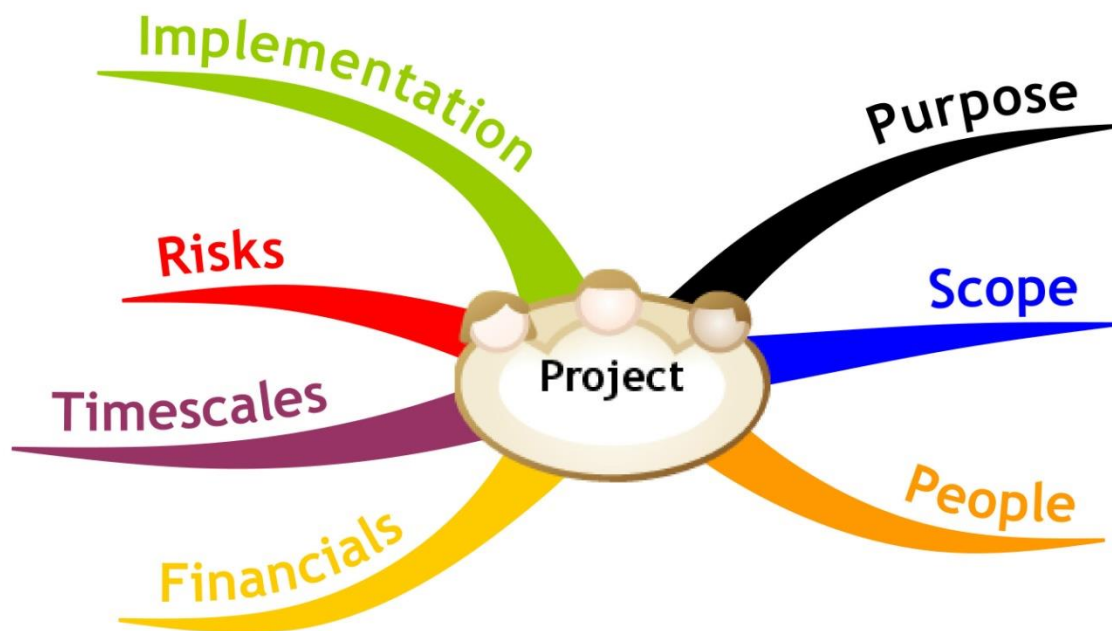


What is a Project Plan?

A project plan sets out the phases, activities and tasks needed to deliver a project. It shows the timeframes required to deliver the project, along with the resources and milestones. It documents all of the project inter-dependencies and lists the planning assumptions and constraints. A project plan expresses the objectives & requirements of the project in terms of

- Project Scope
- Project Schedule
- Resource Requirement
- Project cost estimation
- Project Quality and
- Project Risk Management



Why is Project Planning needed?

A project plan is the first thing to do when undertaking any project.

The key to a successful project is in the planning.

Careful and detailed planning reduces risk and uncertainty in a project.

In a planned project, project planner makes provision for potential occurrences of uncertainties in advance.

Although a project plan in advance cannot take care of all unforeseen events, risks, and deviations nevertheless it still prepares the project team and puts it in a better position than having no planning.

In a well-planned project the project team can respond aptly to potential risks, slippages, etc. thus saving time, resources and cost.

How do we use a Project Plan?

A summarized Project Plan is usually created early in the project life cycle. A detailed Project Plan is created later in the planning phase.

The Project Manager reviews actual progress against that stated in the Project Plan throughout the project life cycle to ensure that the project is on track.

Project Scope and Project Scope Planning

What will be done (in scope) and what will not be done (not in scope)

For defining project scope, project requirements (deliverables) specifying time and cost are identified and listed
In planning phase project deliverable items are listed as 'In Scope' or 'Not in Scope'.

Project scope is generally constrained by TQR:

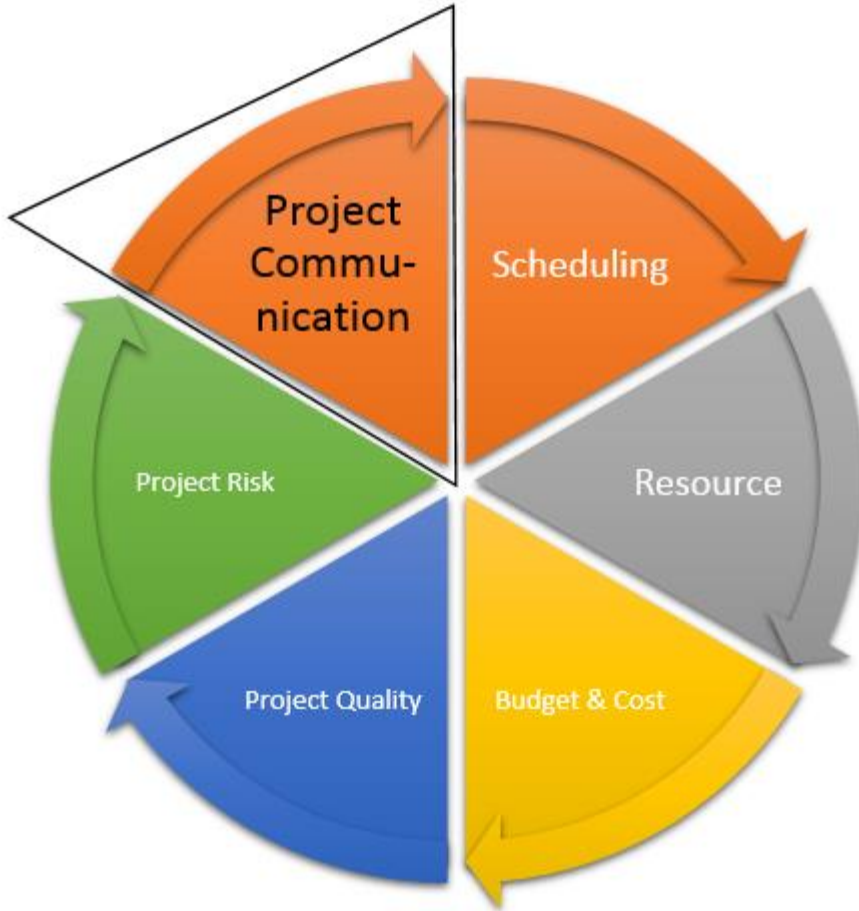
- Time
- Quality
- Resources

Any change in the scope of the project has direct effect on (any or all) of time, quality and resources of given project. Vice versa, any change in time, cost or resource can alter the project scope.

