**MANAGING WORK & COSTS**

**Lecture 6 - Managing Closure**

## Contents

## 1 Introduction

In this chapter we look at the important closure phase of the project. We will identify the important closure tasks and the required documentation.

## 2 Reasons for Project Closure

A project may come to an end in a pre-arranged way (for example, achieving a completion milestone) or it may be abrupt (for example, postponement due to project funding being cut). Some of the reasons are summarised by Lock as follows:

- The project has been completed and handed over to the project owner, with or without complete success.
- The project contractor has run out of funds, leaving the owner to find a new contractor.
- The project owner has permanently run out of funds, killing the project.
- The project owner wishes to make fundamental changes, causing the project to be scrapped and restarted.
- Changed economic or political conditions mean that the project will no longer be financially viable for the owner in the foreseeable future (for example, a fall in the price or demand for a commodity that removes financial justification for building new plant to increase production capacity).
- The customer asks for the project to be 'put on hold' (delayed indefinitely) pending a possible improvement in market conditions or to await the results of a reappraisal.
- Government policy changes (possible for many reasons) resulting in termination of some government contracts. Defence contracts for weapons systems, ships and aircraft are always subject to such risks.
- An Act of God (flood, tempest and so on) has intervened, causing further work on the project to be suspended or abandoned.
- Hostile activities have broken out in an internal or international conflict, making work on the project impossible.

## 3 Why Manage Closure

As with all other project work, closure of the project should be planned and controlled. The objective of the closure is to ensure a definite and complete conclusion of the project. Unmanaged closure can result in a tendency for the project to "drift". Late changes may then arise which further prevent closure and may increase costs significantly. A drifting project can also become a cause for concern to project members and result in lowered motivation for the project members involved.

There are a number of circumstances under which projects are closed:

It has achieved its planned objectives and run its full planned course **or** It is terminated prematurely because:

a) It has not achieved all of its objectives and is unlikely to in its present form
b) External events have overtaken it and made its objectives redundant or of lower priority

In each of these circumstances, it is the responsibility of the project manager to ensure that the closure is completed in a planned and professional manner.

## 4 Formal Closure Process

In "Successful Project Management", Young provides a useful step-by-step closure process. The following paragraphs outline the steps. Note: Sometimes the "Sign off" and the "Post Project Evaluation" steps are combined and a single closure report are produced which contains the closure agreement and the lessons learned. An additional sixth step may be

completed at a later date in order to review whether the project has delivered the benefits proposed. This review answers the question – "Was the project worth doing?" This step may not be the responsibility of the project manager.

## 5 Step 1 – Confirm Completion Criteria

During project planning and contract negotiations you should have agreed the criteria, which will be used to determine when, the project is actually complete and whether the project results are acceptable to the client or customer. You should also have agreed how these acceptance criteria will be measured and verified. It is important to have defined exactly what closure means to the customer or sponsor, particularly if the project scope has been through a number of changes along the way.

Typical acceptance criteria might include:

- All project tasks complete
- All deliverables produced
- Associated documentation handed over:

a. Design Material
b. Process & Procedure Manuals
c. Technical specifications etc
d. All testing completed and signed off
e. All required training completed
f. All project issues closed
g. No outstanding change requests
h. Name of person who will accept the project completion

## 6 Step 2 – Review Project Status

In preparation for formal closure, the project manager should verify that all project tasks have been completed. There should be no significant task uncompleted at close. He should note any minor tasks, which will be uncompleted before closure date and prepare action plan to complete them. He should review the acceptance checklist and make sure that all items are addressed and that he has supporting evidence for this.

## 7 Step 3 – Close-Out Meeting

The purpose of this meeting is to secure acceptance of the project completion from your customer. If the previous stages have been completed correctly then this should just be a formality and there should be no reason for the customer to delay closure.

At the meeting the project manager should:

- Review the deliverables
- Confirm completion of the confirmation checklist
- Explain any outstanding actions
- Review and close the project issues log (agree ownership of outstanding issues)
- Finally - Thank the team & customer!

## 8 Step 4 – Sign Off

- Get the Signature – who's accepting the project?

## 9 Step 5 – Post Project Review

As we know, all projects are unique - which means there is always something new to learn from each one. The purpose of the post project review is to establish what project activities went well and which didn't go quite as well. These learned lessons could be recorded and made available to the project manager and team and also to other people engaged on projects across the organization. When conducting such a review, ensure that they are not used as an opportunity to assign blame for any problems or project delays. Ideally, the project

team and key stakeholders should meet to perform the review. In practice this can be difficult to arrange as many of the team may have moved on to other projects.

