

# 8

## Project Closure

### Syllabus

Project Closure Analysis, Case Study of Software Company's Project Closure Analysis Report.

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## 8.1 Project Closure Analysis

### 8.1.1 Meaning

- Project closure analysis is the key to learning from the past so as to provide future improvements. To achieve this goal, it must be done carefully in an atmosphere of safety so that lessons can be captured and used to improve the process and future projects. Before we describe the details of the closure analysis report, we briefly discuss the role of closure analysis and its implementation.

### 8.1.2 The Role of Closure Analysis

- The objective of a postmortem or closure analysis is "to determine what went right, what went wrong, what worked, what did not, and how it could be made better the next time." Relevant information must be collected from the project, primarily for use by future projects. That is, the purpose of having an identified completion analysis activity, rather than simply saying, "The project is done," is not to help this project but rather to improve the organization by leveraging the lessons learned. This type of learning can be supported effectively by analysis of data from completed projects. This analysis is also needed to understand the performance of the process on this project, which in turn is needed to determine the process capability.

### 8.1.3 Importance of Closing a Project

- At first glance, it might seem like completing the first four phases of the project lifecycle would be all you need to do to tie up your project and call it good.
- However, without a formal closing process, you risk letting crucial details fall through the cracks, which can result in confusion, a never-ending project, dissatisfied clients, and even liability issues.

#### Project closure helps avoid :

- Repeating mistakes on future projects and objectives
- Having final products or deliverables without dedicated support and resources
- Failing to identify the team or individuals who will own and maintain the solution following final delivery

Creating liability issues resulting from incomplete payments, contracts, or deliverables

Following a clear project closure plan helps you properly transition your solution to the client or end-user. This process ensures the final stakeholders have the information, resources, and training to successfully manage and use the end product.



- The project closure process also ensures the project is formally completed and is no longer considered a project, allowing you to hand the reins over to the correct team in charge of managing and maintaining the project's outputs.
- By officially closing a project, you minimize risks, increase client satisfaction, and ensure all parties are on the same page. In other words, project closure is a process you can't afford to skip.

#### 8.1.4 Project Closure Report

- The *Project Closure Report* is the final document produced for the project and is used by senior management to "tidy up" any loose ends and formally close the project.
- This template should be used for more complex projects and developed after the project has been reviewed.
- In less complex projects the review and closure processes can be combined into a *Project Review and Closure Report*.

#### 8.1.5 Need to Develop a Project Closure Analysis and Project Closure Report

##### Need to develop a Project Closure Analysis

A Project Closure analysis is developed to :

- Detail activities undertaken to close the project;
- Outline outstanding issues, risks, operational matters and recommendations.
- This document lists the closure activities and any outstanding matters and recommends how they should be addressed.

##### Need to develop a Project Closure Report

- The *Project Closure Report* is usually developed once the project is completed and the project outputs have been delivered to the Business Owner(s)
- Or it has been decided to close the project for some other reason.
- This may be the result of a recommendation from a review of the project where findings are negative
- Or may be the result of changed priorities within the agency, division or business unit



### 8.1.6 Objective of Closure Analysis Report

- The objective of Closure Analysis Report is :
  - Determine what went wrong
  - What went right
  - What worked
  - What did not work
  - How to make it better next time
- Relevant information needs to be collected from the project, for future projects.
- Also this analysis throws light on performance of the process on project and its capability.
- These analyzed results should be packaged such that they can be used by others effectively.
- Even if not used by others, closure analysis results will consolidate the experience gained by the project personnel.
- The lessons learnt can be carried forward by the project "personnel" for future projects.