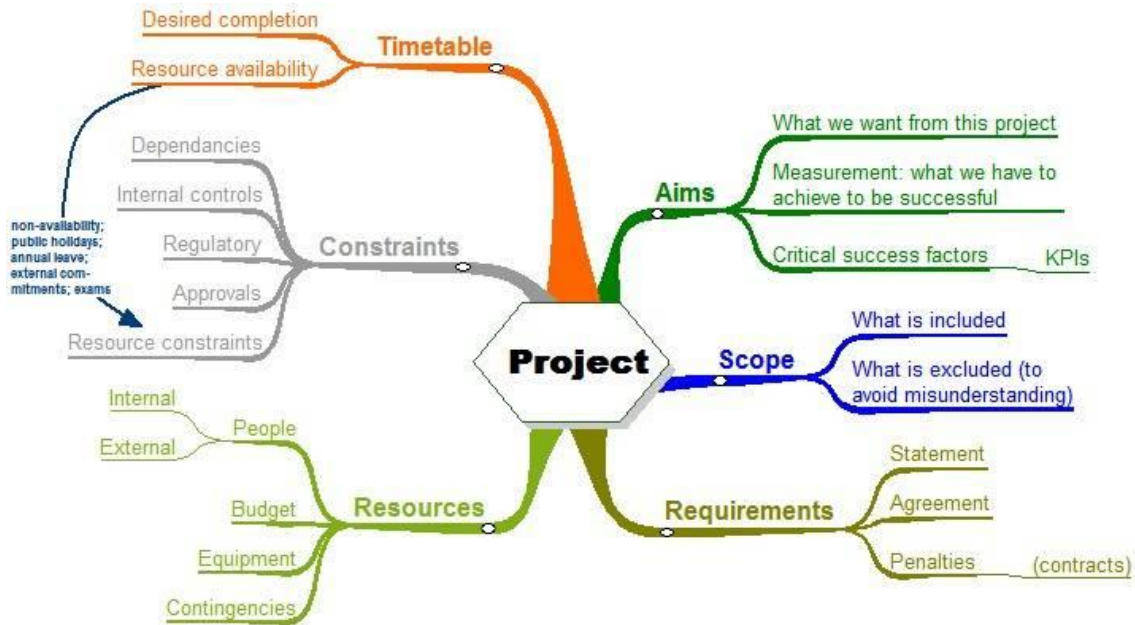
Components of a Project Plan



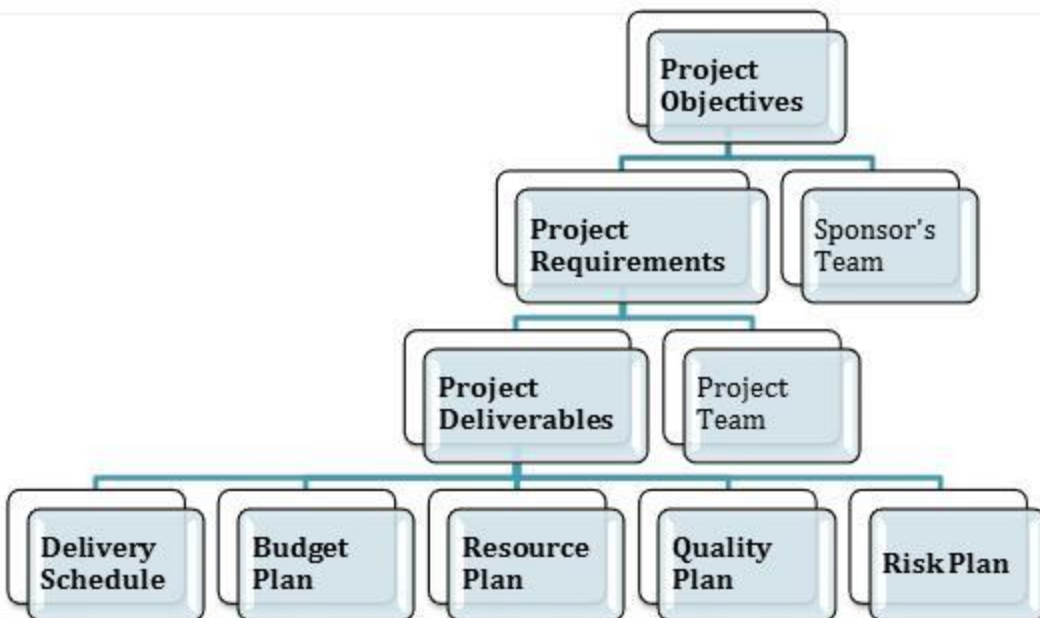
Components of a Project Plan



The Project Planning Process



The Project Planning Process:



Step 1: Set Project Goals

Establish a clear set of goals.
Record goals in the project plan.
The project plan may also record needs and expectations of stakeholders



Setting Project Goals

First Step: Identify the stakeholders in your project
(Stakeholder: Anybody directly, or indirectly impacted by the project)

Examples of stakeholders:
Project sponsor
Customer who receives the deliverables
Users of project output
Project manager and project team

Second Step: Find out needs of stakeholders
(A project is successful when it meets needs of the stakeholders)
Needs of stakeholders is found by conducting stakeholder interviews.
Find needs that create real benefits.
(Sometimes stakeholders express needs that aren't relevant and don't deliver benefits.
These can be recorded and set as a low priority.)

Third Step: Make a comprehensive list of needs
Use the list is to prioritise needs.
Use prioritised list to create a set of easily measurable goals.

Step 2: Project Deliverables

Make a list of things that need to be delivered to meet project goals.
Specify when and how to deliver each item.
Add deliverables to project plan

Step 3: Project Schedule

Once project scope (goals and deliverables) are determined, the next step is to create project delivery schedule or timeline.
For each deliverable identified, work breakdown structure (WBS) is used to make a list of activities or tasks that need to be performed.

Activities become a basis for estimation, scheduling, execution, monitoring and controlling of the project work

For each task the following is estimated:

Time (days, weeks, months) required to complete task

Resources (experts, materials, money etc) required to complete task

Based on estimates of time required for each activity, time required for each deliverable and a delivery date for each deliverable is computed

Finally, input deliverables, durations and resource persons required to complete task

Five steps to create project delivery schedule

Define Tasks/ Activities

Sequence Tasks/ Activities

Estimate Resource Requirement

Estimate Task Duration

Develop Project Delivery Schedule

Once project delivery schedule is agreed by stakeholders, it becomes a baseline for the project. Project sponsors may ask for a project delivery deadline that is not realistic based on estimates of project timeline. The project schedule may then be used to justify pursuing one of the following options.

Reschedule project delivery timeline [Time Implication: Project delay]

Deploy additional resources [Resource Implication: Increased cost]

Change scope of the project [Scope Implication: Less delivered]

Enforce additional/ lesser Quality checks [Quality Implication]

Notes on:

WBS

Work breakdown structure or WBS is a breakdown/ decomposition of project work in a hierarchical fashion into distinct activities or tasks.

Each descending level in the WBS hierarchy gives details of project deliverable required from project team.

These work help the project team to create expected deliverables.

