

Chapter

Objectives and Cycles –

2

Or “How to juggle and move forward at the same time!”

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Chapter Objectives and Cycles

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3.1 Learning Objectives for this Chapter

Having completed this chapter you will be able to:

- Identify the triple objectives applicable to every project
- Understand the interactions between these objectives
- Appreciate the implications for project success of any changes to the balance of the objectives
- Describe a project life cycle
- Understand various attributes associated with each cycle phase

3.2 Introduction

In the previous chapter we defined a project and explored some of the attributes which may determine “when” and “why” you would use the project approach.

In this chapter we continue to explore some When and Why topics. We further explore the nature of projects by looking at the general performance objectives of projects – how we actually measure project success.

We also examine how each project can be viewed as a cycle consisting of a number of phases and how this may influence our management of projects.

3.3 Triple Objectives

Projects are only of value when they deliver results to the customer. This is why the customer initially commissioned the project...in order to gain results that are of benefit to them. For a project manager there are three broad project objectives which determine successful completion - Cost, Time and Quality. These are the triple objectives or “magic triangle” of project management. Let us look at these individually first:

Cost (or more correctly the “budgeted cost” or “budget”)

***Budget:** The approved estimate for the project.*

Note the word “approved” above. A primary objective for a project manager is to complete the project successfully within the prescribed budget. Any overspend can result in adverse consequences such as a lower than predicted profit from the project or a failure to achieve the financial benefits expected. For large strategic projects with high levels of investment the consequences can be even more serious.

Time (or more correctly the “time to completion” or “target date”)

The primary date of concern to the project manager is usually the final completion date. This is the agreed handover date for the final outputs of the project (a road, a bridge, a call centre, a moon landing). Intermediate target dates may also be significant – because meeting these dates can indicate progress towards the end target date and can also instil confidence that the final completion date can be achieved. Intermediate dates can also be important because of the external projects or initiatives that are dependent on deliverables produced from these intermediate stages.

Quality (or “performance”)

Quality: The degree to which a set of inherent characteristics fulfils requirement.

Lock defines the quality objective more plainly – “....the end result of any project must be fit for the purpose for which it was intended”

A project which delivers a substandard result which is on time and in budget is unlikely to be considered successful. The Project Manager must ensure that the quality requirements of the client are understood and that the appropriate quality management procedures are in place.

Important Point: These three objectives are interrelated. This relationship is central to how projects are planned and managed. The following diagram displays this relationship as a triangle. Each the 3 objectives are represented by a point of the triangle. The diagram shows them equally balanced. A change to any one of the 3 angles will always result in some change to the others. This balance is explored further in the next section.

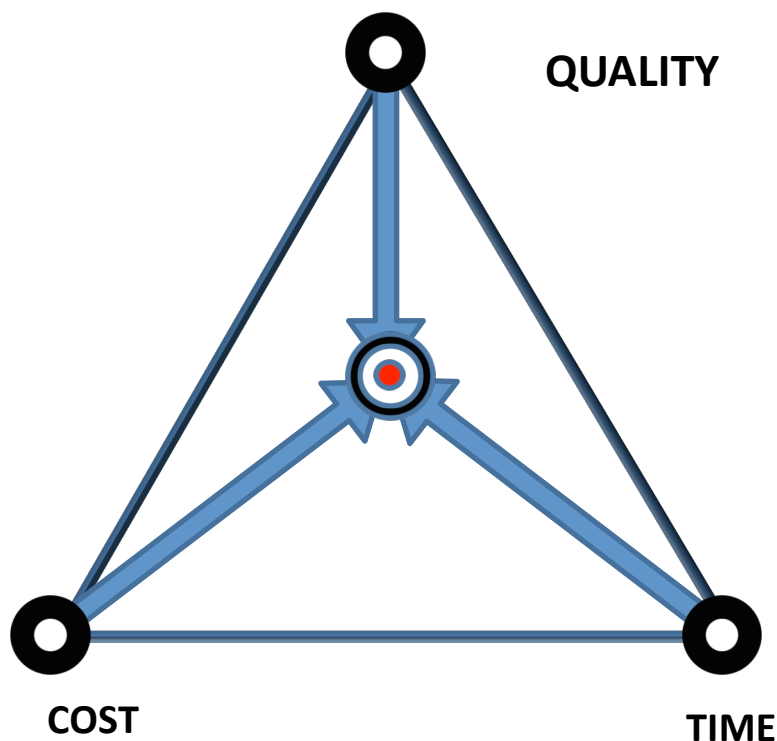


Figure 1 – Triple constraints

3.4 Balancing the Objectives

Before we explore these relationships in more detail let us describe a case study to which we can refer.

