Project Management

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Pure & Simple

Introduction

Project management is a very important function to increase the chances of success for just about any endeavour. It provides the road map from idea to completion, it is your vision's GPS.

We all manage projects, whether in business or private life. Launching a new product is as much a project as is a basement renovation. Intuitively we develop schedules, budgets, people requirements, etc. Often we keep these in our head or on scraps of paper, even task lists. Sometimes this is enough, most often it isn't. Projects are often late, over budget, or don't meet the expected results. To avoid these pitfalls, the discipline of project management has been developed.

Project Management is a recognized educational program, taught in universities and colleges, leading to certificates and professional designations. Some professions learn project management as part of their regular university curriculum, just as I did in my Engineering Program at McGill University. I later refreshed my knowledge with a Project Management Certificate from the University of Toronto.

With all this education available, what is the purpose of this course?

Over 30 years of project management have allowed me to bridge the gap between theoretical learning and practical implementation of project management. The content of this workshop covers all aspects of the theory, but it provides it in a simple step by step format with examples. Instead of hundreds of pages of course material, complex constructs, or weeks of study, this experienced based workshop has you up and running in **ONE DAY**.

Developing a project plan is a mini project by itself, you will learn the steps and how long they take. We are available to facilitate your first project or guide you through it.

Tom Sauder January 2016

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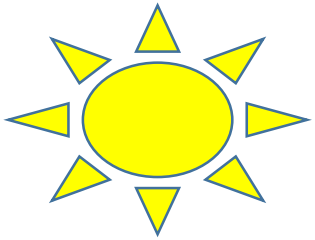
Pages with the sun offer Special tips based on experience



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Project Conception

Project Creation and Approval Steps:

A statement of an idea does not create the existence of a project or imply commitment of resources to work on it. Doing so would eventually result in organizational chaos. A lot of organizations struggle with the concept of project approval. So let's define a simple process to get a project going:

1. Project Idea Generation
   Anyone can do this

2. Project Idea Acceptance
   The functional leader of the person generating the idea must approve the idea.. If a brand manager generates a new product idea, then the leader of the marketing function needs to accept it. After all, if the functional leader doesn't buy in, then it will be difficult to get support from the rest of the organization. The process used to get functional acceptance is up to the function itself.

3. Project Development Approval
   It requires resources to develop the project. If the resources (people, money) are contained within a function, then the leader of the function can approve the project development. If the project is cross-functional, then the leaders of all functions involved need to get together and agree on approval. Some organizations have formal processes established, if you don't, following this workshop will establish one for you.

   With the approval of the project development, two key individuals need to be identified up front:

   Project Manager: The person responsible to lead the project to conclusion
   Project Sponsor: The person supporting the project manager and clearing obstacles

Project Conception

Project Creation and Approval Steps:

4. Project Initiation Charter Development & Approval
   The project manager develops the charter and the project sponsor approves it. It starts with stakeholder interviews.

5. Project Plan Development
   The project team identified in the charter develops the project plan

6. Project Plan Approval
   The project sponsor, with support from the project team, gets approval to accept the project plan, committing human and financial resources.

7. Project Implementation
   The project team executes the project plan

Project Initiation Charter

Stakeholder Requirements:

Stakeholders are individuals or groups who will be impacted by the project. It is important to understand what each of the relevant stakeholders expectations are of the project. Misaligned stakeholder expectations are a major cause of project delays, cost overruns, and frustration. Stakeholder requirements are the basis for the development of the project initiation charter.

The following is a list of typical stakeholders:

- Person who comes up with the project idea
  - Example: Brand Manager: Let's develop new product XYZ
- The customers or end users of the completed project
  - Example: Sales Department
- People who need to implement the project
  - Example: Manufacturing, R&D
- Internal people impacted by the project
  - Example: Executive team if it affects the strategic plan, finances, shareholders
- External people impacted by the project
  - Example: Suppliers, Government Agencies

Project Initiation Charter

After completing, reviewing, and summarizing the stakeholder information, the project initiation charter can be completed.

Project Name:

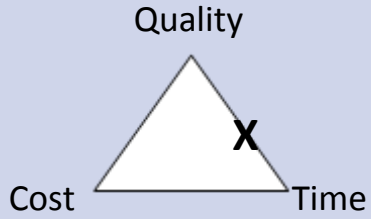
A few words clearly identifying the project, although for confidentiality reasons some projects adopt code names. Example: “New car model development”

Your Project Name:

Project Sponsor (as previously approved):

Project Manager (as previously approved):

We will walk through the step by step development of your project charter using an example. The next slide shows the sample charter.