As an alternative you could distribute a structured questionnaire and request detailed responses.
If you do hold a meeting, it can also be useful to issue a questionnaire before the meeting in any case. This allows the meeting participants to prepare for the meeting and to structure their thoughts. In order to ensure that all areas are covered, it is recommended that a suitable categorization of review topics is used.

Here are some examples:

- Review by Phase – Initiation / Planning & Design / Execution / Handover
- Review by WBS – First Fix / Second Fix or Building / Hardware / Software /Training
- Review by Project Management Area - Scope/ Contracts/ Risk /Resources etc

Whatever the approach, the tone of any communications or meetings should be positive, constructive and neutral in emotion. When you are finished, you should highlight the successes and celebrate the overall achievement.

The resulting Project review report should contain the following:

a) Review of Project Objectives:
   - Schedule & Milestones
   - Budget
   - Deliverables

b) What went well
c) What didn't go so well
d) Lessons learned
e) Actions that can be taken now (to improve methods & procedures etc)

The appendix contains a simple word document template, which can be used to structure the review report.

## 10 Cost Cut Off

At the appropriate point in the closedown process an instruction is required to stop spending against the project, effective from the agreed closure date. Otherwise personnel may continue to book their time in error (or deliberately!!). Hours can be booked mysteriously to projects, so it is important to formally close off the timesheet system.

If people are entering their work hours directly into the project accounting system then the close down can be enforced by blocking the relevant cost codes on the system. Otherwise the Project Manager (or Project Accountant) needs to remain vigilant in monitoring costs. In some cases there may be agreed budget to allow for some wind-down tasks after the closure date. These costs should be clearly segregated and can be referenced in the closure order. These tasks should not include any work on changes to the project deliverable and should be reserved for project administration, record completion and archiving.

## 11 Formal Project Closure

Announcing that the project is closing (either intentionally or prematurely) announces that project expenditure is going to cease. It is a similar process to authorisation in that it is a formal process instigated at project completion.

## 12 Project Closure Document

Giving formal notice that a project is coming to an end may be encapsulated in a Project Closure Document. Such a closure notice should clearly state:

- project title
- project number
- effective closure date
- reason for closure
- any special instructions
- signature authorizing the closure
- distribution, which should at least include all those who received the authorization notice
  when the project was opened.

Make sure to circulate this document to all involved in the project. Lock has suggested the following format which would cover most project situations and types:

## NOTICE OF PROJECT CLOSURE

The following project will be closed to time bookings and all expenses with effect from the date given below

Client: Lox Chemicals Limited — Project number: LX 5150

Project title: Loxylene Plant (Huddersfield) — Closure date: 20 Apr 04

*The following budgets are hereby authorized for the closedown activities marked in the checklist below*

| Department | hours by standard cost staff grade | | | | | | £ |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| Project engineering | 10 | | | 20 | 40 | | 960 |
| Planning | | | | 10 | | | 140 |
| Purchasing | | | 15 | | | | 240 |
| Installation and commissioning | | | | | | | |
| Construction management | 5 | | | | | | 100 |
| Computing | | | | 1 | | | 14 |
| Records and archives | | | 10 | | 200 | | 2560 |
| TOTALS | 15 | | 25 | 31 | 240 | | 4014 |

Special ins tructions:

Take special care with filing. A follow-up project is expected. All files to be destroyed after five years unless otherwise directed below.

| CHECKLIST OF PROJECT CLOSURE ACTIVITIES | |
|---|---|
| Project case history | PM to write, keep it brief |
| Project specification | Has been kept up to date but needs checking |
| Project variations | List and check that the file is complete |
| Drawing schedules | Keep 10 years in engineering files |
| Design calculations | Keep indefinitely in engineering files |
| Our drawings | Check they are as-built and keep indefinitely |
| Client's drawings | Return to client |
| Purchase control schedules | Keep 10 years in engineering files |
| Vendors' drawings | Keep 10 years |
| Purchase orders | |
| Expediting/inspection reports | |
| Test certificates | Keep 10 years |
| Operating/maintenance instructions | Keep 15 years |
| Spares lists | |
| Maintenance contracts | |
| Subcontract documents | Keep 10 years |
| Correspondence files | |
| Final cost records | Keep 10 years in general reference files |
| Photographs | Edit. Discuss with publicity dept and client |
| Critical path networks | Destroy after 1 year and erase computer files |
| Management information system | Delete project from MIS at year end |

Prepared by: A.Scribe — Project manager: I.Diddit — Authorized by: *B. I. G. Whitechief*

The cost of storage of materials (files, drawings) either physically or virtually will need to be considered, either as an ongoing cost to the company or perhaps already built into the agreed contract costs.

