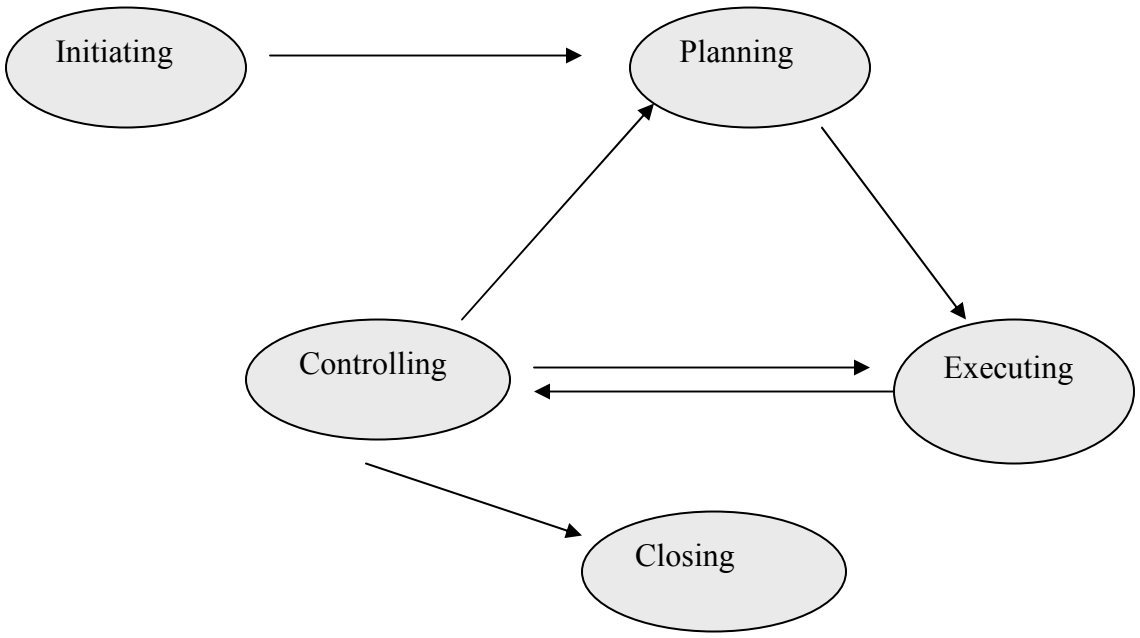
Project Management

{The documentation pulls from the standard Project Management Principles as described in the PMI's PMBOK. Supporting information is also referenced to the PMP Study Guide by Kim Heldman.}

The methodology outlined in this document draws on established project management principles as documented and practiced by the body of project management professionals internationally. This document attempts to simplify the process (particularly for persons not officially PMI/ PMP trained) and make it an easy step by step operation as far as possible.

The processes involved in project management fall into one of the following categories (see diagram) and are interrelated as shown.



Initiation

The Project Charter

The Project must be initiated by a formal document – the Project Charter.

The Project Charter is a document that recognises the existence of a project. It should include (among other things)

a) a statement of the purpose of the project i.e. the business need it was undertaken to address
b) a description of the expected outcome i.e. stakeholders expectations

In addition, the sample template includes:

a) Goals or objectives
b) Deliverables
c) Requirements specifics
d) Constraints and Assumptions
e) Strategic plans and Policies (related to the project)

The project charter provides the project manager with the necessary authority to draw on appropriate organisational resources.

The project charter must be signed and issues by management – someone with the appropriate authority level to authorise the resource use. This person may be the project sponsor, the budget holder from the primary functional area to be served, executive management, or the department manager for small department-specific projects. Large project may require multiple signatures.

The project manager, sponsors and primary stakeholders must receive a signed copy of the project charter.

Your project documentation now contains:
1. Project Charter
2. including Product Definition
3. including Goals and Objectives
4. including Deliverables

Note that as the project progresses and more information is gained and goals, deliverables, product definition may need to be expanded and / or revised. This is particularly so in the planning stages. This is called progressive elaboration.

Planning

Planning establishes the framework in which the project will operate, sets the boundaries of both project and product, schedules the resources, lays out the roadmap for execution and control, always focussed towards meeting or exceeding stakeholders' expectations.

Determining the Stakeholders
The project manager has newly been assigned and the first task will be determining whose expectations you are supposed to meet or exceed. It is useful at this point to construct a Stakeholder List. *See template.*

Let us briefly describe the common areas of planning on most (or all) projects.

