

Planning and Managing a Project

Abstract

Projects are a vital part of most business. The need to manage them well is extremely important and can even affect an organisation's future. Despite this fact many businesses continue to report failed projects and mis-management. In this paper I will explore the various stages and challenges in project management, and the common pitfalls experienced by many businesses.

The Project Management Institute defines a project as: “a temporary endeavour undertaken to achieve a particular aim” (http://www.pmi.org/info/PP_PMProvenProcessBrochure.pdf). Projects differ from operations in that they are unique and occur over a set time period, and are not ongoing. In the competitive business arena, a project will almost always be constrained by resources, time and scope. It is the job of the project manager to work with these limitations whilst co-ordinating a team to produce a final deliverable. A typical project life cycle includes definition, planning, execution and finally deployment. During a project's lifetime the PM (project manager) must keep the team motivated and productive, and be able to cope with changing constraints and problems brought by the development of the project itself or external pressure.

The first thing which needs to be done in a project's life cycle is to create a proper definition. A good project definition will include an outline of the purpose, objectives, deliverables, time, scope, resources and risk analysis. This is a very important part of the project and is sometimes used as a basis for approving or declining it.

It is not always easy to write a clear concise definition for a number of reasons. One of these reasons is the technical complexity of the project. Many organisations assign general managers to the task of project management which is understandable in some cases as it is effective management skills which are most useful in this role. The problem with this is that sometimes - particularly in software development - the project manager requires a reasonable amount of technical knowledge to understand how the product could work and the challenges faced by the members of the team. Often you will find that some companies will recruit senior technical staff as project managers to overcome this problem.

Another primary reason for having difficulty producing a decent definition is that the client may not have a complete vision of the product required, only an idea of its purpose. A project manager may have to provide estimates on time, budget, scope etc. during this stage and so this is not very useful. To overcome this a PM may have to guess and fill in the holes where he/she can, but if this is done the PM needs to be sure that the client is aware of the uncertainties, particularly where constraint estimates are involved.

This emphasis on client communication was mentioned in both the Citigroup and the IBM lectures. It is crucial during the stages of defining and planning a project in order to ensure the team does not spend valuable time or money on things which are not required. It is also very useful to maintain good client communication throughout the development of the project to make sure the team is proceeding in the correct direction and to resolve any issues, ensuring the client is satisfied with the final deliverable.

The planning stage is often neglected even though it is the foundation upon which the project is built and organised. An effective plan will identify the work which needs to be completed, provide a schedule for completing it, allocate resources such as money and people to individual sub-tasks, indicate particular milestones to be reached and include contingency plans.

Evaluating risk is an important aspect of planning a project. The Citigroup lecturer defines a risk as: *“any factor which adversely affects cost, resources, effort, timeframes, quality or client satisfaction”*. The PM can help prevent project failure by assessing the risks involved in a project and producing a contingency plan to help cope with with any problems which do occur. Assessing the risk involved in a project is never easy as it requires the PM to look into the future to anticipate the possible pitfalls in the current plan.

The planning stage of a project need not be completed directly after the definition stage. It is, in fact, almost impossible to carry one out without involving the other:

“You will find that as you gather information about scope and deliverables, you can start laying out a high-level workplan. As you gather more information about the work, you can fill in more details on the workplan. When the deliverables, scope, assumptions and approach are complete, you should have enough information to be able to complete a high-level workplan. You can then use the high-level workplan to estimate the necessary budget, effort and duration - which in turn are used to complete the Project Definition.”

(<http://www.tenstep.com/1.2DefineWork.htm>)

It is likely that the plan will need attention later in the development of the project to keep up with changes and new information in the development of the project. It is important to realise that the plan is only a *best guess* of what needs to be done in order to complete the project.

During the execution of a project a PM must monitor and reward productivity of individuals in order to drive progress and make the project a success. To to achieve this a project manager must be able to successfully monitor the progress of each individual on the team. This can be a very difficult job because firstly; members of the team may have very different roles and areas of expertise, and secondly; it can be very difficult to define what actual progress is. For example, in a task which involves producing code, a project manager may define the number of lines of code produced per day as the measure of progress. This approach would be likely cause problems as members of the team would be motivated to produce masses of useless or inefficient code to promote an image of success.

Because it is difficult to monitor and reward individual progress fairly, it can be much more effective to reward the achievements of the individuals' work or the project overall. Instead of looking at the number of lines of code in the application, you will get a much better measure of success in looking at things like customer satisfaction, reliability, efficiency etc.

As problems are encountered during the execution of a project a PM must be flexible enough to overcome them. As indicated in the IBM and Citigroup lectures, there are three variables a manager has to play around with. They are time, scope and resource. If placed at each of the vertices of a triangle, you can clearly see how altering one of the variables can affect the other two. For example; if we reduce the funding to a project we are reducing its resources. This will mean that the time and/or the scope of the project will also need to be decreased to compensate. The IBM lecturer suggested that technical complexity should be included as an extra dimension on the triangle. Although this is an important issue, I believe it is an aspect of scope and is not one of the fundamental aspects. This does outline the problem however, that this model of project dynamics is a little over simplified. The nature of the problem very much depends on the industry and even on the particular properties of the project.

In industry almost all projects are constrained and hampered by a competitive and volatile business environment. Without a clearly defined management strategy and a competent project manager to implement it, projects are almost certainly destined for failure. As businesses compete to bring quality products to their clients ever faster and cheaper, the importance and challenge of good project management is becoming ever grater.



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Conrad Rider
conrad_rider@hotmail.com