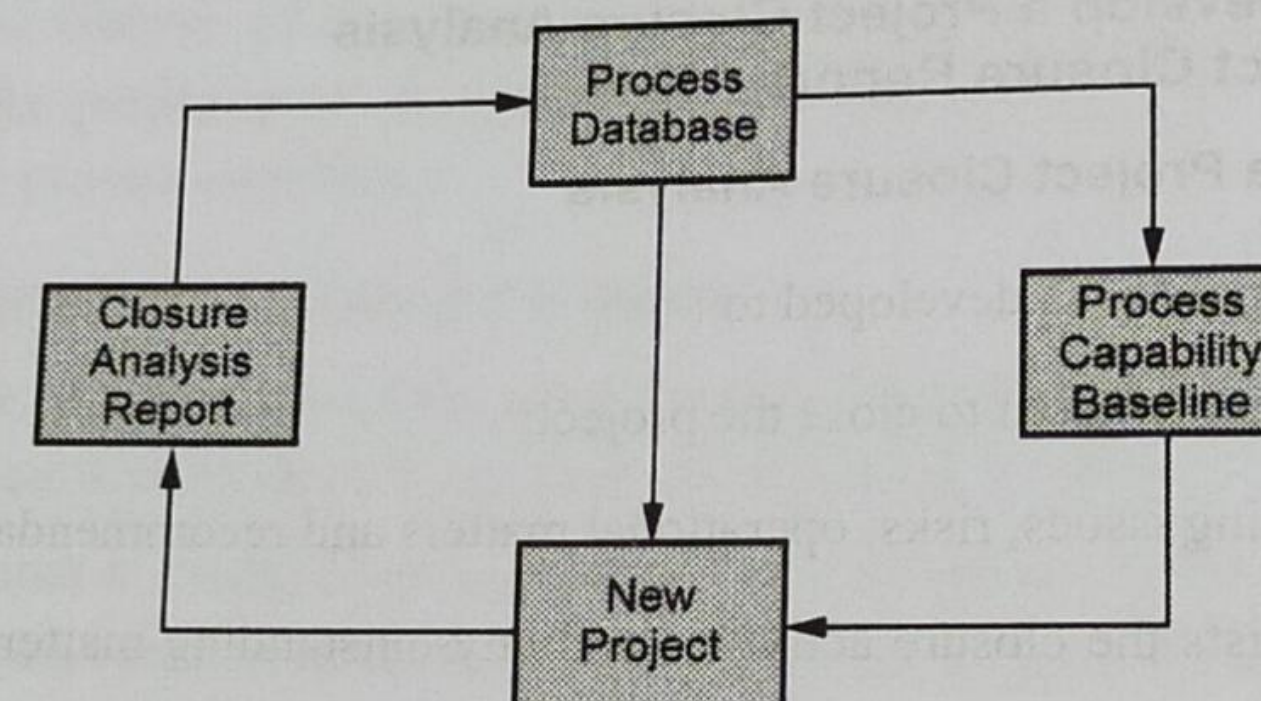


Fig. 8.1.1

### 8.1.7 Elements in Closure Analysis Report

- The major elements in a project closure analysis are :
  - General and Process - Related Information
  - Risk Management
  - Size
  - Effort
  - Defects



- Causal Analysis
- Process Assets

#### ☐ General and Process - Related Information

- The closure report first gives
  - Some general information about the project.
  - Overall Productivity Achieved
  - Quality Delivered
  - Process used and Process Deviation
  - Estimated and Actual Start & End Date of Project
  - Tools used and their experience etc.

#### ☐ Risk Management

- In this part the RISK anticipated for the project are given along with risk mitigation steps planned
- The top risk are reviewed in the post project analysis
- Notes are prepared on the effectiveness of the risk mitigation steps employed.

#### ☐ Size

- The project in size is captured in terms of simple/medium/ or complex modules, along with criteria used for classification
- Data on estimated and actual size is compared
- Productivity is measured in terms of function point per person month or LOC
- The above parameters are captured in closure analysis.

#### ☐ Effort

- Total estimated effort and actual effort in person - hours are captured in closure analysis.
- The total estimated effort is obtained from project management plan.
- If there is a large deviation, reason for the variation are analyzed and recorded.
- These information are useful in forming PCB.
- The effort are separated for
  - Task
  - Review
  - Rework.



- The cost of quality for project is also computed and captured.
- The cost of quality can be defined as "the total effort spent in review, testing and rework to remove defects and project specific training.