CASE STUDY: CALL CENTRE

Project specification:

Background: The Head of Customer Sales of a large communications company has initiated a project to build and staff a call centre to be used for marketing and selling the full range of the company's products and services to its customers. They will achieve this using outbound telephone calling and email marketing. The company is also developing a number of new products and services which it hopes to sell through this centre.

Scope: The project is expected to deliver a working call centre building with all associated facilities. The call centre is to be equipped with the necessary computing and communications facilities. The project manager is also responsible for the recruitment and training of call centre staff

Specification: The centre should be able to support multiple simultaneous sales campaigns (inbound calls and outbound calls). It should have capacity to call up to 2,000 customers per day. The business case prepared by the Head of Sales is based on a forecast that 30% of all calls will result in a sale.

Time: There is a significant new product (Product X) currently in development which will be ready for launch in 6 months time. It is vital that your company are first to market with this product. The use of the outbound call centre is central to the marketing of Product X.

Budget: The Management Board have approved a spend of 2 Million Euro, of which 1 Million Euro is to come from the Marketing Budget for Product X.

At the start of any project there is a (stated or implied) expectation of a particular balance between the 3 objectives. This expectation is defined by the 2 Million Euro budget which has been set by the sponsor (Cost), by the target date of 6 months given (Time) and by some definition of what is acceptable in terms of the delivered benefits.- Calls per day, % of Successful Sales calls (Quality)

One of the early tasks of the PM is to clarify this balance and the priority of objectives in the event of changes.

In the case study above, the time and cost objectives at the start are quite clear. There are clues as to the expected quality in terms of call handling volumes and sales conversions expected. There are possibly other quality criteria which will come into play as the project is further defined. This might include: reliability of the communications systems, customer service attitude of the call centre agents etc.

The project manager must ensure that the work is planned in order to deliver to these objectives. She will also need to ensure that any monitoring and controlling activities are constructed to track against these objectives.

Disaster strikes!:

Changes will occur during the lifetime of the project which may require a trade-off between the objectives as defined at the start. For example, the project manager may find out at some stage of the design work that the call centre software which is favoured by Sales Director will not work with the companies in-house telephone system. Sourcing and installing of a similar alternative will take 3 months and will extend the scheduled end date of the overall project by a minimum of 2 months. Immediately it appears that the schedule objective is at risk. This in turn will compromise budget as the additional months labour must then be factored in.

However, the project manager determines with the Call Centre IT Manager that one of his team is capable of designing and building some bespoke functionality within the budgeted cost and schedule. However the functionality will not be as efficient and call handling capacity will only be 80% of the planned specification.

The project manager has the opportunity to restore the schedule and cost objectives but the performance objective is now compromised. She is not happy with the option and would prefer to deliver a fully performing solution. However she is under pressure from the Product Development Manager of Product X to meet the original deadline, whatever the impact on the operations of the Call Centre.

A project manager may make many trade offs like these during the life of the project. The final decision on significant tradeoffs, however, must rest with the project sponsor.

Note: One must also remember that there are other ancillary objectives (apart from Time, Cost & Quality) which cannot be ignored. Included among these are the likes of: impact on the environment, legislation and the health and well being of the project participants.



Exercise 1

Here are some examples of projects. What do you believe was the priority objective in each case? What was the least important? Give your reasons why:

Getting the first man on the moon

Staging the Special Olympics in Dublin in 2003

Construction of the Dublin Port Tunnel

Development of a treatment for AIDS

3.5 Project Lifecycles

A Project Life Cycle is a collection of generally sequential project phase whose name and number are determined by the control needs of the organization involved in the project.

In order words – it is possible to organise and view any project as a number of phases each with their own objectives and attributes.

The number and types of phase will vary depending on project type or environment. However, most projects exhibit general phases such as the four shown below. (An alternate naming is shown in brackets).

1. **Initiate (Concept)** – Involves such tasks as feasibility, project selection, preliminary planning
2. **Plan (Design)** - includes budgeting, scheduling and more detailed planning
3. **Execute (Implement)** – contains the bulk of the “work” to deliver the results
4. **Close (Handover)** - is mostly concerned with final completion of work, handover to the customer, the paperwork etc.