Planning the Project Scope

Project Scope Planning must produce a written Scope Statement and a Scope Management Plan. The project manager's main target at this point is to accurately document the project goals, deliverables, requirements and boundaries. This is documented in the scope statement which will serve as a baseline for future decision concerning the project. The Scope Management Plan describes how the project scope will be managed, how change control will be integrated, how they will be identified and classified.

At this point the Project Manager is in place and other individuals might have been assigned so there are resources to begin information gathering. Methods of information gathering will include conducting interviews with the primary stakeholders, reviewing the documentation from similar projects, interviewing experts in the subject and prospective functional users. The purpose is to develop a more complete understanding of the product, the scope of the project, expectations and requirements.

It is important for the scope statement to be clear and concise because you are going to use this document to determine if the project has been completed successfully i.e. meeting or exceeding stakeholders' expectations.

Note that some of the information being collected here already has its genesis in the Project Charter.

Note – the scope statement is the baseline for the project which means that questions on the project or change requests can be referred to what's documented here.

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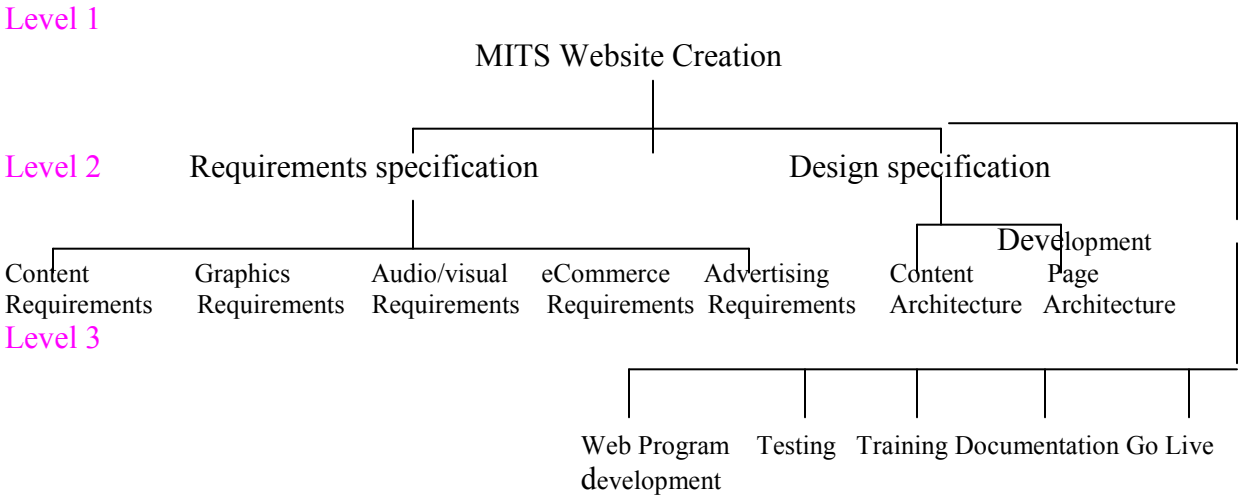
The **Scope Management Plan** helps the project manager to manage the project scope and the changes which are inevitable over the life of any project. The scope management plan is a document describing how the scope will be managed, how changes will be incorporated into the project.

Another fundamental output of Scope Planning is the **Work Breakdown Structure** (WBS). Creating the WBS involves breaking down deliverables and project sub-components into smaller more manageable components in order to a) identify cost points and time points; b) set a baseline for performance measure and for project control c) facilitate clear responsibility assignments. WBS is a deliverable-oriented grouping of project components that organises and defines the total scope of the project. The highest level is the project and the lowest level is called a work package which may be the individual task (on small projects) or a group of tasks making up a specific job.

You may wish to include **Milestones** on your WBS but if you do include it here it should be included on your project schedule (later). Milestones are checkpoint events which to indicate progress e.g. "Training Document Signed".

The following serves to illustrate the hierarchical structure of the WBS



The task level (if included) is expressed with verbs

Identify Characteristics | Specify graphic etc. Create storybook | create index | Create layout

It might be more convenient to use a table format (see template).

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- including Deliverables

Stakeholders List

Project Scope Statement
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- including fuller treatment of Deliverables
- including Requirements definition

Work Breakdown Structure (WBS)

Resource Requirements

The question to be answered by this planning activity is - What are the resources needed and in what quantities to execute the project? To answer this question, you have to call on a) Expert judgement ; b) Historical evidence from previous projects; c) an examination of the WBS for a determination of the areas of need ; d) discussions with persons having experience in the particular area. Some of these may be in the Departments, they may be stakeholders, they may be external (such as your vendors and consultants), they may be persons already nominated to the teams.