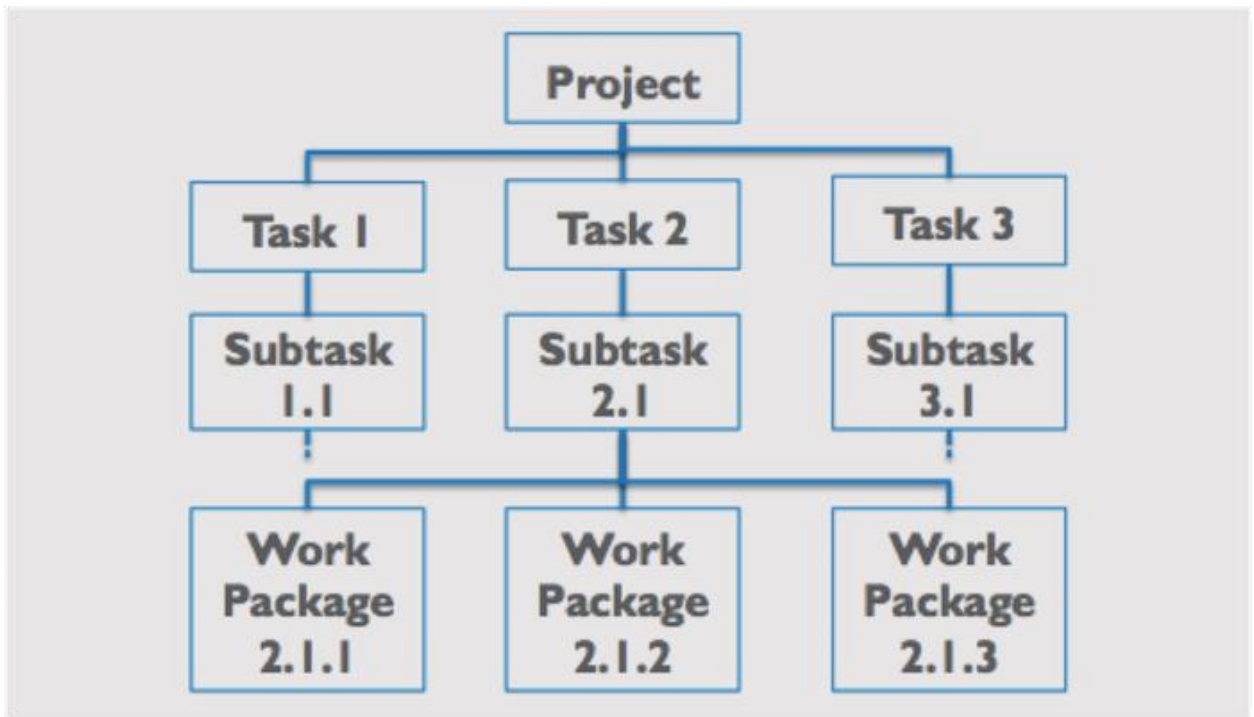
Milestones

A milestone marks a significant event in the project. Generally, project sponsors refer to list of milestones to trace project delivery in respect of timeline and cost overrun.

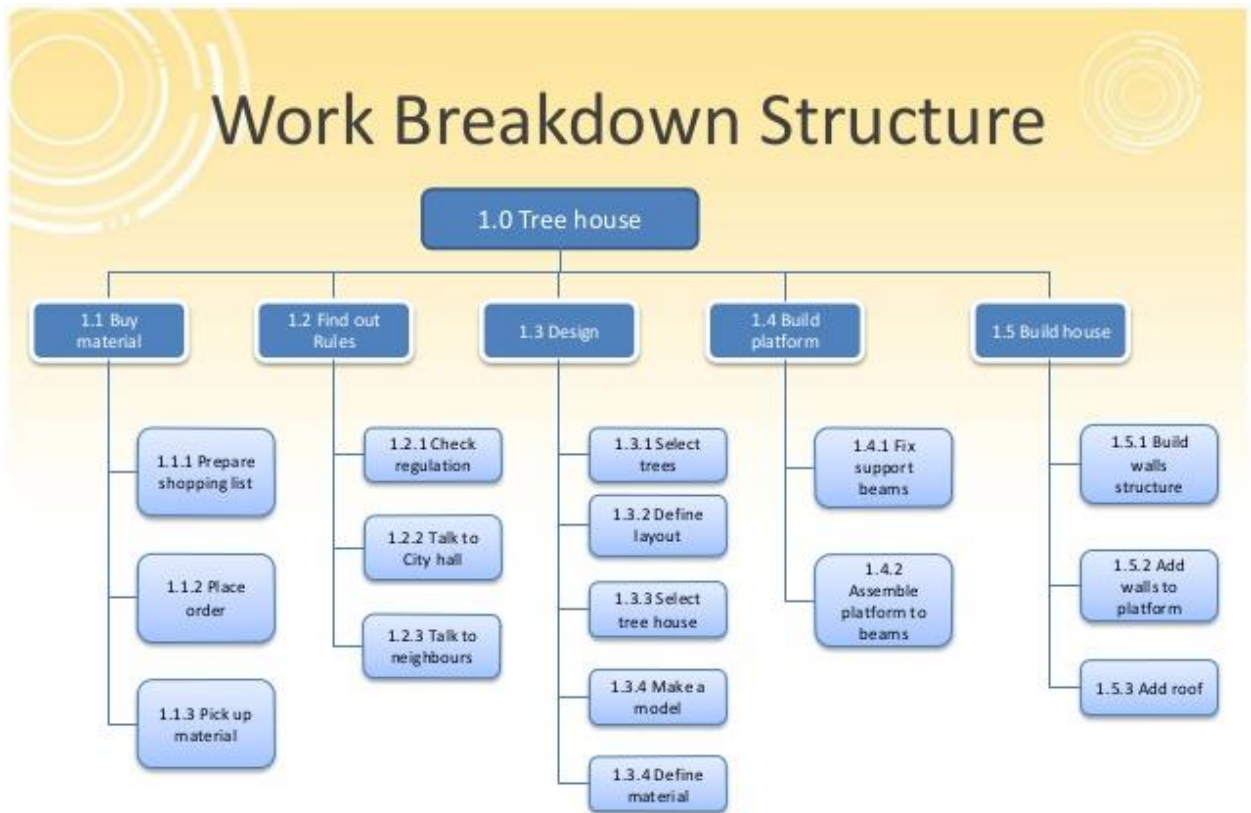
Gantt chart

A visual representation of project delivery schedule. Project managers and sponsors find it easy to work with Gantt chart.

