Chapter 29

Assessing Requirements Quality in Iterative Development

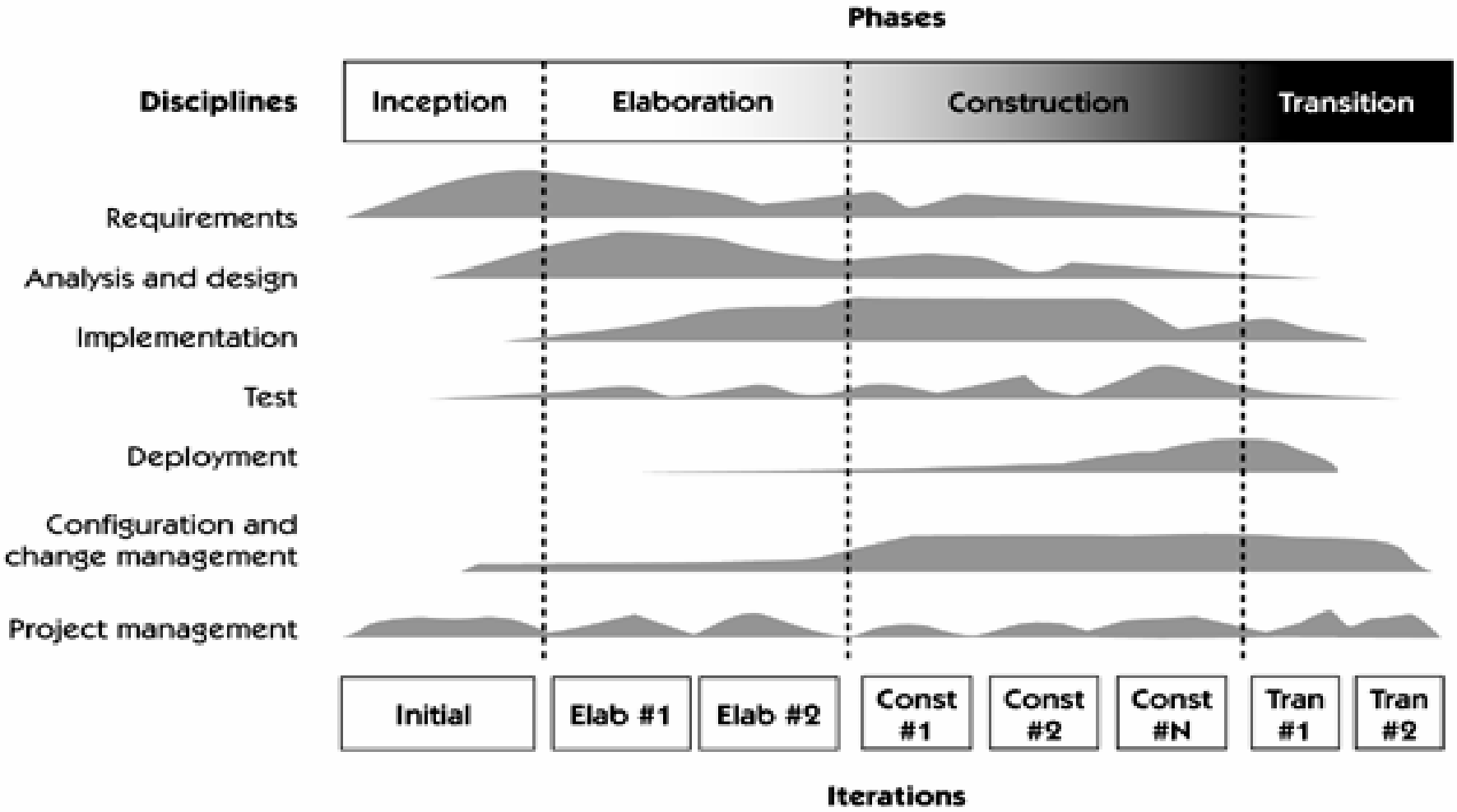
What is Software Project Quality?

- The characteristic of having demonstrated the achievement of producing a product that meets or exceeds agreed-on requirements—as measured by agreed-on measures and criteria—and that is produced by an agreed-on process.

Software Project Quality

- Quality is not simply "meeting requirements“
- Quality also includes
  - Identifying the measures and criteria to demonstrate the achievement of quality
    - These include process and project measures such as time to market; overall budget adherence; and scope of team, project, and company investment.
  - Implementation of a process and execution of a project to ensure the product created by the process has achieved the desired result.

Assessing Quality in Iterative Development



Assessing Quality in Iterative Development

- In the waterfall model, at the end of each phase, specific measures could be applied to “complete” artifacts.
- In iterative model, development progress is not measured by completion of artifacts but by incremental iterations, or a series of “builds” that more objectively demonstrate the progress we have made in defining and building the system.
  - In order to assess artifacts, we just have to know what to expect and when to expect it, and that depends on what iteration we are in.

Assessing Quality in Iterative Development

- For the delivery of an iteration, we can now ask and answer the following questions:
  - “Does it do what we said it would do?"
  - "Does it appear to meet the requirements as we know them at this time?"
  - "Did we do it about when we said we would?"
  - "Now that you can see a bit of this thing, is this what you really wanted? Is this what you really meant?"
- Iterative development allow us to have some of that early feedback, and alter the course of action before additional investment is made.
- When the team has the ability to ask and answer these questions early and often, the team can be assured that inherent quality processes and measures are built into the process itself.

Key Points

- In iterative development, the primary quality check is the objective evidence provided by the availability and suitability of intermediate iterations.
- Assessment of requirements process quality and requirements artifacts can also occur at these checkpoints.
- Assessments must take into consideration the point in the lifecycle at which the assessment occurs.
- Successive refinement, rather than absolute completeness or specificity, is the goal.