Note that the transition points at the start and end of a phase are usually marked by a handover process – deliverables are checked and accepted and the next phase is approved to proceed. This helps in the monitoring and tracking of progress.

An organisation may choose to standardise the project phases to ensure more consistent and controlled management of projects. This is particularly useful when the nature of the project work or deliverables is unlikely to change from project to project.

3.6 Characteristics of a Project Lifecycle

Whichever type of cycle is used – the project manager should be aware of certain characteristics associated with each of the various phases of the lifecycle. Some of the more common ones are :

- a) Percentage Completion
- b) Resources Engaged
- c) Influence of Stakeholders
- d) Cost of Changes
- e) Conflict

a) Percentage Completion

Projects tend to start slowly. Output is low in the early stages as the actual activity is only being planned and required systems and process are set up and bedded in. Productivity peaks at the mid point of the project cycle. Towards the end, the pace of work can slacken and it may take a disproportionate amount of time to close out the project... (Sometimes to the point that it is not clear whether the project will ever finally end!)

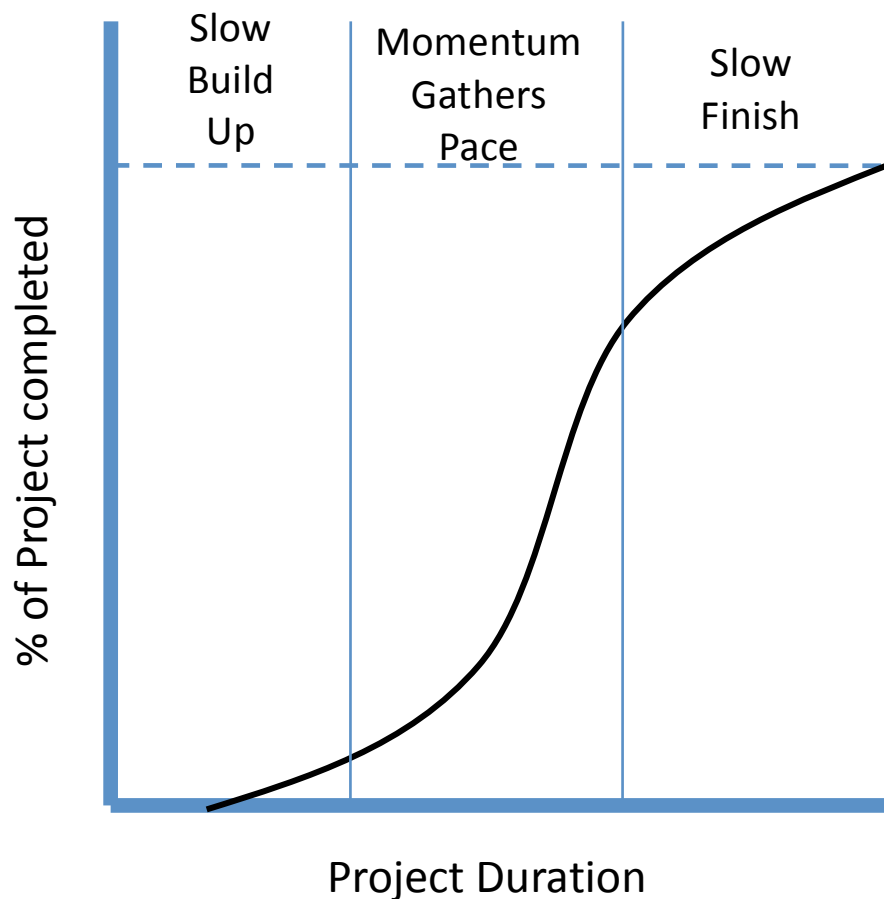


Figure 2 - Project Completion per Phase

Below is the same curve mapped to the 4 phases mentioned above:

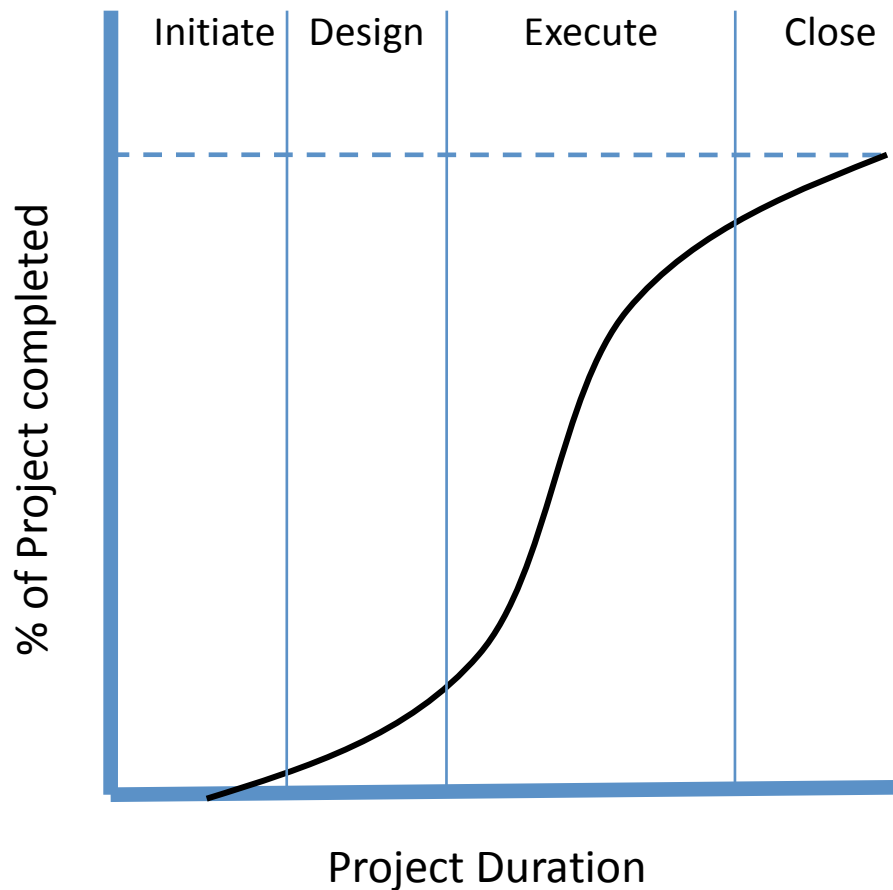


Figure 3- Project completion in a 4- phase cycle

b) Resources Engaged

The level of resources used (or the Rate of effort) follows a similar pattern of gradual build up to a peak followed by a slow down. All resources are rarely in place (or even required) in early stages. When the initial feasibility and planning is complete the implementation resources are then engaged and activity rises to a peak. As deliverables are completed the project manager may start to release resources from the project until finally the project manager is the last one standing!