The examination should produce a Staffing **Requirements List** and an **Equipment Requirements List**.

The next output is an **Organisational Chart** which shows the reporting and working relationships in the project team. In addition, on larger projects, it might be useful to produce an Organizational Breakdown Structure (OBS) which relates the WBS (at the lower levels) to the organisational elements.

Templates:

Staffing List
Equipment Requirements List
Organisational Chart

Communication Strategy

The focus of your communication strategy is to address the following:

Who is the communication target?
What is to be communicated to the various persons or groups?
When is it to be communicated?
How is it to be communicated?

Consider the persons included in the communication ring
The Customer (i.e. budget holder)
Primary Stakeholders (listed previously)
Management Committee
Project Manager
Teams
Contractors

Consider the communication methodology
Project Team Meetings
Formal reports
Informal Reports
Informal contacts (email, telephone…)
Co-location i.e. having the project team in same physical working environment to enhance informal dialogue, cooperation and collaboration
..etc

Consider the communication Items … The list is not exhaustive.
Project Team meetings
Management team meetings
Performance Report
Project Review
Status update
Change Request
Decision documentation
Contract Closure report
Payment Submission
Deliverables submission

Consider the communication periods…
Work Teams should meet regularly and often (possibly weekly) for project review or team review.
Management team (or Committee) should also meet regularly but less often
It is usual for Performance Reports to be produced at regular intervals but alternatively it could be linked to particular milestones
Status update reports should be produced at regular intervals

A good communication system is fundamental to good project results. As the project manager your business is to ensure that all member of the project team and all stakeholders are kept appropriately informed. It is more important for the project team to be given more information than you think they need than less than they actually need. The project team should be regarded as participants in the scheme of things not just actors to be handed a task. Involve them in planning and in the formulation of ideas and strategies. They are often specialists in their area of assignment with general knowledge about matters on the ground which often prove to be of consequence.

About Meetings

Type of meeting	Purpose	Regularity
Project meeting	To discuss all issues concerning the project on the ground. Team members should give a report of the status of their tasks, issues arising, projections, etc This is a forum for participation not project manager's presentation	Every two weeks or every week depending on the project or the phase it is in. If a number of critical issues with short term duration , then you may wish to meet more often than otherwise
Individual team meetings	This refers to persons working together on a particular deliverable or aspect of the project (such as Data Cleanup).	Often – these are short meetings and can be called by anyone on the team. As required, it may be extended to include persons from other teams. Meetings may be online if it is not practical to meet in the same physical space
Team Leader meetings	To discuss and collaborate on issues concerning major deliverables	As required Meetings may be online
Management Committee meeting	To review performance To review status To examine change request and make decisions	Monthly to quarterly depending on the project

Meetings should begin on time and end on time. A specific timeframe should be scheduled and there should be an agenda. Persons to the meetings must be canvassed for agenda items. The facilitator may or may not be the project manager.

Templates included:
Communication Strategy
Project Status report
Project Change Request
Project Performance
Team Report

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- including Requirements definition

Work Breakdown Structure (WBS)

Resource Requirements
- Staffing Requirements
- Equipment Requirements
- Project Organisation Chart

Communication Strategy
- What is communicated … to whom... when and how
- Meeting plans / strategy

The Project Schedule

There are a number of steps to determining the project schedule.

Activity definition

This is a breakdown of the lowest level of the work breakdown structure (the work package) into its constituent tasks or activities. You should try to detail the breakdown to a level where the task is measurable in terms of cost and time and where specific resources can be applied. This is in order to be able to measure performance and to identify where delays and over-runs occur. For instance:

Program Coding (is the work package)

- Develop user interface code
- Create the report generator
- Create scripts for data entry imports
- …

All activities must be defined

Activity sequencing

Here we are ordering the activities in the sequence in which they should occur. It is probably simpler to keep them grouped under the sub-component or work package they belong to. You will need to observe the dependencies which are:

- an activity having to end before the dependent activity can starts (called finish to start) *- this is the most common*
- the dependent activity must start before the other can fining (start to finish)
- the activity must finish before the dependent activity can finish (finish to finish)
- the dependent activity must start before the other activity can start (start to start)

You will also notice that many activities are not directly dependent on another and can be started at any point over a wide timescale. Advice: give them a lesser priority in terms of resource allocation if there are competing activities with constraints.

