Chapter 3 - Project Foundations

Requirement Engineering

def: develop and manage requirements
requirements development: elicitation of operation requirements (what we need for system-to-be) convert that in technical specification and then set acceptance criteria

Requirement management: maintain (at least try to) the requirements in all categories: cost, time, effort,…

Requirement Elicitation ➜ Analysis ➜ Acceptance ➜ Management ➜ Baseline control

Operational Requirements

Functional requirements (what the system should do)
Quality attribute/NFR (how well the system must do it)

Technique to elaborate Operation Requirements: brainstorm, post-it, storyboards, surveys, focus groups

requirement analysis: verify if requirements are actionable, measurable, testable. They must be detailed enough are related to the system.

requirement verification: reviews (peer informal, short) or inspection (long thorough, multiple people, super formal, checklist). Verify that specifications are met

Concept of Operations

Document that explain why we need the solution, what is the vision, how it'll work, the requirements and scenarios (use cases). We must also establish some priorities in this document

Use cases

ID, Name, Actors, Why it's a necessary use case, preconditions, scenario, post-conditions, alternate scenarios, comments

Technical Specifications

Primary requirements: operational features translated into specifications

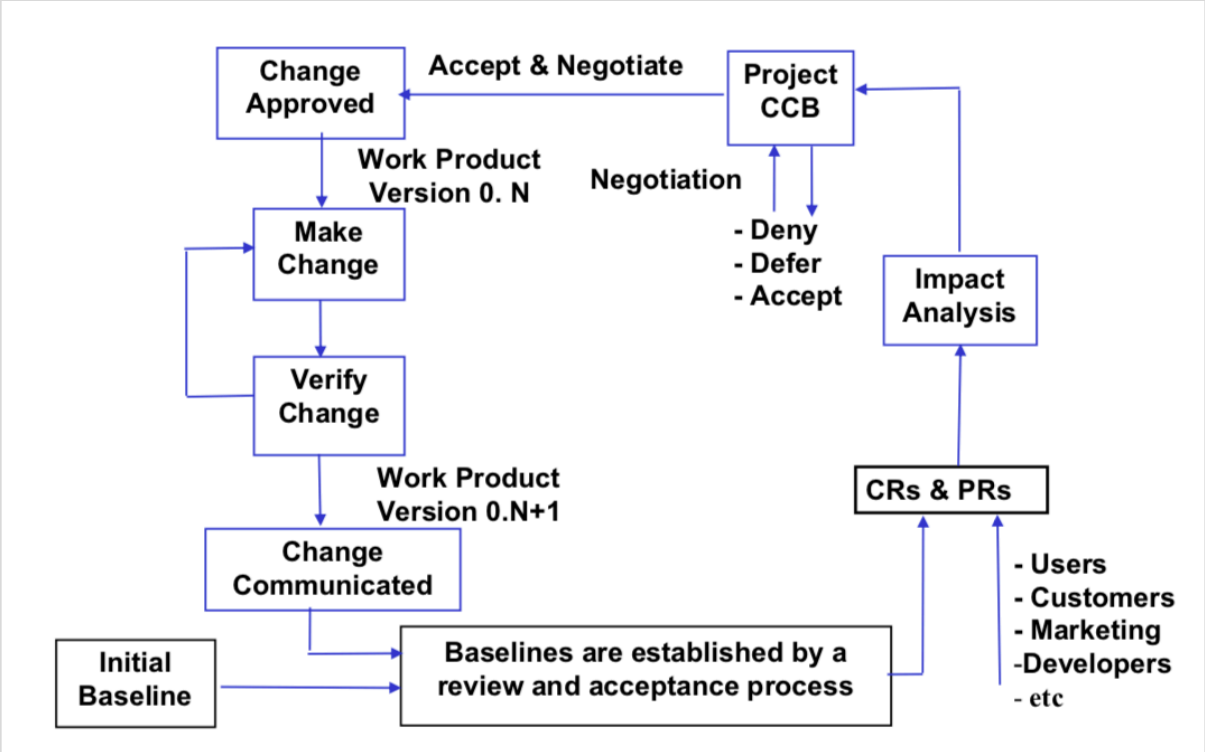
Derived requirements: system and quality attributes that are derived from the primary requirements. They are not visible to the user but necessary to support operational requirements.

Design goals: operational requirements that have not been met yet or cannot be translated in technical specification

Design constraint: decision that you have no control on it. Fixed

verification technique: analysis, reviews, walkthroughs, traceability (matrix: check that all the operational features have been converted to requirements)

Change Control Boards (CCB)



- Identify the baseline to evaluate requirement change.
- Modify the schedule, budget resources and tech to accommodate changes.
- Analyse change propositions and decide on them

CR: Change request
DR: Defect report

Contractual Agreement

a contractual agreement should have:

- Scope of work
- deliverables with dates
- review schedules + change request procedures
- design + development constraints
- acceptance criterias
- price
- schedule

Types of documents:

- Statement of Work (SOW) **legally binding** used with external clients
- Informal contract aka Memos of understanding (MOU) used internally gives authorization