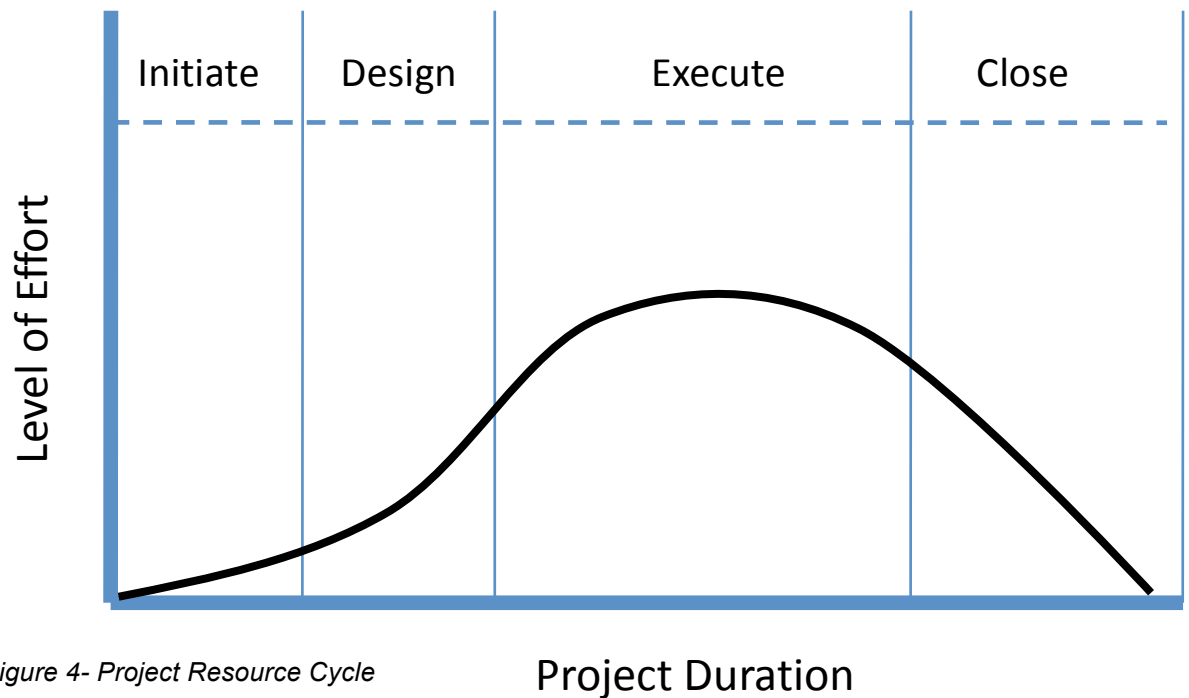


Figure 4- Project Resource Cycle

b) Influence of Stakeholders

This chart shows a different, downward, trend to the previous ones. At the start of the project there is higher possibility to change the objectives and requirements. This situation persists while feasibility and planning are in progress. As the project progresses this ability to influence falls rapidly. We