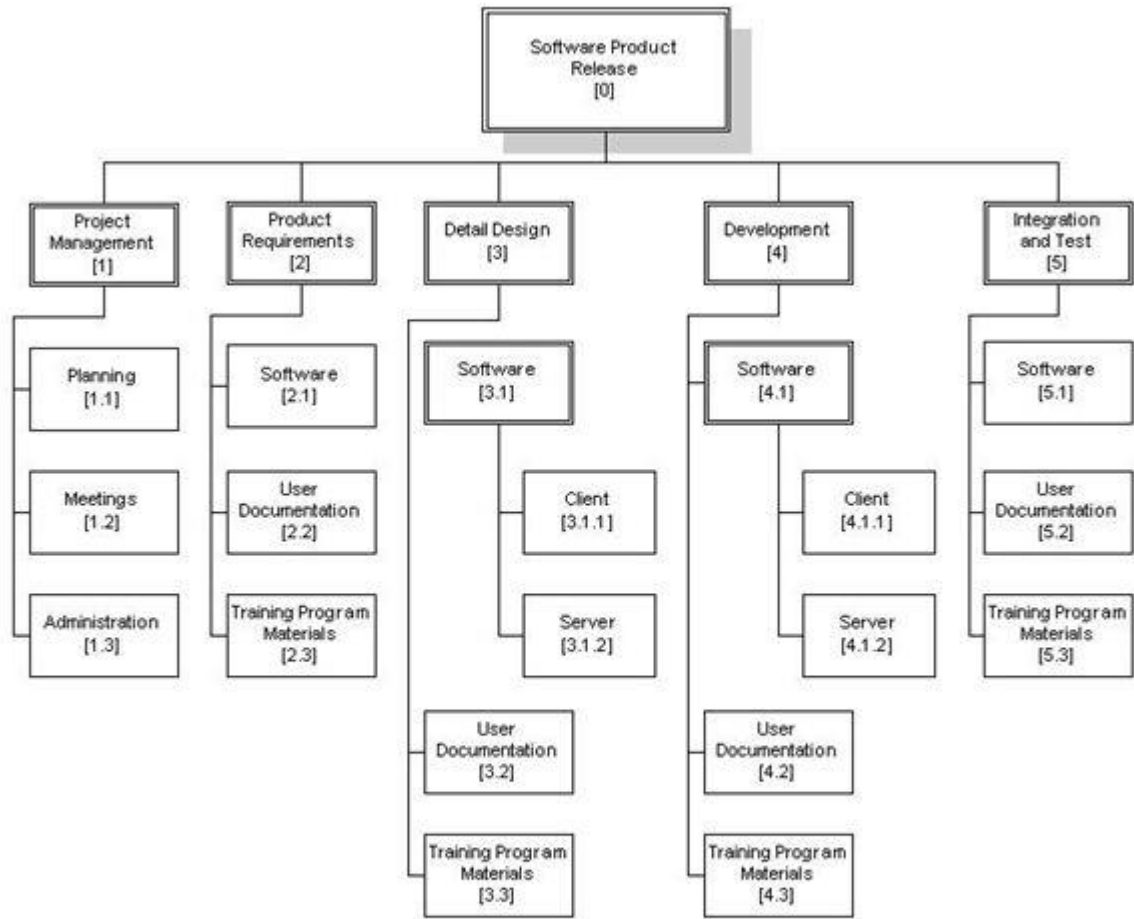
WBS: Example 1



WBS: Example 2



WBS: Example 3



Sample Work Breakdown Structure organized by phase

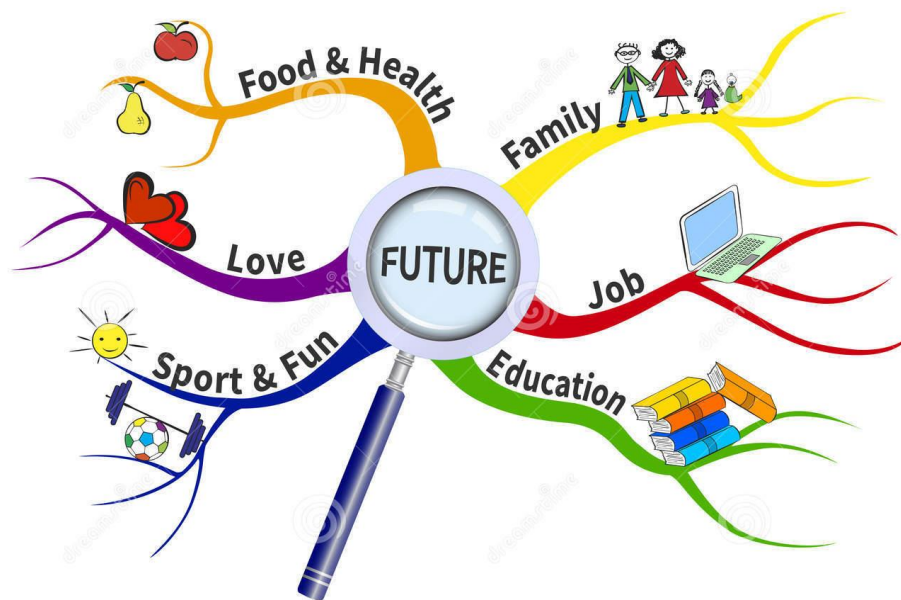
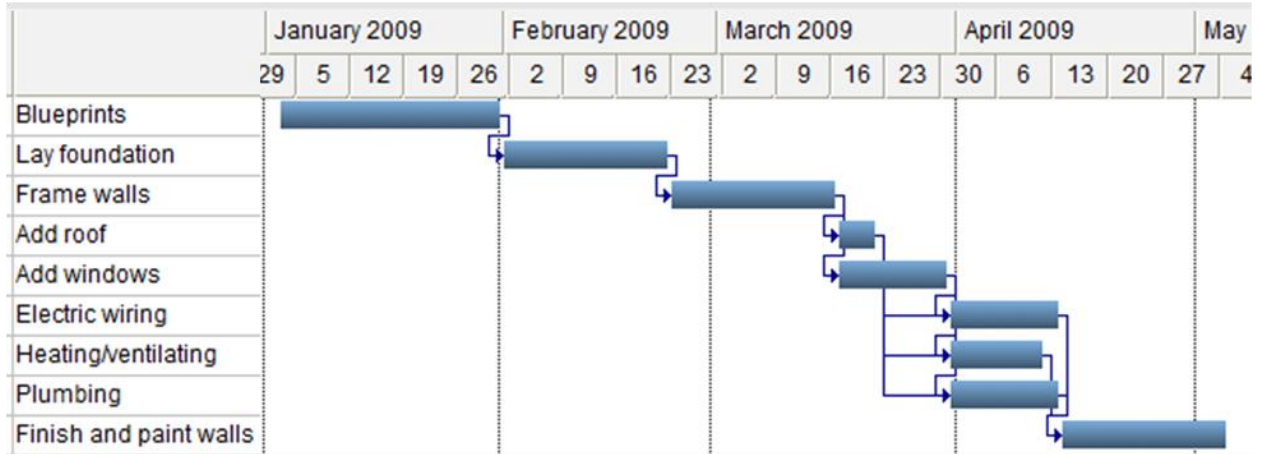
EXAMPLE_WBS_BUILD A HOSTEL



Level	WBS Code	Element Name
1	1	Build Hotel
2	1.1	Design
2	1.2	Municipal Approval
2	1.3	Obtain Finance
2	1.4	Construction
3	1.4.1	Plumbing
3	1.4.2	Electrical
3	1.4.3	Building
4	1.4.3.1	Detailed planning & approval
4	1.4.3.2	Buy Materials
4	1.4.3.3	Dig & Cast foundations
4	1.4.3.4	Build Walls

Fig.3 Hierarchical Structure

Gantt Chart: Example 3



Step 4: Supporting Plans

Supporting plans need to be created as part of the project planning process.

- Project Resources Planning
 - Human Resource Plan
 - Procurement Plan (Materials, Equipment, Machinery)
- Project Costing and Budgeting
- Communications Plan
- Risk Management Plan
- Project Quality Plan

Human Resource Plan

It is the people who make the project work hence it is critical to plan for project team.

