#4 Project and System Definition

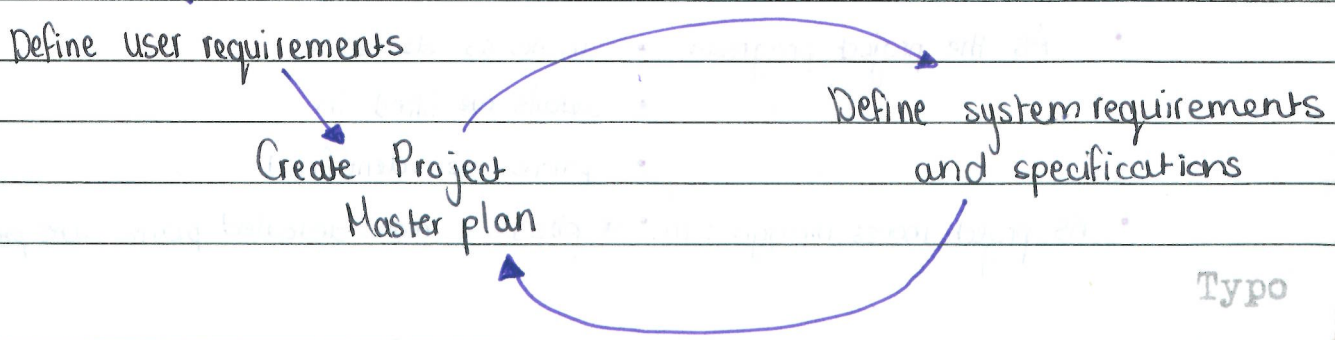
Phase B: Definition

* Assume: * Project has been approved and funded.
  * Existance of:
    - SOW in RFP and proposal
    - User requirements
    - Rudimentary project plan
    - Contract with SDO

* Principle tasks in phase B:
  - Organize project team: hold "kick off"
  - Clarify detail in user requirements
  - Prepare detailed system requirements
  - Prepare project master plan
  - Review requirements & plan with customer.

Project kick-off meeting:
- first formal meeting between PM and team members, stakeholder
- Formal Presentation — Question and Answer
- Purpose is to announce project
- Covers: → who is project manager
  → customer and key stakeholders
  → project organization structure
  → immediate steps
  → SOW, goal & deliverables

* User/customer needs



Project definition

- During definition, project master plan and requirements are defined
- System requirements adress what end-item must do
- Project master plan describes how project will deliver end-item and meet system requirements
- Iterative process

* Project Master Plan:

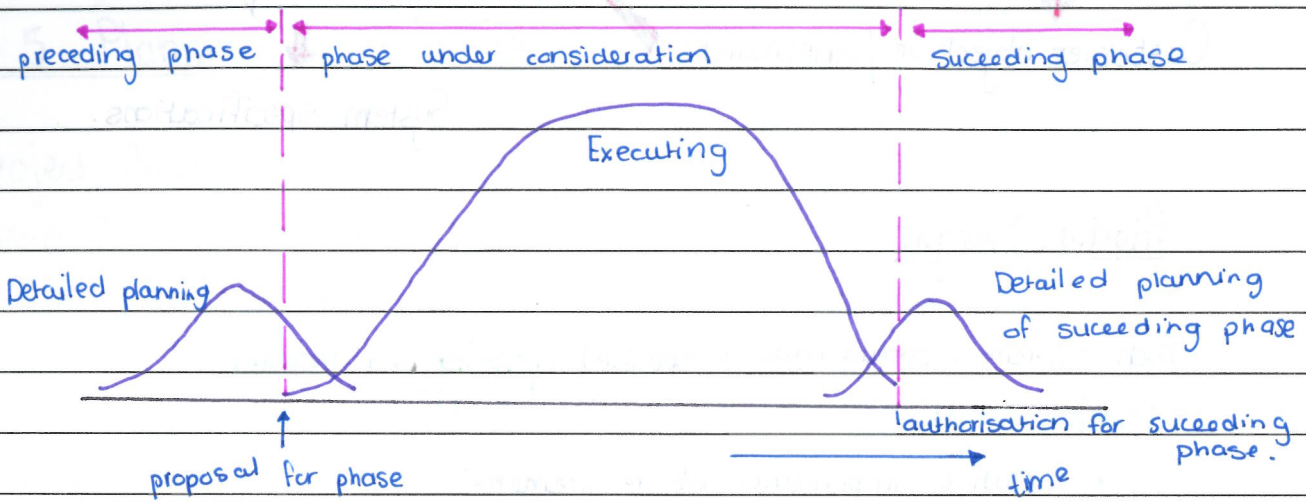
- Adresses the following questions to the satisfaction of project core team.
- Adresses all matters in sufficient detail for managers to organize and meet performance, cost & time targets

1. What? Scope statement, Charter, SOW
2. What? Detailed requirements
3. How? Detailed work definition (WBS or PBS and work package / work task detail)
4. Who? Responsibility for tasks
5. When? detailed schedules with milestones
6. How much? Project budget
7. What if? Risk Plan
8. How well? Performance tracking