will understand some the reasons when we look next at the cost of making changes.

Note 1: The ability to influence and change the course of the project may be even more constrained, depending on the nature of the project. The lower dotted line in the diagram shows a downward trend but will a steeper fall early in the project.

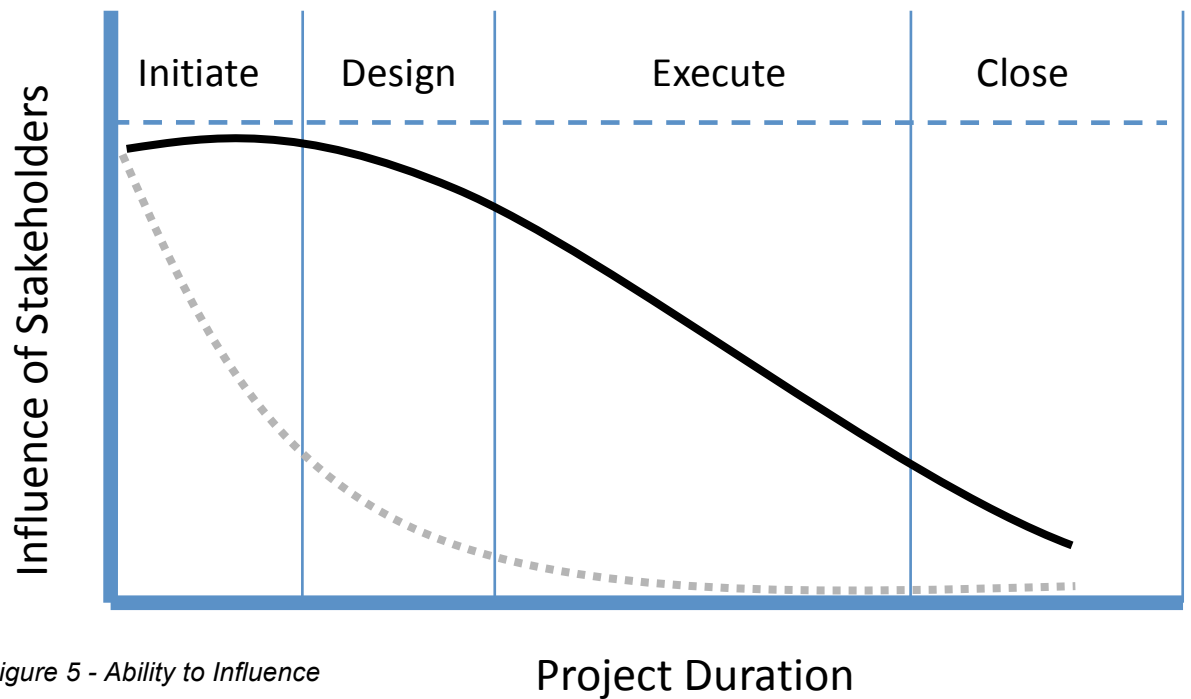
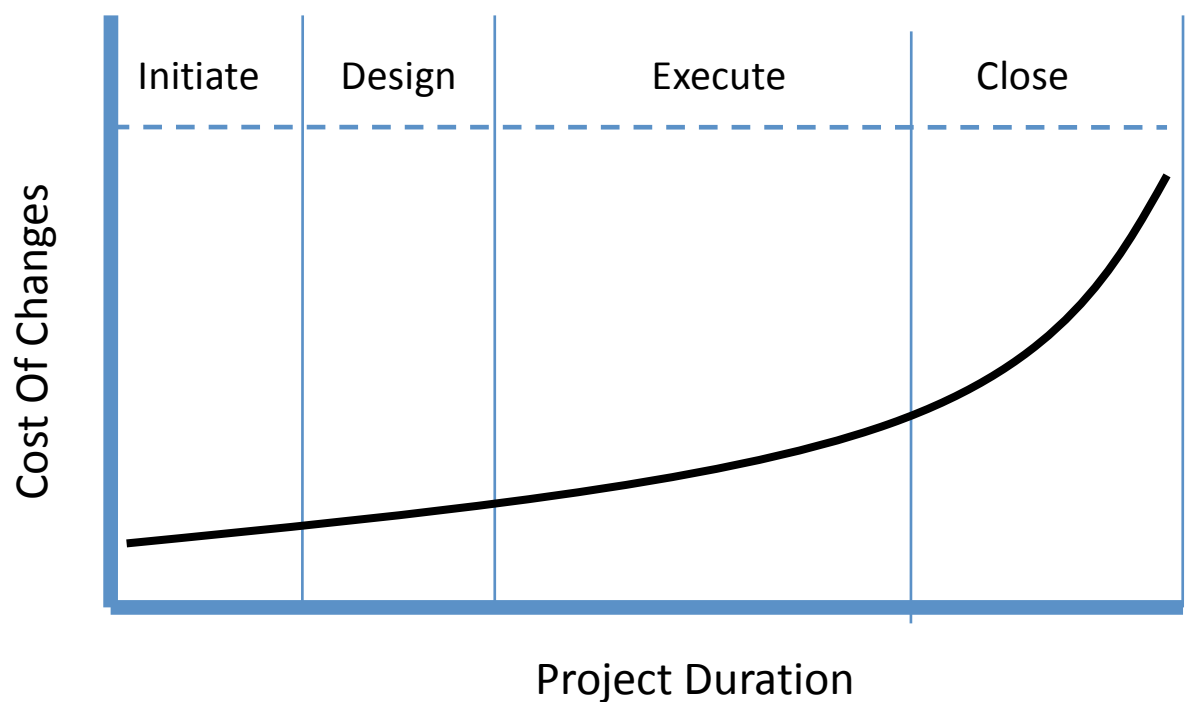