Human resource plan identifies and document the following staffing plans or requirements:

- skill set, roles, responsibilities.
- timeline of acquisition and release of staff
- Establishes reporting structure of project resources

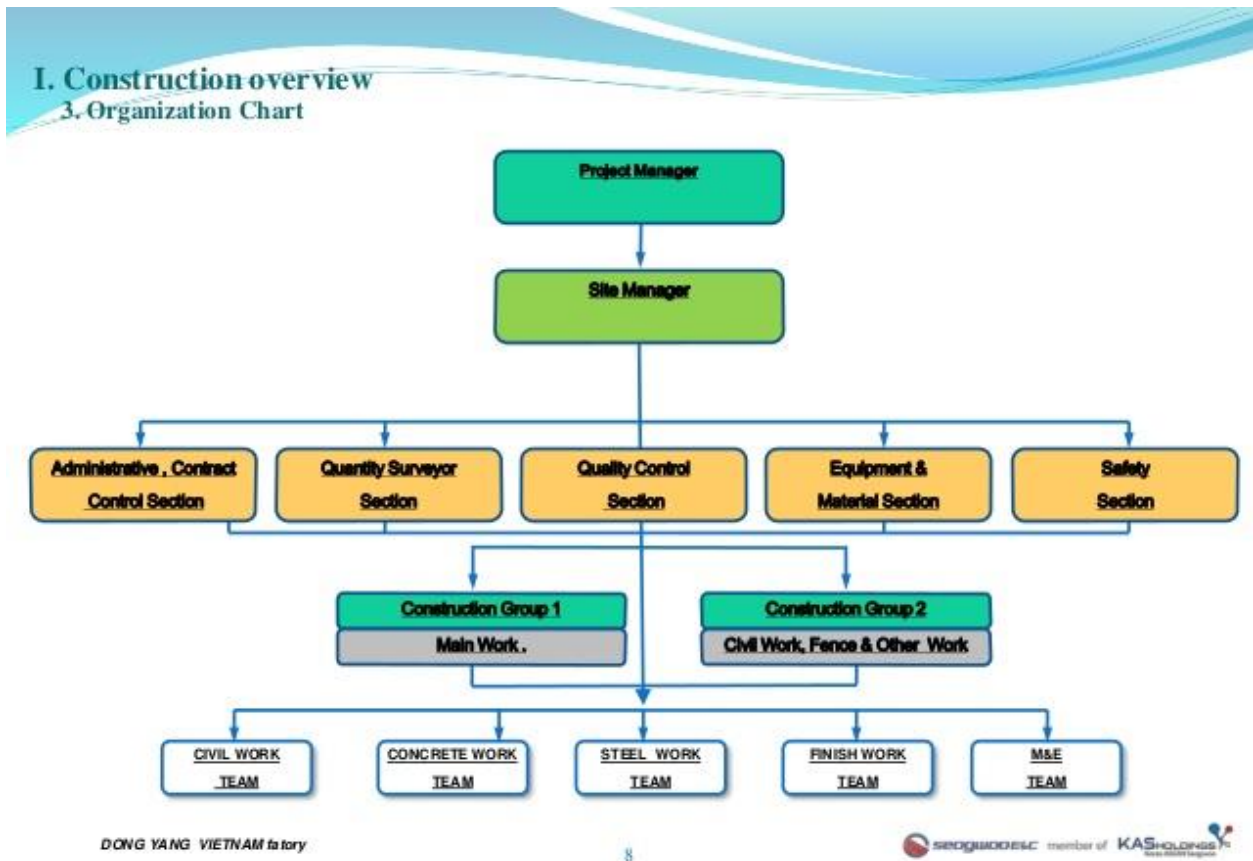
This plan tries to answer following questions:

- What kinds of people are required to complete the project – number, competencies?
- What should they do – specify their skills, roles and responsibilities?
- Whom will they report to? Develop an organogram for the project.
- Staffing management plan: Staffing and training requirement, method for obtaining staff,
- Resource calendar (staff acquisition dates or start dates, estimated duration, staff release plan)
- Rewards, incentives and recognition

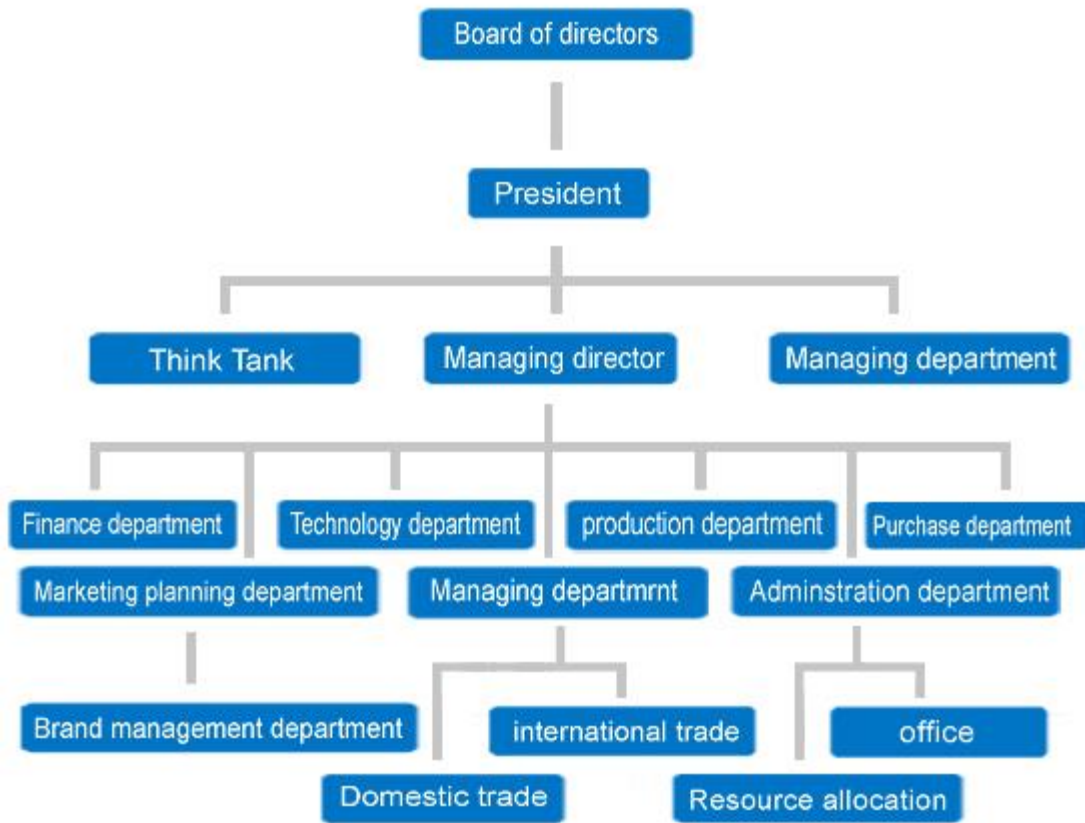
Procurement Plan

A plan for resources such as material, equipments such as grade of equipment, capabilities available, duration & schedule of availability, acquisition plan, etc.