PROJECT INITIATION CHARTER	PROJECT NAME: NEW CAR MODEL DEVELOPMENT		
PROJECT SPONSOR: KEY CUSTOMER:	Jane Dale, EVP Marketing John Rice, V.P. Dealerships	PROJECT MANAGER: DATE APPROVED:	Jim Dole, Director of Engineering October 12, 20XX
BUSINESS NEED:	We need to develop a low cost vehicle with best in class safety rating. Consumers want safety but given a choice they will opt for lower cost and less safety. Competitors are claiming low cost/high safety and threaten our market share.	ASSUMPTIONS:	1. We have sufficient human resources 2. No government approvals 3. Use existing production facilities 4. Competitors do not have our safety technology 5. Existing suppliers can deliver all materials
PROJECT DESCRIPTION:	"Starting with a review of the market this project will deliver a complete plan resulting in the launch of a new cost effective/high safety vehicle for the model year 20xx	CONSTRAINTS:	1. Produce in February for new model year launch 2. Maximum capital budget of $ XXX 3. R&D and Engineering teams are at capacity
PROJECT DELIVERABLES:	1. Market Analysis 2. Vehicle Design 3. Product Launch 4. Production 5. Financial Analysis	SELECTION CRITERIA: Check all that apply	• Compelling event √ • Risk avoidance • Strategic imperative √ • Financial benefit • Prerequisite
PROJECT TEAM:	Jim Dole (Engineering) Jill Marketing Fred Sales Beth Dealerships Joe R&D Nancy Finance Harry Engineering	PRIORITY TRIANGLE:	

Project Scope Development

The scope of the project is the total of all deliverables, sub-deliverable, and work packages. It is in essence the work breakdown structure.

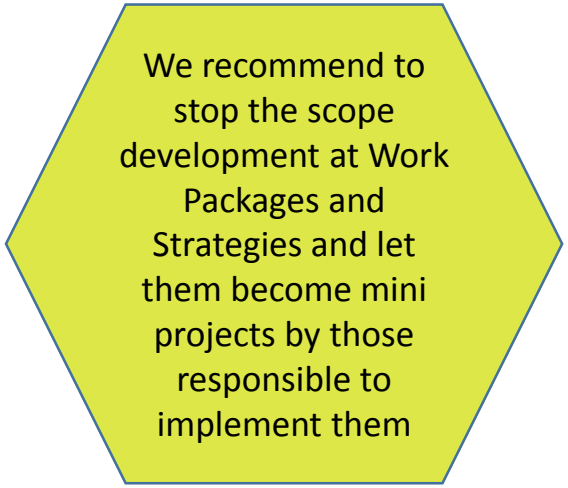
Anything that gets added to or deleted from the scope AFTER the project plan has been approved is considered a **SCOPE CHANGE.** Scope changes are one of the most common reasons for invoking the project priority triangle. A scope increase will cost money, take time, and possibly impact project quality to reclaim the cost and time. Therefore **SCOPE CHANGES must be approved by the Project Sponsor** and the team needs to **REPLAN** the project.

For regular projects the work breakdown structure flows as follows:

- Project Name
- Deliverables
- Sub Deliverables
- Work Packages
  - Actions

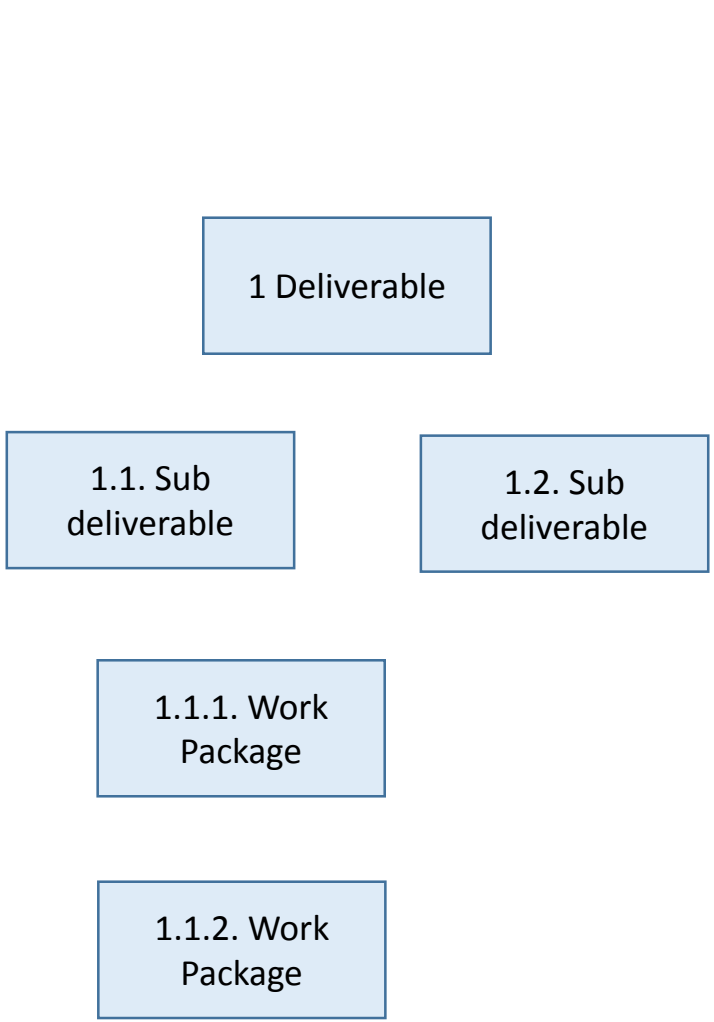
For strategic plan implementations the work breakdown structure is:

- Vision
- Mission Statement
- Goal Areas (project deliverable equivalent)
- Objectives (Sub Deliverables
- Strategies (Work Packages)
  - Tasks



Project Scope Development

The work breakdown structure will look like an organizational chart:



Notice the numbering system. It is required for subsequent project sequencing and scheduling.

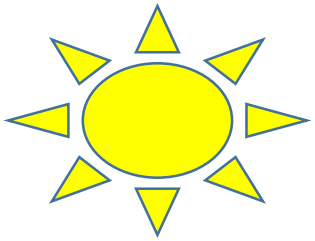
Each deliverable is numbered sequentially with a single number ID.

Each Sub deliverable belonging to a deliverable takes the deliverable's ID plus sequential numbers after the period. So Sub deliverables can always be linked to the parent deliverable.

Each work package for a sub deliverable starts with the sub deliverable ID and adds third numbers create its own unique ID and association to sub deliverable and deliverable

While Microsoft Visio can be used we suggest XLS spreadsheet to develop the WBS for reasons you will see later.

Project Scope Development



Process Tips:

The development of the work breakdown structure can be quite intense and tiring. It is a good idea to give the group a break after this day.

We show tips derived from many years of experience, offering tremendous value. This particular tip shows practical ways of developing the work breakdown structure.

Project Scheduling

Introduction:

Project scheduling determines the beginning and anticipated completion dates of the project. It involves a couple of critical activities, using the work breakdown structure as input.

Sequencing:

All items of the work breakdown structure must be arranged in a logical sequence in which they must be executed. Each WBS item must have a predecessor, a task that must be completed before the new one is started, and a successor, a task that starts after this one is completed. The key is to recognize that work packages under one deliverable must be completed before you can start work packages under another deliverable. There are several techniques of sequencing we will discuss.

Effort and Duration:

Effort is the amount of net time required to complete a task. Duration is the lapsed time to complete the task. For example John may need 8 hours of effort to complete a task, but he can only devote 10%of his time to it. Therefore it will take 80 hours of duration to complete it. Or Jane needs 4 hours to complete a task but there is a waiting period of 2 days to get an answer from someone else before the task can be completed. The duration is 20 hours. What determines the project schedule is duration.

Sequencing: GANTT Chart

Software creates a GANTT chart which consists of two parts. The task list and a timeline.