Phased Project Planning

- At the start of project, there are to many variables → plan must be developed in phases
- Initial plan is rough but adequate to
  - estimate cost & time
  - explain to customer
- As the project progress:
  - unknowns decrease
  - details are filled in
  - phases are identified
- As project moves through successive phase, more detailed plans are prepared

- Sometimes each phase concludes with a milestone
- Review the detailed phase for the next phase
- Authorization for the next phase represents a commitment



System definition

- System requirements elaborate in detail on the technical performance of end-item
- Translation from user → technical requirements.
- Users are ignorant to most requirements

Problems with Requirement definition:

1. Incorrect requirements — multiple users — shifting / vagueness
2. Imprecise / Language requirements — language — user lack of expertise
3. Shifting requirements — new opportunities — user changes mind
4. Over specification of requirements — insufficient info
5. Under specification of requirements — chaotic project planning.

Guidlines for defining requirements:

1. State each requirement, both users must sign off
2. Assume if a requirement can be misinterpreted it will be
3. Accep that changes are inevitable
4. include visual media in requirement formulation
5. Carefully monitor changes once project starts
6. Educate both users and staff.

Typo

Requirements / Specification

* Customer Need
  ↓
  Customer objective / constraints
  ↗
  Customer requirements
  ↓
  System requirements
  ↓
  System specifications.

Priority / Margin

Each requirement should have a specified priority and margin

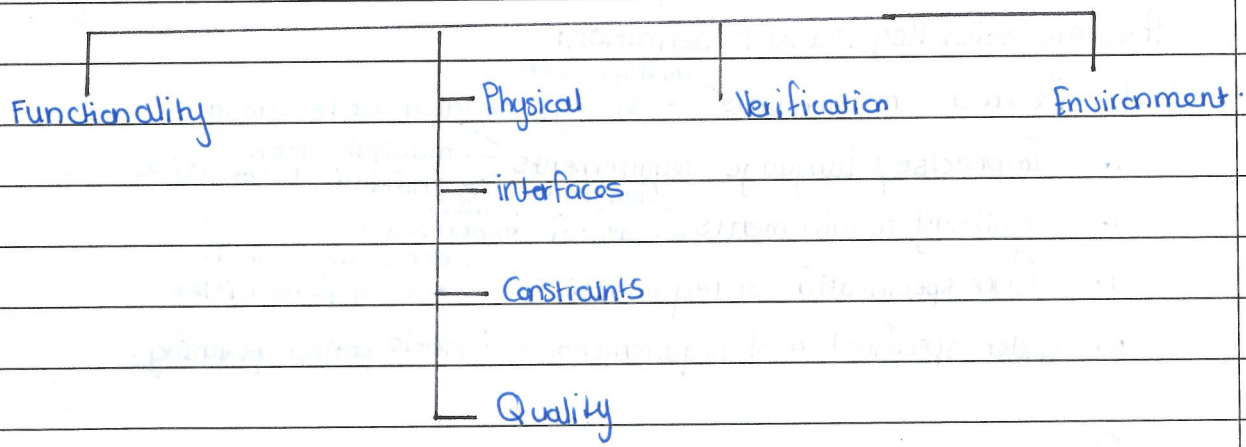
Priority Level:

- relative importance of requirement
- In case of multiple requirement conflict allows to determine which can be bent

Margin:

- Amount by which the requirement may vary.

* Requirement Breakdown structure.



* System Spesifications

- Define in more detail the system requirements
- Guide actual project work, written by and for project specialists
- Adress all areas of the project: design, fabrication, installation, operation
- Enables traceability - • keeping track of specifications, their impacts and controlling changes.
  • Configuration Management

Example:

System spesification: motor must provide sufficient thrust.

System requirement: motor mut be ≥ 88 kN thrust

#5 Planning fundamentals.

Project Plan:

1. Scope Statement, Charter, SOW
2. Detailed Requirements
3. Project organization & responsibilities
4. Detailed work definition (WBS)
5. Detailed schedule with milestones.
6. Project budget
7. Quality plan
8. Risk plan
9. Work Review plan
10. Testing plan
11. Change control plan
12. Documentation plan
13. Procurement plan
14. Implemention plan.

1. Scope, Charter, SOW

Purpose: provide a broad description of master plan

Describes the breadth of project, areas to be covered, and deliverables

Includes:
- Objectives (contractor view)
- Requirements
- Deliverables
- Milestones
- Limits & exclusions.

SOW: Statement of work, scope document for contracted projects

2 types:
- SOW in master plan
- SOW in contract (CSOW)

SOW & CSOW must contain the same information and requirements

Requiremensts for every end-item task must be clear enough that parties can sign-off acceptance.

Suggestions:
- Never use passive terminology "should" "try to"
- Categorize specifications applicable to entire project seperate from parts

Hold meetings with customer to review clarity and completeness

Typo