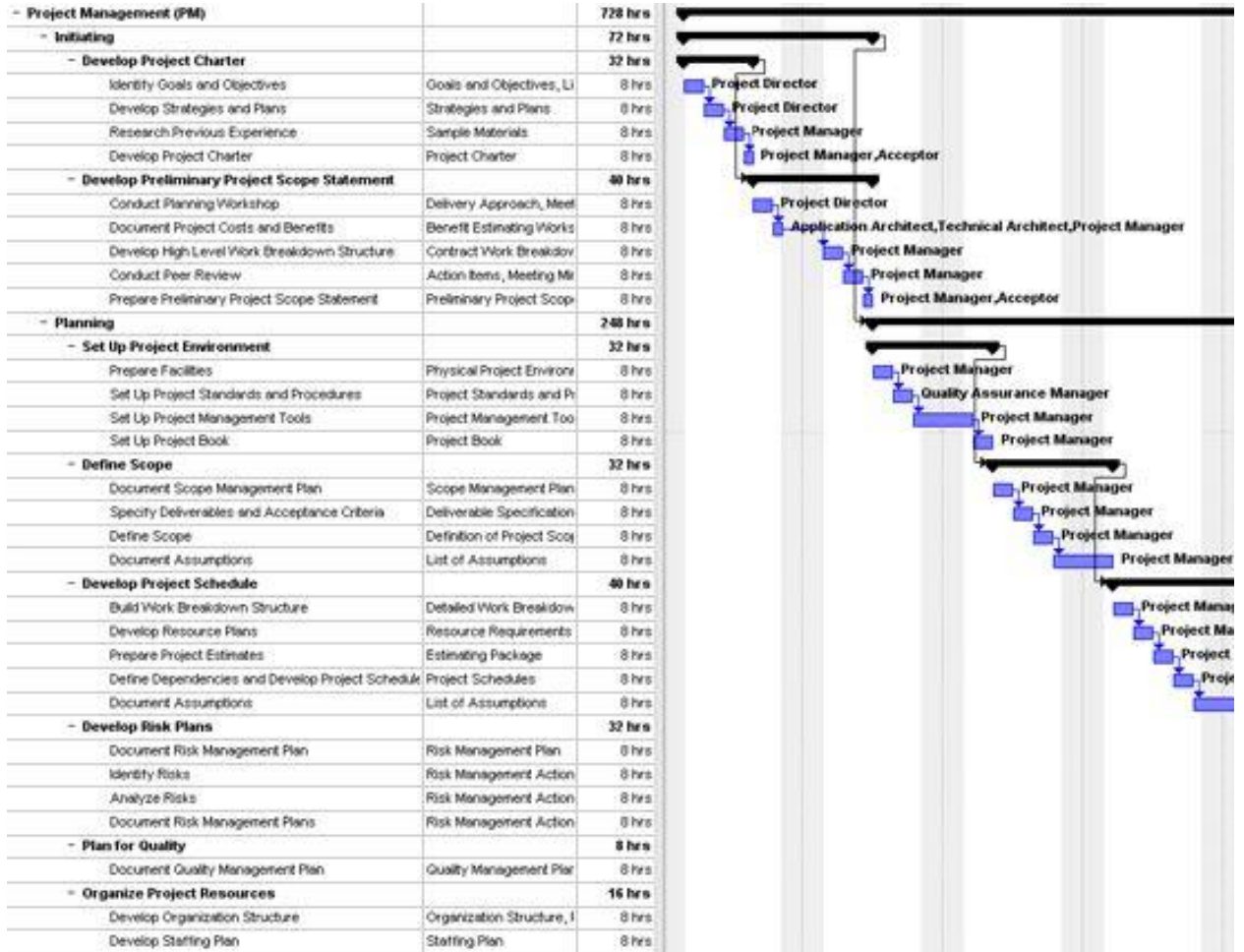
Example of Organogram: Example 1



Example of Organogram: Example 2



Example: Human Resource Plan



Project Cost Planning

Cost planning helps to baseline the project budget so that project sponsors can agree on project delivery schedule as well as payment schedule.

Cost planning is an iterative process wherein project cost is updated based on available information. It identifies cost elements during the project lifecycles such as

- Monetary resources requirement (people, machinery, material, equipment, space, etc.)
- Provisions for risk management (people, machinery, material, equipment, space, etc.)

Project task or activity provides a quantifiable unit for assessment of cost.

It is expected that cost of people, equipment, facilities, etc. required to complete an activity can be estimated.

Project cost is generally summed up based on cost estimates of the activities involved.

The parameters used for the basis of estimate, assumptions made, constraints applied and confidence level of estimate are documented in the cost plan.

Example of Project Cost Planning/Budgeting

Project Budget													[Company Name]	
													[Company Info]	
Starting Balance	1,000													
Total Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NET (Income - Expenses)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Projected End Balance	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000		
INCOME														
Internal Funding	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Department Budget														-
Customer Billing/Invoicing														-
Existing Revenue Streams														-
Other														-
Total Internal Income														-
External Funding/Other														
Government Grants														-
Foundation Grants														-
Donations														-
Other														-
Total External Income														-
Total INCOME														-
EXPENSES														
[Category Name]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
[limited expense]														-
[limited expense]														-
[limited expense]														-
[limited expense]														-
[limited expense]														-
Subtotal														-
[Category Name]														
[limited expense]														-
[limited expense]														-
[limited expense]														-
[limited expense]														-
[limited expense]														-
Subtotal														-
[Category Name]														
[limited expense]														-
[limited expense]														-
[limited expense]														-
[limited expense]														-
[limited expense]														-
Subtotal														-
Total EXPENSES														-

Communications Plan

Projects get successfully delivery only when people work together.
 Project team can work together only when they know what they should do and they would know this, only when they are informed about it. That's the precise reason why organizations should have communication plan.
 Project communication planning is about establishing appropriate channels to let correct information flow top-down as well as bottom-up manner.
 The vital part of successfully completing a project is to communicate with clients and stakeholders. By keeping in constant contact, it is easier to understand client's wishes and execute the task accordingly
 Communication plan is a document showing who is to be kept informed about the project and how the information will be presented to them. Generally the document is a weekly or monthly status report describing how the project is performing.
 Communication plan should inform clients and stakeholders regarding milestones achieved and work planned for the next period.

(Milestones written into the project plan by the client are vital because they are helpful in explaining progress of work and they give the client an understanding if the project is going in the wrong direction.)

Risk Management Plan

Risk management identifies all potential risks to the project and prepares plans to handle the risks.

Major risk areas are:

- Lack of stakeholder engagement
- Lack of communication
- Lack of clear key responsibilities & roles.

For risk management, the following procedures may be followed:

- Record risk identified in a risk log;
- Risks can then be tracked using the risk log.
- Write down plan of action to tackle the risk in the event it occurs and what to do to prevent it from happening.
- Review risk log on a regular basis
- Add new risks to the risk log as they occur during the life of the project.
- Remember, if you ignore risks, they don't go away.