#### ☐ Defects

- A summary of defects found during the project is given in closure analysis report.
- The following information are captured,
  - Stage injected
  - Stage detected
  - Severity
  - Program and module where defect found.
- Information on defect distribution coupled with defection injection rate will be useful for defect prediction.

#### ☐ Casual Analysis

- Casual analysis involves looking at large variations between estimated and actual values.
- The reason for variation is also analyzed
- They are also determined through discussion & brainstorming
- Once causes are identified, this is used as lessons learned.
- Casual analysis is done through Fishbone diagram and Pareto charts.

#### ☐ Process Asset

- The metrics and other artifacts produced during the project can be used for future projects
- These artifacts are called **process asset**.
- These artifacts are available to other project by capturing them into PDB.

#### ☐ Archiving

- Every time a software version is released, the source code along with relevant document is archived.
- This provides a long - term backup
- The list of artifacts that are archived are :
  - Project proposal, contract and review document
  - Requirement specification.



- Project plan, configuration management plan, installation and AT plan and maintenance plan.
- High - level design and review document
- Program specification, pseudocode and review
- Source code
- Testing related files, test case, test result
- Manuals and technical support materials.

## 8.2 Case Study of Software Company's Project Closure Analysis Report

### 8.2.1 Examples of Project Closing Oversight

Case-based example	Impact
The IT team has completed the development of an application. The application was fully tested and accepted by the business and users. A few months later, users look for basic "how-to guides" but never find them, because they were seen as a secondary product and of lesser importance than the application itself	<p>Users are dissatisfied with the outcome of the project and view it as a failure.</p> <p>Users are not capable of fully using the application, as they are dissatisfied with the lack of documentation to help them achieve what they need through the application.</p> <p>Responsibility to correct the situation is diluted.</p> <p>Developers engaged in supporting users, as opposed to being in a position to work on new projects.</p>
At the end of the application development project, the project manager is required to close the contract with the vendor who provided him with two HTML developers but hasn't on the premise that this is a minor administrative matter and everybody knows that the project is over.	Three months after the project, the finance department receives invoices for work that was completed during the project life cycle, with claims of extra time and effort. Because the work is a distant memory and the exact proceedings and requests were not documented at the time, the organization and the contractor enter into a dispute. Such a dispute not only harms the relationship between the two parties, but could also make one of them liable for reparations, damages and legal costs, hence costing the organization far more than necessary.



Case-based example	Impact
There is no formal end to the project application development project and hence developer's time is still allocated to that project and they are not free to work on other projects or tasks and stakeholders continue to view this as a long-term project.	<p>Project manager, project teams and other resources are continuously engaged in post-project activities, though unnecessarily.</p> <p>Support staff is incapable of supporting the application due to the lack of a formal hand off.</p> <p>The organization is constrained in initiating new projects due to lack of confidence or lack of resources.</p>

### 8.2.2 Impact of Project Closing Oversight

- Project closing is further explained in depth throughout this paper. A comprehensive project closing process would typically include all of the following processes, and may include others, depending on the size, magnitude, complexity, and impact of the project :
  1. Making sure all the work that needed to be has been done.
  2. Obtaining approval by the project's sponsor and customer (whether internal or external) for the work completed.
  3. Reviewing whether or not all organizational governance processes have been executed.
  4. Assessing whether or not the necessary project management processes have been applied.
  5. Administrative closing of any and all procurements, reviewing that all work on the contract has been completed and that both parties have completed their contractual obligations toward each other.
  6. Formally recognizing the completion of a project and its transition to operations.
  7. Validating that the project achieved benefits identified in the business case.
  8. Capturing of lessons learned : What was done well, and should be documented so it can be repeated in the future ? What could have been done better ? And if so, how can it have been done better ?
  9. Disbanding project resources, freeing them to perform other projects and undertake other tasks as required within the organization.
  10. Transitioning project deliverables to the customer organization in a manner that warrants seamless operations and support.

