

# Product Life Cycle and Project Management

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For many non-project managers it is often difficult to understand the full extent of the role of the Project Manager throughout a project.

The various stakeholders tend to view their projects in terms of a sequence of steps that can be easily represented in a Gantt chart often called the Project Plan – more on the use of that term later.

While tasks and activities on the Gantt chart represent work that needs to be done at a particular moment in time, there is a range of management skills and processes that are applied on an ongoing basis throughout the project and, as such, are not represented on the chart as specific activities occurring at particular moments in time.

This article sets out to provide greater clarity as to what the Project Manager's role is by decomposing the work in a project into two streams, the product and the project management lifecycles.

The Product lifecycle has a defined approach, depending on the type of project, utilising phases and templates to direct the sequence and deliverables associated with the project. The lifecycle would be different for a software implementation from, say, that of building a ship.

Project Management refers to the application of the professional body of knowledge combined with personal skills a project manager brings to the management of the project. These knowledge and skills are essentially the same irrespective of the type of project.

Both of these components, or streams of the project lifecycle, are integrated to form the essential framework for the effective delivery of the project.

## Product Lifecycle

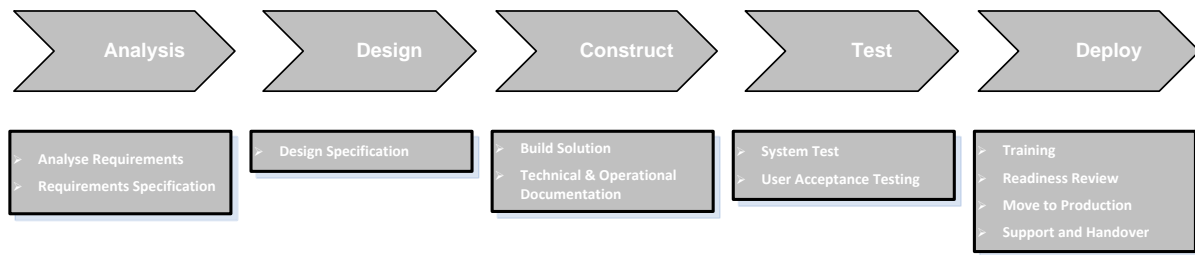
The Product or Delivery Lifecycle is composed of a series of phases which are a logical and sequential grouping of the activities that are required to be undertaken to deliver the end product.

These activities may be undertaken in a **waterfall** type manner, that is, a preceding activity must be performed before the next activity is started. As an alternative these activities can be performed in an **iterative** manner, going through a cycle of activities, e.g. prototyping, to facilitate the continuous improvement of the end product. Another approach is to deliver in an **incremental** manner – deliver quick wins.

The traditional product delivery “waterfall” lifecycle goes through a number of phases. These include (i) requirements analysis, (ii) design, (iii) construct, (iv) test and (v) deployment. In addition to these phases, before the project formally commences and after closing, there will most likely be a start-up phase, that is, justifying and formally starting any project, and an operational phase, involving the day to day management of the functioning product at the end of the project.

The following diagram illustrates the sequence of Product lifecycle phases together with a number of the key activities:

### Summary Generic Product Lifecycle



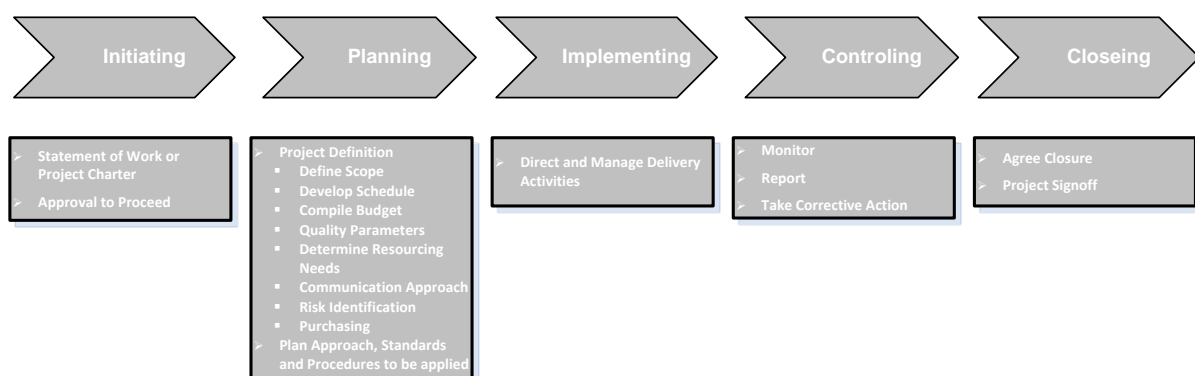
### Project Management Cycle

The knowledge, skills, tools and techniques that are applied to a project by a Project Manager follow a different, but complimentary cycle and the associated processes are categorised under Scope, Quality, Procurement, Cost, Time, Resources, Risk/Issues, Stakeholder and Communications Management.