Examples of common project risks:

- Time and cost estimate too optimistic
- Customer review and feedback cycle too slow
- Unexpected budget cuts
- Unclear roles and responsibilities
- No stakeholder input obtained
- Not clearly understanding stakeholder needs
- Stakeholders changing requirements after the project has started
- Stakeholders adding new requirements after the project has started
- Poor communication resulting in misunderstandings, quality problems and rework



Link: <http://projectmanager.com.au/advanced/planning-for-new-and-complex-projects/>

Project Quality Plan

To create project quality plan, project planner need to identify quality requirements of the project, standards are we supposed to comply with and in what manner Surely project quality plans undergoes changes just as the master project plan

Quality Process & Policies

policies about quality assurance process to be followed
quality controls to be in place
process improvement being adopted

Cost-Benefit Analysis

Build business case to present cost-benefit analysis of quality assurance & control process and demonstrate benefits of

Significant avoidance of rework
Increase in productivity
Quality & Reliability of deliverables,
Satisfaction of quality expectations and accompanying cost implication

Cost of Quality

Estimated cost of quality control and quality process during project lifecycle highlighting cost projection in terms of

Conformance cost (Prevention costs, appraisal cost)
Non-Conformance cost (internal failure cost, external fail. cost)

Quality Metrics



Establish the metrics based on which quality controls can be applied.

(Establishing quality metrics is very important to ensure stability and performance of the project)

Parameters & permissible values governs and indicate health of the project to the stakeholders.

Examples of parameters and permissible values are

availability (acceptable: 98.95%)
failure rate (0.02%) and frequency
budget control (cost overrun <4%)

Quality Checklist

Based on the best practices, the project quality planner may provide quality checklist to ensure specific set of project activities are performed in standardized manner. Such checklists are quite useful in quality controls.

Control Charts

This is chart representation to visualize process stability & performance.

The project planner needs to specify the boundary and threshold limits to indicate when project stability or performance is getting compromised.

At what levels who's intervention is expected etc is being charted out.

There are various known approaches to ensure project quality. Some of these are as follows:

Six Sigma (6 s)

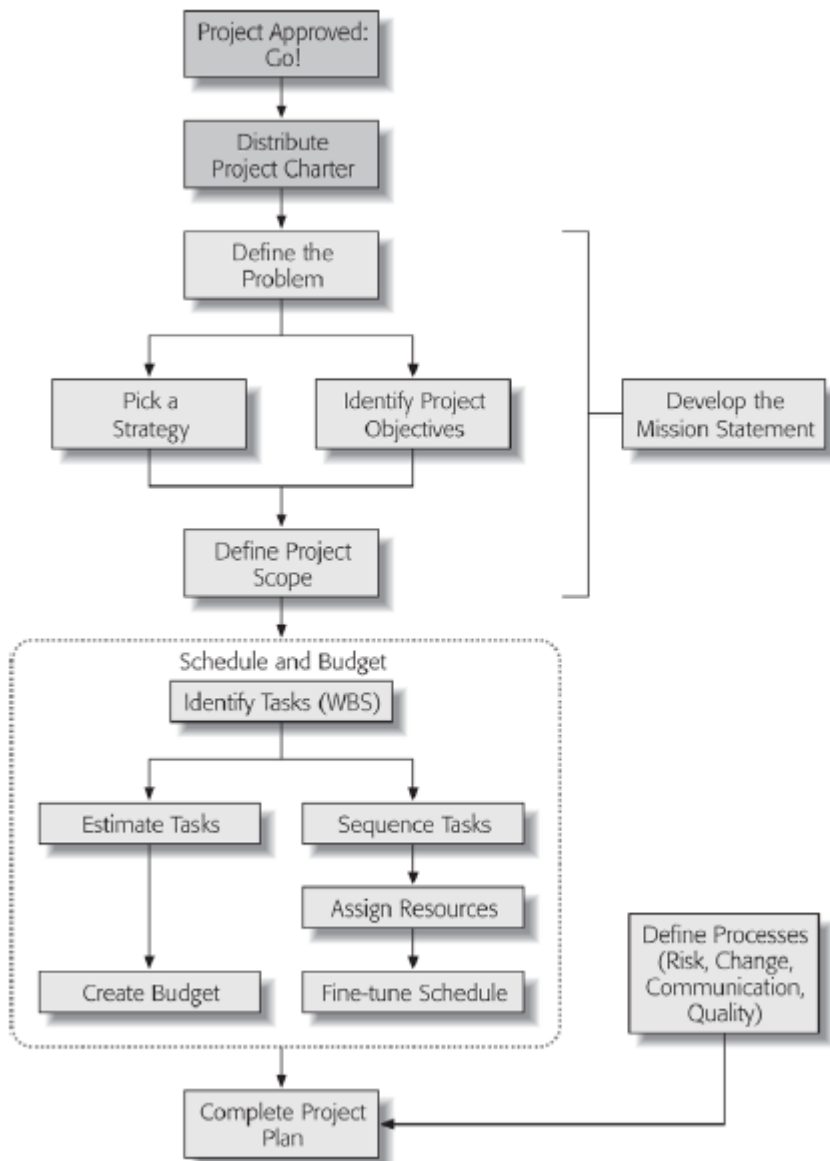
Cost of Quality (CoQ)

Total Quality Management (TQM)

Failure Mode and Effect Analysis (FMEA)

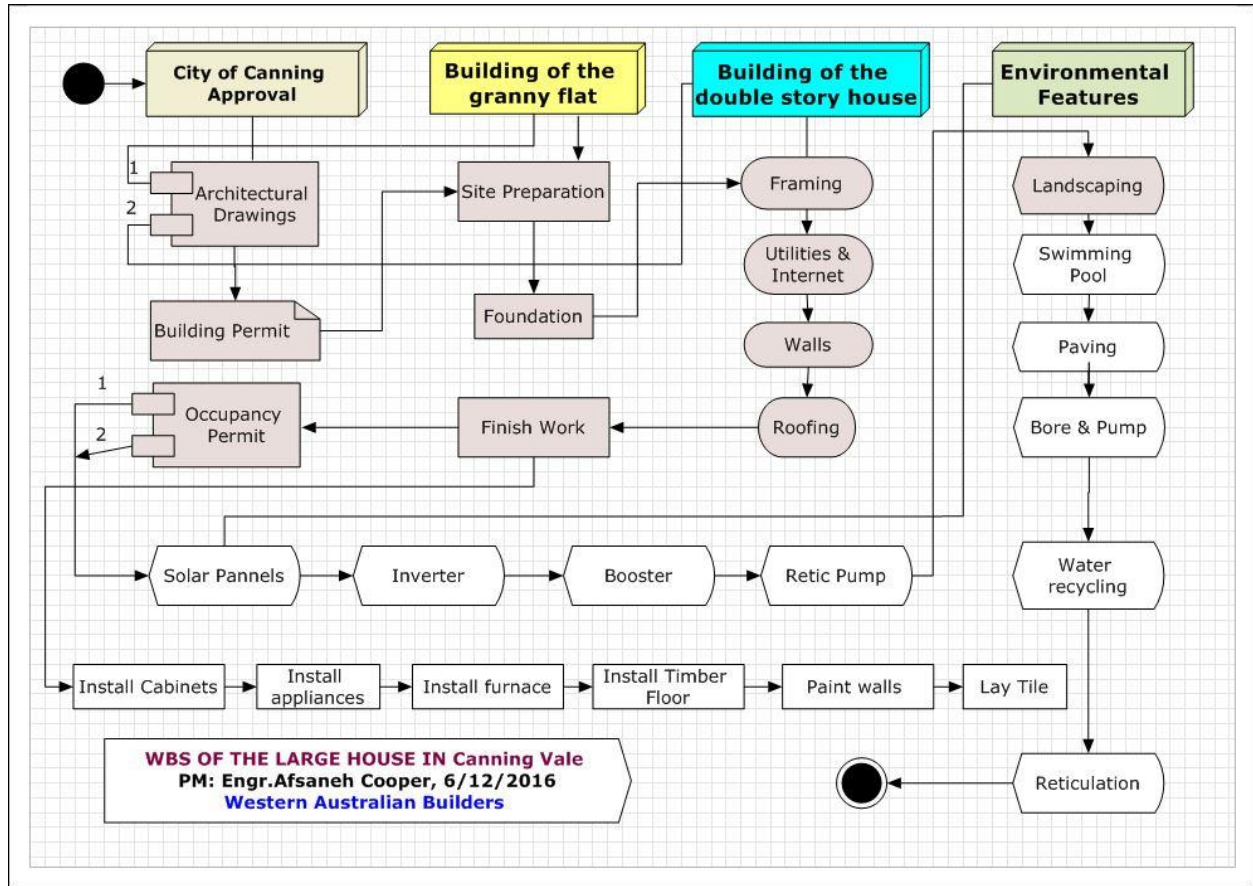
International Organization for Standardization 9001, etc.