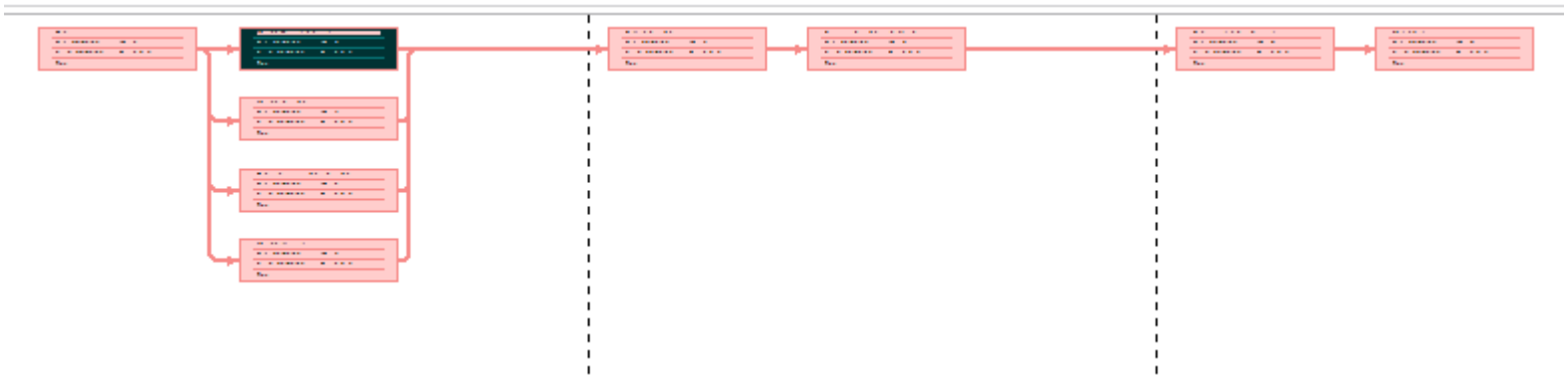
2. Live on screen – MS Project Example – task list

	Task Mode	WBS	Task Name	Start	Finish	Duration	Predecessors	Successors
1		0	Start	Wed 20/01/1	Wed 20/01/1	1 day?		2,4,5,3
2		1.1.1.	Identify the markets to analyse	Thu 21/01/16	Thu 21/01/16	1 day?	1	6
3		1.1.2.	Identify all suppliers	Thu 21/01/16	Thu 21/01/16	1 day?	1	6
4		1.1.3.	Identify share data source	Thu 21/01/16	Thu 21/01/16	1 day?	1	6
5		1.1.4.	Define time period for share data	Thu 21/01/16	Thu 21/01/16	1 day?	1	6
6		1.1.5.	Collect share data	Fri 22/01/16	Fri 22/01/16	1 day?	2,4,5,3	7
7		1.1.6.	Summarize share data in chart/graph	Mon 25/01/16	Mon 25/01/16	1 day?	6	8
8		1.1.	Past year market share by supplier	Tue 26/01/16	Tue 26/01/16	1 day?	7	9
9		1	Market Analysis	Wed 27/01/1	Wed 27/01/1	1 day?	8	

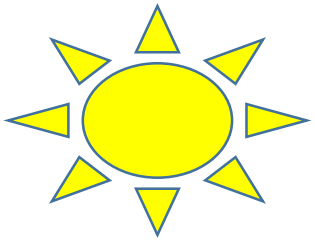
Note that the Predecessors you enter are the IDs assigned by MS Project on the far left, not the WBS Ids.

Sequencing: Network Diagram

The sequencing of all tasks and the resulting diagram/flowchart is called a network diagram. You will create it manually in the sticky method first. As you enter it into PM software the tool develops the network diagram as you go. See screen shot below:



The key is that each and every box feeds into another box except for the project “END” box. Any boxes missing output lines need to be reviewed.



Validation

Once the project has been completely sequenced, scheduled and resource assigned, the project manager reviews the output for any obvious errors, omissions, or discrepancies.

It is also important to review the **CRITICAL PATH** of the project. The critical path includes only tasks, which if late, will delay the project. All non-critical path tasks can be late without affecting the project completion date. MS Project will identify the critical path and provide a “late finish” for non-critical tasks.

There typically is an expected completion date for every project. If the output including a buffer is within expected completion date, all is good.

If the output suggests a completion date beyond the desired date, there are only four options to shorten the length of the project:

1. …..
2. …..
3. ……
4. ……

It is important to reach agreement on scope and schedule before proceeding.