Duration estimating

You now need to estimate the amount of time each activity will take. Given the project timeframe (which is usually a constraint) you now need to develop a project schedule given the above information.

Project Schedule

Use a good software like Microsoft Projects to carry out this activity. Enter the activities as you have identified and sequenced them; enter the duration. Enter the start dates, activity by activity. Enter the dependencies. The software should calculate the finish date. After completing this, notice the project end date. If it is unacceptable you may wish to revisit the duration or the overlap of tasks. You may even remove whole sections and contract them to third party consultants or other departments.

You will need the team effort, expert judgement, evaluation of past projects, consultation from persons with experience to arrive at a realistic project schedule.

Note Remember to add buffer time to your schedule particularly for tasks where you are using new technology and tasks which are critical.

Adding Resources to your Schedule

The next step is to add resources to the schedule. Microsoft Projects allows you to create your resource list and apply them on a task by task basis. It is not a common University practice but it is a good idea to apply costs to the resources in order to obtain an estimate of the cost of the project. This becomes the project budget. A **budget** requirement document must be produced for management acceptance.

See template "Budget Requirements"

See template "Project Schedule"

We now have a sufficiently complete project schedule which constitutes our working document for project task execution, for performance evaluation, for status assessment.

Further to Planning the Management of the Project

Use this discussion to help you to think about the primary areas for consideration in the overall management of the project.

The *management plans* may be formal or informal, highly detailed or not, but it is important to take them into consideration in the overall planning of the project. It is very important that the entire project team is informed of these processes.

There should be a **Scope Management Plan** describing the strategy for managing the project scope. Here you will define the rules which apply to making changes which affect project scope. *Remember that project scope is integrally related to the product or service you have set out to produce*.

Let us use the SAS Project to illustrate the above. The project scope is defined as (say):

- implementation of general person
- implementation of academic history
- implementation of alumni module
- implementation of admissions module
- implementation of registration module
- implementation of web for students
- integration with Finance module

Your Scope Management Plan may state the level of authority required to effect a change to the above, the procedure to be followed, the persons to be informed.

There should be a **Schedule Management Plan** which defines how changes to the schedule will be managed. It might include the procedure to follow to implement a schedule revision and how the schedule versions are managed.

There should be a **Cost Management Plan** which describes how cost variances will be managed. We need to ensure - referring to the University - that we are keeping an eye on the cost. The plan must provide for tracking costs regularly and comparing actual to budget to the level of accomplishment.

There should be a **Quality Management Plan** which describes how the project team will ensure that the quality standards and regulations adopted by the project are ensured. (see topic below)

Quality Management

Project quality management addresses both the quality of the project and of the product. Meeting stakeholder requirements but overworking the team may lead to high turnover and higher costs or eventual delays. Meeting project schedule objectives but rushing or avoiding quality inspections may have other consequences.

Project quality management includes the processes required to ensure that the project will satisfy the needs for which it was undertaken.

Quality bears on scope so the scope statement should be adequately defined.

Quality is "the totality of characteristics of an entity that bear on its ability to meet stated or implied needs" (PMBOK). Quality must not be confused with grade. You can have a high quality software product of a low grade i.e. no errors, documentation good, user interface attractive etc but not feature rich. Low quality is always a problem but low grade may not be. The project must determine both the quality standards and the grade level. Grade is therefore a ranking.

Quality seeks to ensure:

- Customer satisfaction – This involves conformance to specifications, fitness for use, real benefit
- Prevention over cure (i.e. prevention is better than cure)

You need to determine the Quality management processes /standards / that your organisation adheres and ensure that the project adheres to them also (e.g. accounting standards).

There may be other regulations and standards specific to the product or the type of project. These must be identified and documented and your quality management plan will describe how they are going to be upheld. *Adage - Quality is planned in not inspected in.*

For quality planning you should have documented (at least)...

1. Standards and regulations which apply to the project
2. Organisation's quality policy and standards adhered to, with implications for the project
3. Checklist - tasks or deliverable to be verified for completion or for quality fit. There may also be a checklist of results (or particular elements) to look for.
4. A quality management plan (referred to above)

See templates

Checklist – items to be verified
- *results to look for*
- *what to do*

Documentation of quality standards and regulations which apply to the project

Organisation's quality policy (listing of the appropriate items may be sufficient)

The area of quality management is often taken on by another entity (i.e. not the project team), possibly the Quality Control Department.