### 13 Final Project Cost Records

These costs can be used as a useful data base for future project cost comparisons

### 14 Disposal of Surplus Material Stocks

The PM may have to consider how to handle any excess material and stock associated with the project if these are not to be used elsewhere. Materials accumulated in this way represent an ongoing cost to the contractor- they should be sold on to the customer or disposed off otherwise as soon as possible.

## 15 As-Built Project Condition

Recording the as-built condition of a project is important. All drawings and specifications are typically identified and any changes to these recorded. Operating instructions for equipment and plant are also important for the customer and end user.

A final drawing register, recording the 'as-built' drawings, will serve as a useful document in identifying the drawings and specification that have made up the project.

Purchased equipment will need maintenance agreements set up to maintain it. There is a certain mount of responsibility to the customer to ensure it is operating as it was specified. Post-project service agreements will need a contractor coming fresh to the post-contract phase and taking responsibly for the installed equipment

### 15.1 Other Documentation

Design calculations – these may become useful if reference needs to be made to access structural calculations or, in a worst case scenario, investigation of structural failure where injury occurs and legal proceedings follow.

Change documents and inspections documentation, All contract variations, All contract variations, modifications, engineering change requests, concessions, production permits, final inspection reports, test certificates and similar documents that help to define the final design status and quality of the project should be filed and indexed. For example:

- Correspondence
- Letters to / from
- Emails
- Etc

Decide where this central depositary will be archived and maintained. You may chose to use the WBS as a basis for building up and organizing the archive, as each element can easily be retrieved if need be.

### 15.2 Managing Files and Archives

A baseline description of the scope and specification of the deliverables is normally defined at design stage for all projects. In engineering projects this is normally represented by a set of project drawings. In other applications this may be represented by a Functional Specification of the deliverables or by some other technical description. As change requests are accepted this description needs to be updated to reflect the changes. An important task at end of any project is to ensure that this description of the product delivered by the project reflects what was actually handed over. Lock calls this the "as built condition" In order to complete this task all of the descriptive documents should be gathered together into a project file (paper or electronic) and verified as being up to date. This up to date description is often supported by other documents such as Instruction manuals, Training manuals, technical specifications etc. In many cases this document set is itself a deliverable of the project.

Note: The contractor may also wish to keep a copy of all documentation for reference. This may be used to provide support and maintenance for the product. Alternatively the contractor might anticipate that further projects will arise which may reference the documentation. There should be clear action plan for the management of files remaining with the project team either paper or electronic. Options to consider are:

- Destroy immediately
- Return to client
- Store for X weeks/days /months
- Onsite /Offsite
- Allow access to files A,B C etc
- Archive for X months/Years
- Onsite /Offsite

## 16 Closing the Resources

Bearing in mind that your successful project was delivered using living, breathing people, the project manager must also ensure that the exit of these people from the project is managed professionally and sensitively. A possible approach is to prepare a re-deployment sheet for the project indicating, for each person:

- The source of the resource (Functional area/ Temporary hire/contractor etc)
- Date of joining the project
- Role on the project
- Date of leaving the project
- Target area for redeployment of the resource e.g.

a. Return to full time working in their functional are
b. To be released from the company
c. Reassigned to project X for Client Y

In this way there should be no confusion as to the future position of each person. This document can be including in a project closure report.

# 17 Appendix 1 – Template for Post Project Review Report

## Post Project Review Report

| Post Project Review Report |
|---|
| **Name of Project:** |
| **Project ID:** |
| **Date and Location of meeting (if held):** |
| **Names of attendees/reviewers:** |

1. Overview by Project Manager: (brief list of highlights, accomplishment, etc.)
2. Review by team of goals, objectives/ deliverables and schedule as outlined in the (updated) Project Plan

| | MET | MISSED | PARTIALLY MET | COMMENTS |
|---|---|---|---|---|
| **Project Goal** | | | | |
| Objectives / Deliverables | | | | |
| | | | | |
| **Success Criteria** | | | | |
| | | | | |
| | | | | |
| **Schedule** | | | | |
| | | | | |
| **Budget** | | | | |

**3. What worked well; what could have gone better?**

| Worked well | Could have gone better |
|---|---|
| | |
| | |
| | |

**4. Lessons Learned**

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| |

**5. Next Steps / Improvement Plans**

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| |

- Project Management Institute. Guide to the Project Management Body of Knowledge (PMBOK), 3rd edition, PMI
- Burke, Rory, (2001) Project Management, Planning & Control Techniques, 3rd edition, Wiley
- Lock, Dennis (2007) Project Management, 9th. Edition, Gower
- Young, Trevor L, (2000) Successful Project Management, Kogan Page