Software Project and Configuration Management MANP 1433

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TOPIC 1: SOFTWARE PROJECT MANAGEMENT OVERVIEW

What is a project?

- A project is a **temporary** overlay on the standing organization
- It is created to achieve a **specific objective** defined by a **client** within **agreed time** and **budget**
- The standing organization is represented by the line-management

One project manager will manage

Project defined by PMI

- A temporary group activity designed to produce a unique product, service or result.
- A project is **temporary** in that it has a defined beginning and end in time, and therefore defined scope and resources.
- And a project is **unique** in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal.

In other words

- Projects have a purpose
- Projects are limited in time and space
- Projects have budget constraint
- Projects are collective
- Projects are unique
- Projects are realistic
- Projects are complex
- Projects are an adventure
- Projects can be assessed
- Projects are made up of stages

What is Project Management?

- Project management deals with the complex knowledge-based teamwork in organizations going through very fast changes in business environments.
- The purpose of project management is to carry out a series of activities as effective as possible.

Project management defined by PMI

the application of knowledge, skills and techniques to execute projects effectively and efficiently. It's a strategic competency for organizations, enabling them to tie project results to business goals — and thus, better compete in their markets.

Work Package (PMI)

- It is the effort required to produce a deliverable within a project.
- This effort may be a single task or it could be several related tasks.

Software Work Package

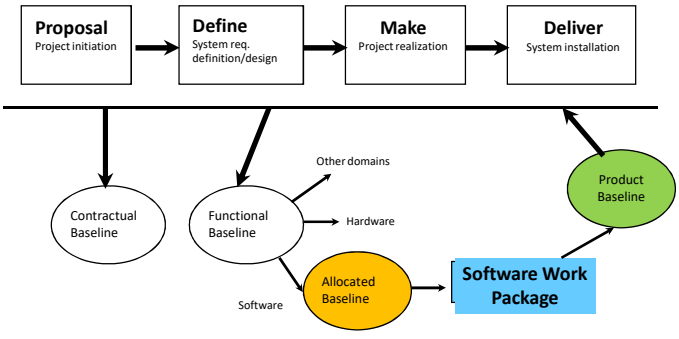
Purpose

To provide at an agreed price and schedule, software that meets the (functional) requirements, negotiated with the customer and verifiable by the customer

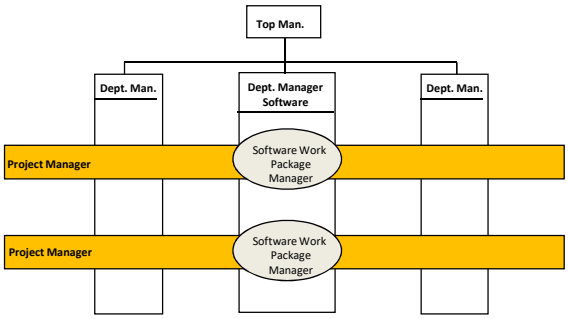
Size

The Software Work Package may consist of one or a number of CSCI's

Software Work Package



Software Work Package



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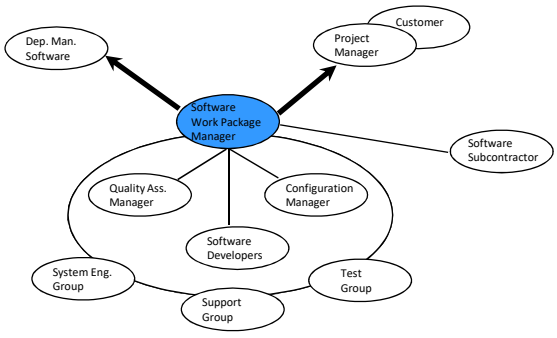
People involved



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Software work package managing steps

- Setting-up and kick-off
  - Make sure that the input documents are ready, set up the environment, define the resources, enforce commitment
- Production
  - Drive and control the execution of the work and of each participants commitment
- Delivery
  - Carry out the product qualification, finalize the output documents, deliver them to the customer
- Closing down
  - Evaluate the project, transfer the knowledge and resources to the support group

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Software work package documentation

- Management documentation
  - Software Development Plan (SDP)
  - Software Quality Program Planning (SQPP)
- Engineering documentation
  - Allocated baseline: SRS, IRS
  - Design documentation: SDD, IDD
  - Internal documentation: project notes, project log, etc.
  - Product baseline: Software Product Specification (SPS), Version Description Document (VDD)
- Quality assurance documentation
  - Audit and review reports
  - STP, STD, STR