Figure 5 - Ability to Influence

d) Cost of Changes

The impact of making changes to the project objectives increases greatly as you progress along the cycle. This impact is normally expressed in terms of cost. As we have seen earlier in the chapter, time means money too! Therefore any changes that add to project duration also have a monetary cost. As a result, the ability of stakeholders to influence the outcome declines.



e) Conflict

Later, we will learn that conflict is always present at some level in all projects and it is the responsibility of the project manager to manage and, indeed, harness it. You will need to be aware that there is a general pattern to the appearance of this conflict throughout the cycle. In the early stages there is some conflict which is largely due to the lack of clarity about what's expected of the project and of individual project members. This rises during planning as other triggers for conflicts occur – e.g. allocation of resources, technical design disagreements etc. As the level of definition and understanding increases as we enter the execution phase the level of conflict tends to subside. However it is not unusual for a further breakout towards the end – particularly at the handover stage when the client actually gets to see the delivered article !

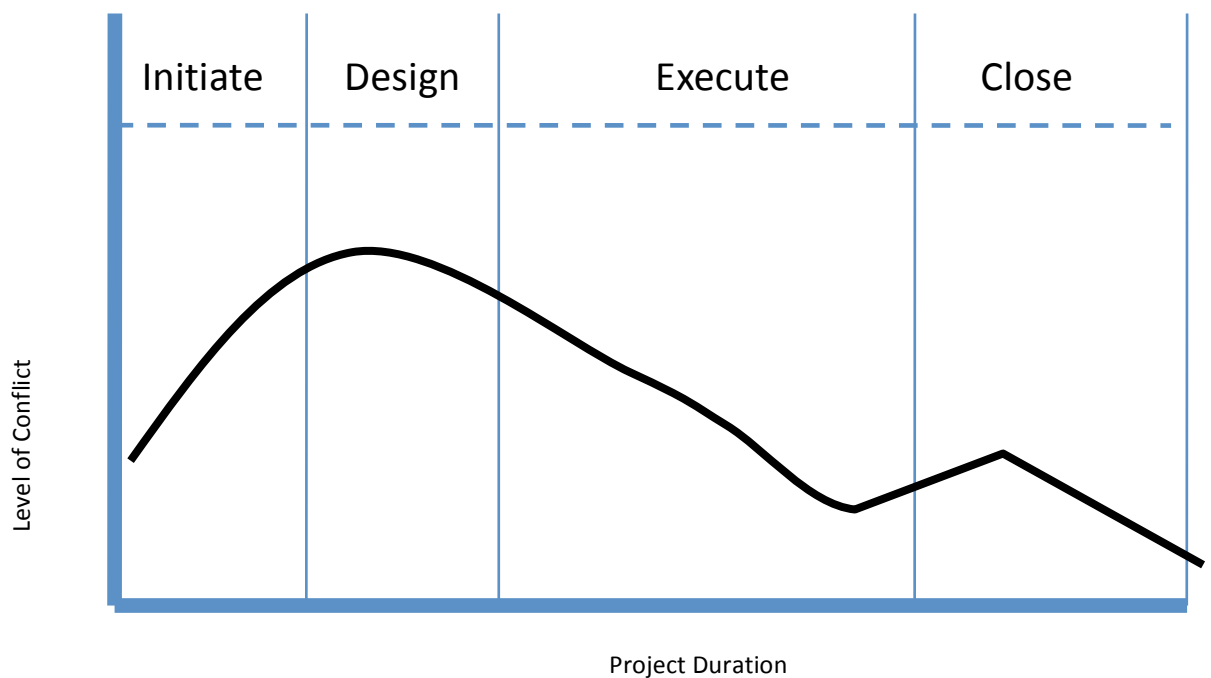


Figure 6 - Level of Conflict

3.7 Balance of Objectives during the Lifecycle

At the start of the chapter we looked at the triple objectives and the need for the project manager to be aware of the tradeoffs which may need to be made between the objectives. We can see from the chart below that the relative priority of the objectives is likely to change throughout the project cycle.

At initiation there is usually no significant difference in the priority a project manager will give to the objectives. During the design stage the schedule will tend to become paramount with cost becoming minor. During execution the schedule and performance will both vie for attention. As the project moves to the end of the schedule and the deliverables become clearer the focus will shift towards the performance of those deliverables.

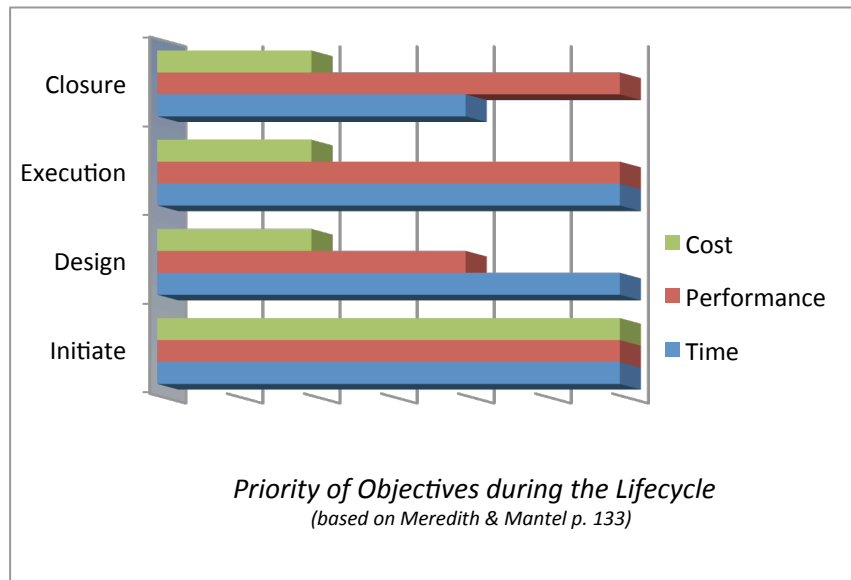


Figure 7- Priority of the Triple Objectives through the lifecycle



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Student Notes

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