Summary of the Project Planning Process

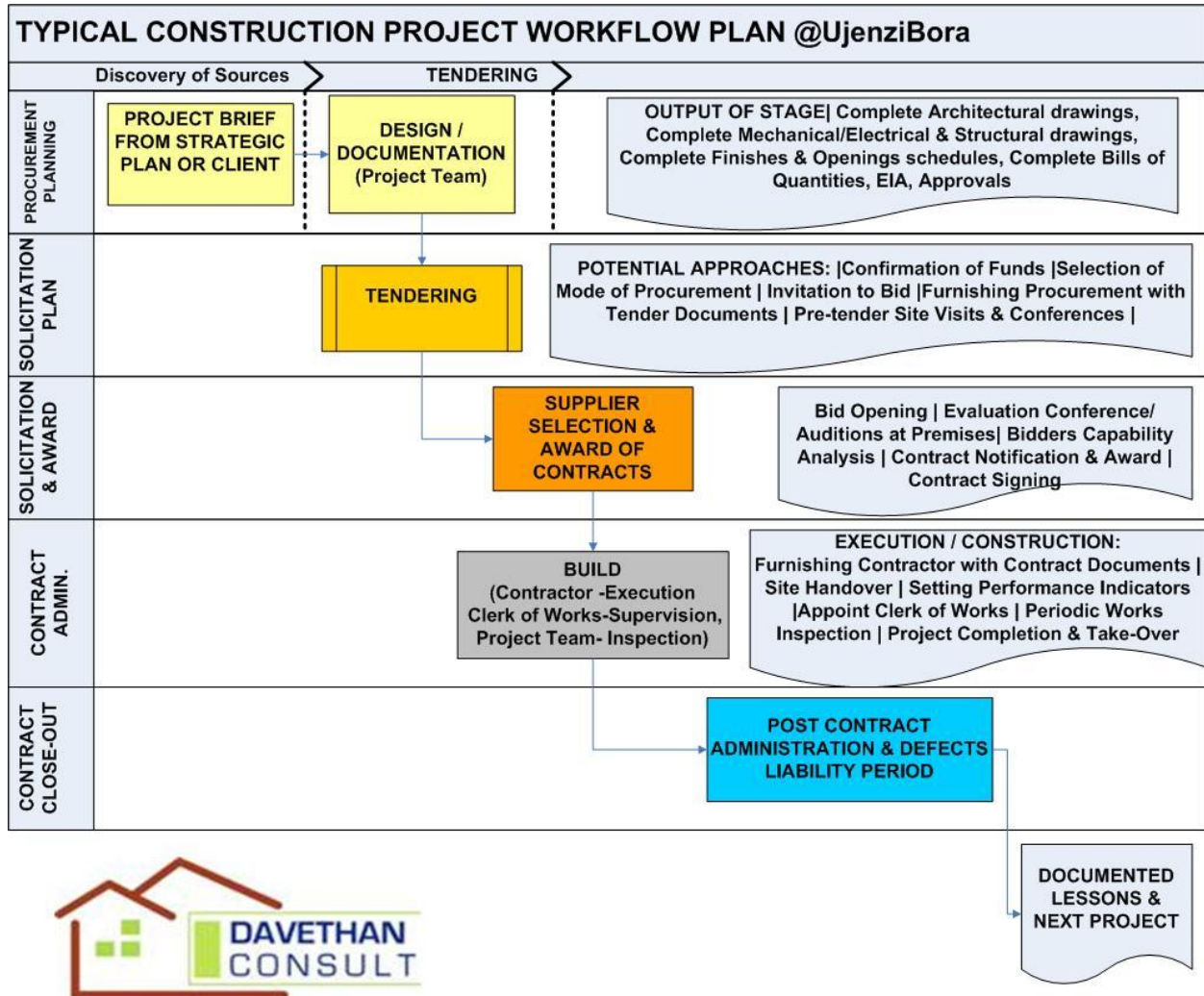




Example: Alternative method of showing work breakdown structure: Use of flow chart



Example: Alternative method of showing work breakdown structure: Use of tables and flow charts



Project Charter

Business Case:

SDG SIPL is a development centre for a fortune 5 company. For the management of internal IT Infrastructure issues, they have an internal tool named infra central which is used for incident, problem and change management of IT assets in the organization. Of late it is being observed that the concerned department is always under a lot of pressure leading to SLA Misses, lot of rework, loss of productive hour, and hence needs urgent attention.

Problem Statement:

On analyzing the last for the last one year we observe that out of total 6556 ticket raised in the year 09-10, 43.7% tickets have been opened for Software related issues. Too many tickets being opened is adversely impacting the department's ability to serve their customers well and often critical SLAs of OTA, OTC are being missed etc. These and the other challenges is impacting the productivity of the employees sometimes leading to the schedule slippage and in turn customer dissatisfaction etc. Additionally, the increased work pressure of the department is preventing proactiveness and preventive maintenance leading to lot of rework, absence of permanent fixes of issues etc.

Goal Statement:

This project targets to reduce the number of tickets in the software category by 1/3 in the next one month.

In Scope:

All processes, documents that contribute to the software related tickets being opened by the teams, including but not limited to IT Infra Internal Processes, provisioning processes, exit processes etc

Out of Scope:

Software licensing related processes are not deemed to part of this project

High Level Project Plan

	Target Date	Actual Date
Start Date	Xxxx	Xxxx
Define	Xxxx	
Measure		
Analyze		
Design		
Verify		



Example: Documenting Summary Project Plan