These processes are phased under various process groups:

- Initiation – The processes involved in converting the project vision into a definition of the expectations of the stakeholders and providing the formal handover to the project manager
- Planning – The processes involved in the develop of a detailed definition of the work and as to how it is to be executed and managed
- Implementing – Managing the work based on the product lifecycle work plan
- Controlling – Track, review and regulate the progress and performance of the project
- Closing – Finalise and handover the project output

### Project Management Framework



On receiving formal approval to commence the project, the Project Manager will set about determining the scope of the project, not just in term of with the final output is to be, but also all the parameters associated with managing the project to achieve that output.

The Project Manager will define, sequence, determine the effort and schedule the activities to be undertaken throughout the project and determine who will undertake these activities.

Drawing up and agreeing the budget, identifying the risks and determining the appropriate way to communicate with all stakeholders are included in the planning activities to be undertaken by the Project Manager.

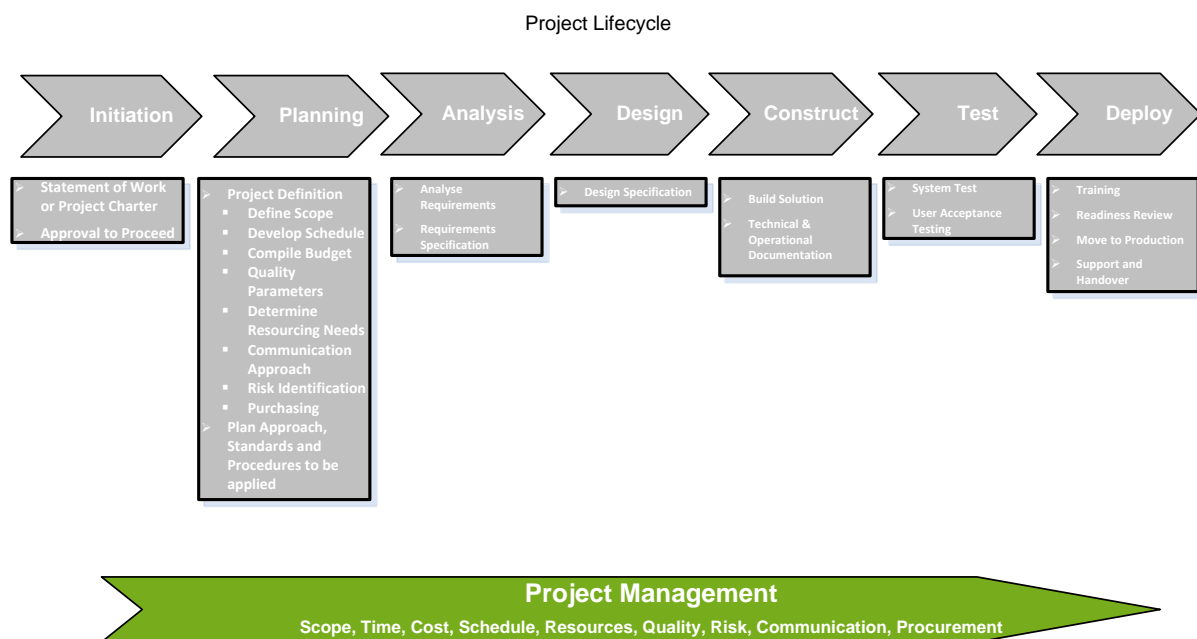
The planning activities will involve determining what standards and procedures will be applied throughout the project in terms of risk, issues, change control, schedule, costs, communications, configuration management and quality.

Having completed and signed-off the Planning phase, the Project Manager will be responsible for managing the performance of the tasks and activities associated with the Product lifecycle. Part of the responsibility will include monitoring and controlling the work and taking corrective action where appropriate.

Finally at the conclusion of the project the Project Manager will oversee the formal closure of the project.

### Integrating Product Lifecycle and Project Management Processes

Having decomposed the components of the project lifecycle it is now appropriate to bring them together to reflect the overall sequence with the full visibility of the Project Manager's involvement.



An organisation's or industry specific methodology is developed by bringing together all the elements of the Product lifecycle and Project Management framework and setting out in detail the inputs and outputs and the tools and techniques used through the project.

#### Project Plans

As suggested earlier in the article above, the term Project Plan is used by many to describe the output from a scheduling tool.

However the ISO Draft International Standard for Project Management outlines the purpose of Project Plans *'is to document: why the project is being undertaken; what is to be created by whom; how it will be created; what it will cost; and how the project is to be implemented, controlled and closed. Project plans normally consist of the business case, the project plan and the project management plan'*.

The Gantt chart gives us information on the work breakdown, the sequence and interdependence of each task and activity, together with the schedule and effort. It is possible to include other aspects of the project, such as costs. However, a scheduling tool does not set out the project risks, the approaches to communication, stakeholders and quality assurance and how these and all the other aspects of the project are to be managed.

My preference for the output from a scheduling tool is a work plan.