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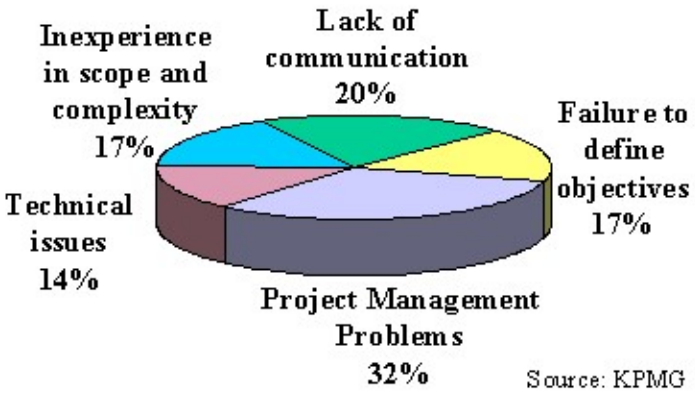
Problems with software projects



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What the user wanted

What the budget allowed for

What the timescale allowed for

What the technican designed

What the user finally got

Software Product from different perspectives

Why do projects fail?

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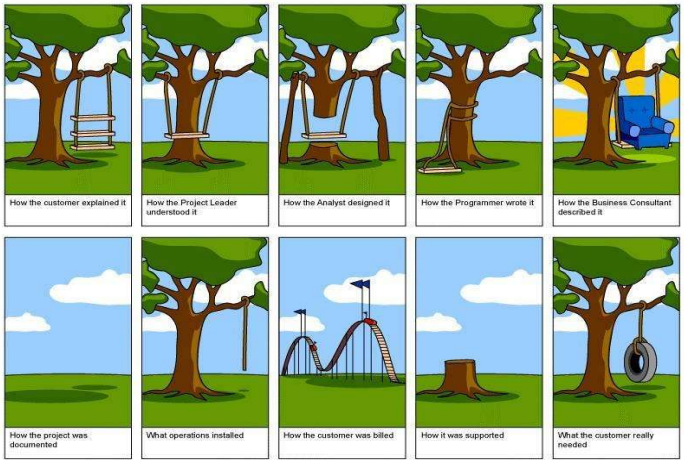
Explain this scenario



Software Project Management must Manage to a Future Target

- Business Changes
  - Market shifts and investment fluctuations
  - Portfolio changes
  - Mergers and Acquisitions
- Technology Changes
  - Hardware, software, networks, mobile
  - Fast, better, cheaper
- Process Changes
  - Agility vs. quality
  - Business and technology
- Staffing Changes
  - Shortages and gluts

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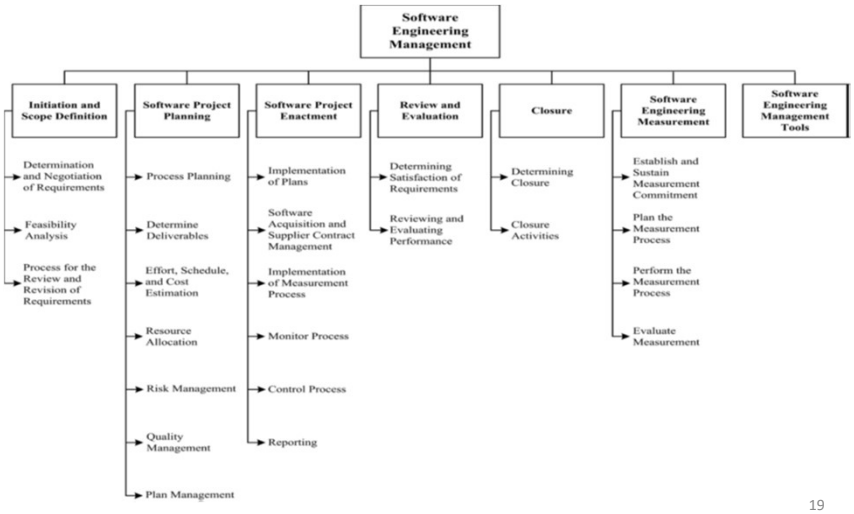
Software Engineering Management according to SWEBOK



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