Risk Management

The idea of risk planning is that you identify all the risk, evaluate and quantify them, then come up with a plan to deal with or avert them. Risks may be internal, (resource related, the planning process ..) or external such as Govt. laws or policies, environment related.

Risk management includes

- identifying the primary risks and how they might affect the project
- quantifying and prioritising
- development response to the major risks identified

Risk identification seeks to identify all risks that might impact the project, documenting them and their characteristics. You might want to start with discussion among your project team then open it up to include particular stakeholders, and subject experts. Look for risks in areas such as (not exhaustive list):

- Budget / funding
- Schedules
- Scope or requirements changes
- Technical issues (such as skill level, technology changes..)
- Personal issues (e.g. team conflicts)
- Contracts
- Business risks (e.g. will the product be accepted by the market?)
- Legal risks
- Environmental

Risk quantification is concerned with evaluating risk and risk interactions to assess the range of possible project outcomes. In the final analysis it is concerned with determining those risks which warrant response.

Approaches to Risk Response Planning:

All the following approaches are relevant to one situation or another.

Risk avoidance: planning to avoid the event or eliminating the cause of it. Example – ensuring a rigorous security system with respect to user access to data will / may avoid many of the covert acts of man and some user mishaps.

Transference: transferring the consequences to a third party such as Insurance or a third party contractor

Risk Mitigation: reducing the probability that the risk event may occur and reducing the impact to a level where the outcome can be absorbed

Contingency: planning alternatives to deal with the risk event should it occur (i.e. accepting the risk)

Templates:

Sources of Risk
Project Risks Identified / Effects determined (associated with the project schedule)
Threats and Opportunities
Risk response plan

(Note : The effect of a risk event may be positive i.e. opportunities or negative i.e. threats. The positive possibilities are also to be analysed to determine what to do about them. The fact that it is positive does not necessarily mean that the project will take it on.)

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  - What is communicated … to whom .. when and how
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- Activity (or Task) list
- Activity Sequencing & duration estimates
- Project Schedule
- Budget Requirements
- Strategy (or Plan) for Managing the Project
  - Scope Management Plan
  - Schedule Management Plan
  - Cost Management Plan
  - Quality Management Plan
    - Standards and rules that apply to the project
    - Organisational policies which apply
    - Checklists
    - Quality Management plan
  - Risk Management Plan
    - Risks – listed , prioritised
    - Responses to the major risks

Procurement Management

We are narrowing our treatment of procurement management to include only the purchase of goods and services required for the project. This may extend to including the purchase of contract services but not the processes of contracting (i.e. solicitation, selection of contractor etc). Refer to the paper on third party contracting *"Guidelines for Third Party Contracting for IT System …"*

The planning exercise must produce a Procurement Management Plan.
Procurement Management Plan describes how the procurement process will be conducted and managed. It describes the integration of the procurement process with the rest of the project processes including information such as:

- Timing of procurement in relation to the project schedule
- The procurement process – this is directly related to the rules and the processes governing the University's procurement process
- The University's procurement policy and rules which affect the project should be identified (e.g. the need for 3-bids for purchases over $x). These rules may influence procurement timing.
- The payment process - this may be related to deliverables. The conditions must be stated (terms etc)

Templates:

Procurement schedule
Payment schedule
Procurement process and rules documented

Planning Your Change Control

Changes will always be requested, some will be allowed to occur and some won't. The project management must control the changes allowed (or forced) by ensuring that there is a process to recognise changes, authenticate them, incorporate them and communicate them. We have already noted that the Management Plans – *Scope Management Plan, Schedule Management Plan, Cost Management Plan, Quality Management Plan* – describe how changes are managed in these major areas of project management. This section will outline the infrastructure within which changes may be managed.

Define the basic rules governing dos and don'ts. For instance :

- ✓ Customisation is not allowed unless the requirement is essential to product quality standards
- ✓ All changes brought on by changes in University policy will be accommodated
- ✓ The project schedule will not be changed unless …. Instead as far as possible resources will be contracted to maintain the established timeframes.
- ✓ Etc

Define the roadmap to initiating a change request through to its incorporation into the project. It might look like this:

- ✓ Making a request for change (who from .. who to)
- ✓ Processing that request – accepting or rejecting
- ✓ Adjusting the project processes if appropriate. Documenting the adjustments
- ✓ Communicating the decision, and the change

What institution will carryout the above? A tried and tested approach below:

1. Establish a Change Control Board to take decision on changes. If there is already a Management Committee this responsibility may be assigned to the committee.
2. Determine what changes can be authorised at the level of the Project Manager. Note that policy changes may require a decision at University Executive level.