RACIS CHART:

There are more resources required to successfully implement the project plan than those on the project team or identified in the project management software. In the software you identified those who take action on a particular task. There are four more functions required for each task. Together they form the RACIS chart:

R: The person responsible for a task
This is not necessarily the person doing the task. It typically is a member of the project team who is responsible to follow up with the person doing the task. It could also be the manager of the person accountable for the work.

A: The person(s) acting on the task
The individual(s) who do the work, executing the work package. These are the resources whose hours get consumed significantly.

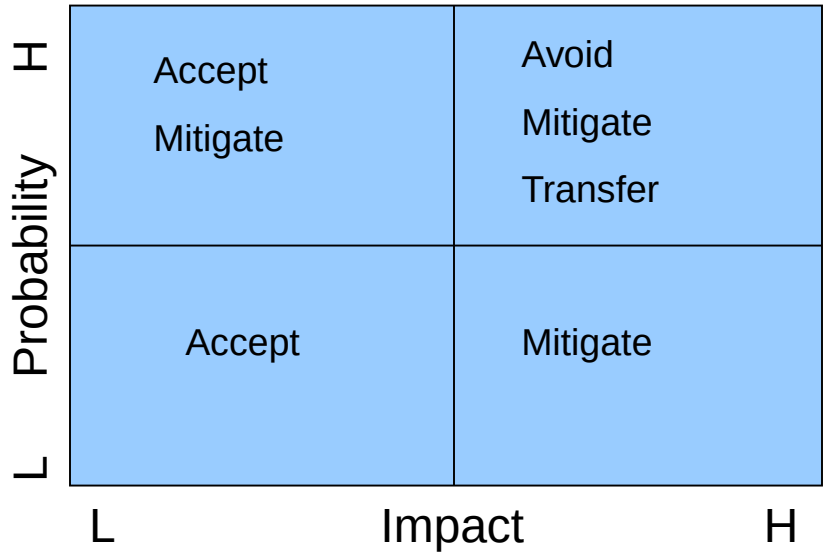
C: The person(s) consulted
Individuals whom the "**A"** needs to consult for input on the task completion.

I: The person(s) needing to be informed
Anyone who needs to be informed at specific levels of detail of the project progress. Identifying these individuals forms the basis of the project communication plan.

S: The person signing off on completion of a task
You may choose all or specific tasks that warrant sign-off that it has been completed satisfactorily. The sign-off can be by an executive manager, the sponsor, or the person who needs to work with the output of this task.

Risk Management

Risks are events that can delay the project, add costs, or impact quality. A good source of potential risks are the assumptions and constraints identified in the project initiation charter. Additional risks can be discussed in the planning meeting. We suggest the following risk management matrix.



H = High
L = Low

Impact = overall negative impact on project if risk event occurs

Accept: Accept the risk and deal with it when it occurs

Avoid: If the risk is deemed unacceptable, develop a strategy to avoid it from the beginning, or cancel the project

Transfer: Buy insurance if available

Mitigate: Manage the risk

Cost Management

The project should have a budget. At a minimum the budget must contain all costs occurred as a result of the project. The resource cost should have been identified already. Below is a starter template. You can also develop a spreadsheet with as much detail as required and summarize the budget in the template:

ITEM	BUDGET	ACTUAL
Project Management Costs		
Resource acquisition		
Travel		
Software		
Consulting		
Subtotal Project Management		
Project Deliverable Costs		
Capital Costs		
Software costs		
Permanent Operating Expense Increase		
Subtotal Project Deliverables		
Contingency (x %)		
Total Project Costs		

Project Control

Project control and monitoring is an important function. It addresses any changes or important developments relative to:

1. Schedule: Any delays affecting project completion dates?

2. Cost: Any significant overruns occurring or expected?

3. Quality: Any quality issues impacting project?

4. Scope: Any changes to the work breakdown structure being suggested?

5. Risks: Any Risk that need to be managed?

We suggest all of the above be addressed in project status meetings. The frequency of project status meetings is determined by the project team. Typically, meeting frequency is a factor of the complexity of the project. The more complex, the more frequent the meetings should be. Also, it is normal for a higher meeting frequency early on in the project. Once the team is comfortable with the project start and the mechanics of the meeting, frequency can be reduced.

The project manager is responsible for meeting preparation and content.

We suggest the meeting to be used for updates, identifying any actions required, and identifying issues. The meeting should be summarized and minutes published within 24 hours. The project manager needs to ensure all actions are done by those responsible.