Changes often require revision of the project. These must be documented and incorporated and communicated appropriately.

Templates:

Change control rules
Change Request
Change Authorisation
Communicating the (expected) change effect

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  - Quality Management Plan
    - Standards and rules that apply to the project
    - Organisational policies which apply
    - Checklists
    - Quality Management plan
  - Risk Management Plan
    - Risks – listed, prioritised
    - Responses to the major risks
- Procurement Management Plan to include:
  - Description of the process
  - The strategy for payment
  - Procurement Schedule (or plan)
  - Organisational Policies which apply
- Change Control Plan
  - Rules governing Do's and Don'ts
  - Change Request process from initiation to authorisation
  - Change control Mechanism & Communicating the change

Execution

Execution involves three primary operations or processes:

- ✓ Project Plan Execution
- ✓ Team Development
- ✓ Communicating

Project plan execution is about putting the plan into action. This includes the whole plan (as described in the previous sections) but particularly the Project Schedule.

If the Project Schedule is sufficiently granular it makes it a lot easier to manage the tasks, to assess completion, to place responsibility. Project Plan execution requires that each resource team carries out the tasks assigned, attempting to complete them within the scheduled period and conforming to the quality standards and rules defined in the quality plan. The Project Manager will ensure that resources are available on time and will ensure that there is a process in operation (via communication) to keep tabs on conformance to schedule, to cost, to quality. The Project Manager must bear in mind the procurement process of the Organisation (outlines in the appropriate template under Procurement Plan) in order to obtain resources on time, and make payments on time, authenticate the procurement / payment process.
The Project Manager also has to keep a close eye on the Risk Management Plan. If this is well constructed (indicating the primary areas of risk, type of risk, type of response) it will make it easier to spot risk events. Look for indicators, such as - a) performance lagging behind expectation ; b) long delays in vendor payment and other aspects of the procurement process ; c) team disquiet. Try to prevent over trying to cure.

Team Development

The Project Manager's responsibility is to bring the team together, keep them headed in the same direction using varying strategies of reward, recognition, motivation. All newly formed teams go through *four stages of development:*

- **Forming** – coming together as a team, introductions; interactions tend to be formal
- **Storming** – confrontational ; staking out ones territory; vying for position and control and domination
- **Norming** – settling down to accept the environment and the outcome of storming
- **Performing** – getting down to business

The Project Manager needs to establish appropriate authority and ensure that Storming is contained and that it does not last longer than is appropriate and does not eventually become a threat to the viability of the project team. Communication skills and HR management are useful in this regard. Your communication plan should facilitate this requirement. *Note that the sample template includes Team meetings, project meetings etc.*

All team members need to understand the direction and the objectives of the project in order to be expected to work towards them. As Project Manager you must also ensure that each person understands clearly the job assigned to him and what is expected. Otherwise one cannot ensure or expect realistic deliverables.

Effective teams are energetic and enthusiastic. Ineffective teams are often tired, experience dropouts, tasks are delayed and they are often dysfunctional. Both are created!.
Some of the benefits of effective teams are:

- Conflict resolution
- Commitment to project
- Commitment to project team and project manager
- High job satisfaction
- Good communication
- Belonging and Purposefulness
- On time task completion
- Going the extra mile

You will help to create an effective team by:

- Ensuring real participation in decision making, project planning, all areas of project execution. Real participation means that the views and opinions of the team are not only requested but taken into consideration.
- Ensuring clarity – each operator must clearly understand what is expected, how it affects the overall scheme of things
- Skills development (training) where necessary – the team must receive the appropriate training to carryout the tasks. This is not suggesting that we train persons in all functions to be executed but that where new skills are required to carry out the task the respective persons are appropriately trained
- Co-location – locating the team together in the physical space either for general working or for specific collaborative activities

Communicating

Communication does not stand on its own. You come across it in Team Development, in Project Execution, in Planning .. in every aspect of the project. Think about this in constructing (and revising) the templates.

Good communication skills foster an open trusting environment.

Communication is Information exchange. Information exchange has 3-elements namely – sender, message, receiver. The sender must take the responsibility to construct the message in such a way that the receiver will comprehend it as he intended. Messages must be clear as simple as possible, and to the point. Keep in mind that the receiver has filters which may be based on concepts held, emotions, knowledge, language, culture and so on. The sender must be aware of these and ensure as far as possible that the message is so constructed as to be communicated

appropriately. The receiver has the responsibility to understand correctly and act on .(Note that the sender encodes the message i.e. puts it in a form to understood possibly including pictures or other enhancements, the receiver decodes it) . It is transmitted from sender to receiver.

Forms of communication include written or verbal. Both might be formal or informal. Project status meeting and project status reports usually take the formal approach. Communicating with stakeholders and team members outside of the project status meetings should be informal to encourage the airing of problems and issues and ideas.

… Conflict Resolution

Conflicts are inevitable when two or more persons are working together. Conflicts arise when parties have differences of opinion, goals, needs, desires which are incompatible with each other and when one would restrict or block another. Simply put, conflict is the incompatibility of goals and one party resisting or blocking the attainment of those goals by another usually for reasons which he sees to be quite justifiable. This is a normal occurrence in any working or sharing relationship. But it has to be managed in order for the objectives or the outcomes of the project to be realised. It will cause persons to work in divergent paths or parallel paths and thus dilute the effort of the whole. Following are some of the ways to manage conflict – Forcing, Smoothing, Compromise, Confrontation, Withdrawal

Forcing : One person forces a solution on the other person or on the party. This may be project manager ("the boss"). It is a permanent solution, the forcing party wins. It is not necessarily a good one. People will go along with it but maybe with lack lustre. It is not a good team building strategy. *If you have to use this strategy be watchful of its effect, you may have to do some pacifying later*.

Smoothing :This is where one person is able to make the problem (maybe by articulation) seem lesser than it is. Everyone goes away thinking that – "what was the big thing anyway?" . This is not a permanent solution. If there were really fundamental problems they will resurface. This is a lose-lose resolution technique. *Not good.*

Compromise: This is where the persons agree to "give and take" for the greater good of the project. The persons involved decide what they will give up and the negotiation continues until there is a resolution position. This is a technique where there are no winners or losers but it is a permanent solution if firm commitments are made.

Confrontation : This is a solution in which the facts of the situation are researched and brought to bear on the resolution decision. The thinking here is that there is one right solution. On the basis of the facts the resolution is made. This is the technique most often used in project management. It is permanent, win-win resolution technique.

Withdrawal: this is when one person gives up and withdraws from the resolution discussions refusing to discuss the conflict. This is probably the worst outcome. It is a lose-lose situation. If this happens you may have to pacify later ; have one to one discussions with the offended party ; do some shifting around in the team … for instance.

Group sizes make a difference when you are trying to resolve conflict. Groups of 5-11 have been shown to make the most accurate decisions (from PMP Study Guide).

Project managers with excellent communication skills can work wonders on a project. The converse is also true !

Controlling

Controlling processes are concerned with monitoring performance to determine where there is variation from the established baselines. Checks should be done regularly in order to prevent a manageable situation becoming a large threat to the project.

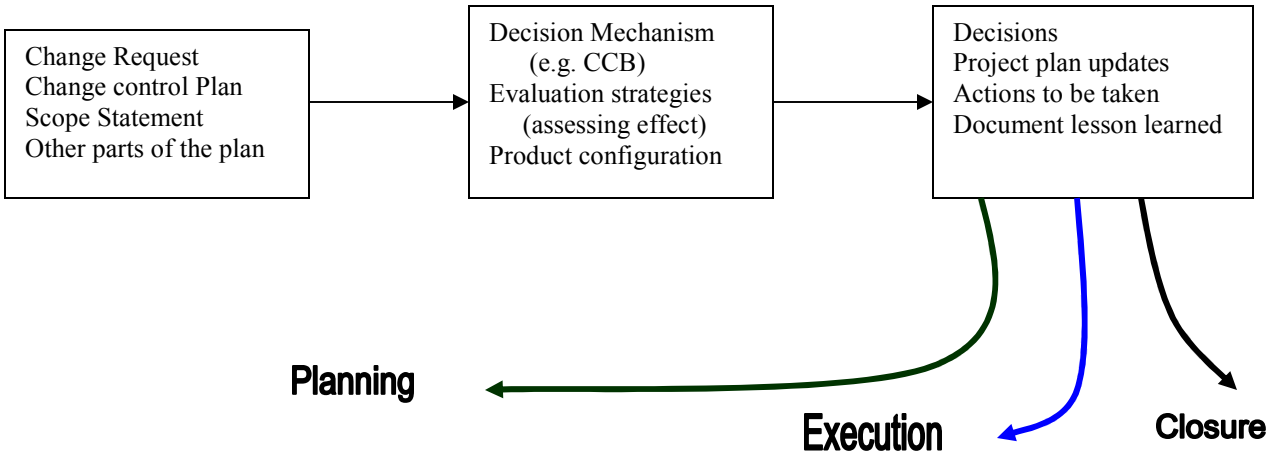
Controlling is to a large extent concerned with the management of change.

Change occurs all the time and for many reasons. They should be presented to the project via a change request form. Change requests may arise from within the project team where team members discover better ways of doing things; from the sponsors and / or stakeholders, as a result of risk measurement strategies, and so on. Changes sometimes occurs without the Project Managers prior knowledge by team members trying to facilitate a "small" request. This should not be encouraged but it does happen so ones needs to determine a way of recording, even after the fact.

Not all requests for change will be accommodated. The decision mechanism which you would have established under "Planning your Change Control" will determine what changes are incorporated into the project. Changes may be beneficial but even so they must be evaluated before being adopted.

Changes usually affect the triple constraints – cost, time, quality. It may also affects scope. When this is determined to be the case the product configuration must be re-evaluated for quality and goodness of fit. Scope changes must be taken very seriously, document, and broadcast to the stakeholders. You want to ensure that a) stakeholders expectations can be maintained ; b) you are not working with constantly shifting project boundaries.

Typically there are so many changes to a large project that one has to give consideration of what to include as a change to baseline i.e. will require a revision of schedule and the cost structure. It must affect the processes in a significant way.



Templates:

- *Decisions document*
- *Lessons learned document*
- *Product configuration changes*

Closing

Closing is as important to your project as any other of the five identified processes – Initiation , Planning, Executing, Controlling, Closing. It must be done officially when the project comes to an end. A project may come to an end by being completed, being abandoned, or by being merged into something else.

Closing the project involves verifying the project results and collecting together the documentation for presentation and posterity.

Templates:

Project Closure

Possible documentation content

During the Executing , Controlling and Closing processes you should be documenting (cf templates) as you go along and collecting the documents associated with the project. The following is a list of some of the typical documents to be collected. The list is by no means exhaustive.

Staff lists and assignments (actual persons named)
Minutes of Meetings
Communications – to stakeholders and response where supplied
Communications – reports
Report on staff development activities (documentation, course evaluation …etc)
Schedule revisions
Cost / Budget revisions
Changes to product configuration
Changes to project scope
Other changes
Change requests
Change authorisation
Risk events / evaluation / response
Completed checklists
Procurement documents – Purchase Requests, Purchase Orders, Invoice, Payment evidence
Close out documents

Glossary of Terms

A project is a temporary endeavour undertaken to create a product, service or result. Unique because no two outcomes are ever the same ; temporary because they have definitive start and end dates. Projects are complete when the project goals are achieved. A successful project is one that meets or exceeds expectations of the stakeholders

Project management is the application of knowledge, skills, tools and techniques to meet project requirements. Project management is a process that involves several things including planning, putting the plan into action, measuring progress and performance. There are always constraints which require the project manager to perform balancing feats in order to deliver a successful project. – time, money, quality and of course resources are some of the typical ones.

The Project Sponsor is usually an executive in the organisation who has the power and authority to make decisions and settle disputes or conflicts regarding the project. The sponsor takes the project to the limelight (so to speak) and gets to call the shots on outcomes. Sponsors are actively involved in the Initiation and Planning phases of the project but function less during execution and controlling.

Stakeholders – persons or organisations who have vested interest in the outcome of the project. A Project exists to bring about a unique product or service

Project Managers' skills:

- communication : explicit, clear, complete – excellent communication skills is one of the primary requirements
- organization skills
- budgeting skills – preparing cost estimates for project budgeting – need knowledge of finance and accounting principles, Cost to be linked back to project activities and expense items in the project budget.
- Problem solving – problem solving follows two steps ; first you define the problem (not describe) then you take a decision based on analysis and options
- Negotiating and influencing
- Leadership – impart vision, gain consensus, establish direction, inspire and motivate. Management is also a key requirement i.e. focusing on results, getting the job done
- Team building and human resource management

Progressive Elaboration is the process of determining the characteristics and features of the product of the project. It is carried out in steps in detailed fashion.

Document compiled and presented by D.Mallett