Project Closing
Goals of the Unit

• All projects come to an end

• Many projects, however, live a long period in “limbo” land, not active but neither properly closed

• The goal of a good project manager is ensuring projects are properly closed

• Goals of the Unit:
  – Understanding what activities need to be performed to close a project
  – Understanding why projects are not properly closed
  – Understanding the risks of not properly closing a project
Initiate

Assess Feasibility

Plan

Formalize Goals

Define Goals

Define Schedule

Define Costs

[Obtain Approval]

Execute & Monitor

Collect Outputs

Develop

Kick Off Activities

Close

Release

Change Control & Configuration Management

Quality Management

Risk Management

Human Resource Management
Types of Project Closing

• **Termination by integration and termination by addition**
  Successful cases: project outputs integrated and/or used as input for another project/production

• **Termination by starvation**
  Project ends because resources run out.

• **Termination by extinction**
  Termination by management because the project failed (objectives not met, superseded, not profitable)
Project Closing

Project closing is the last phase of a project, when the project outputs are handed over to the stakeholders, contractual agreements properly taken care of, and project records elicited and stored for future reference.

• Main goals:
  – Ensuring project outputs can be used
  – Ensuring there are no pending/further obligations
  – Taking stock and learning
Why Projects are not Properly Closed

- For unsuccessful projects
  - Little interest by the team

- For all projects
  - Decreasing interest by the project team
  - Cost of performing closing activities
  - Closing activities require little or no creativity
  - Underestimation of how much implicit knowledge there is
  - Underestimation of how fast know-how can get lost
  - Reluctance to release resources for opportunistic reasons
  - Emotional factor
Project Closing Process

• Getting client acceptance
• Installing Project Deliverables
• Archiving old Deliverables
• Documenting the Project
• Performing a Financial Closure
• Performing Post-Implementation Audit
• Releasing Staff
Getting Client Acceptance

• Ceremonial acceptance
  – No formal procedure or formal record for accepting project deliverables
  – Scenarios: gentlemen agreement; reaching project deadlines

• Formal acceptance
  – Formal procedure for accepting project deliverables
  – System testing/client approval
Post-Implementation Audit (Post-mortem)

• We hate doing the same mistakes over and over again

• The goal of a post-mortem is a critical analysis of the project in order to learn and improve, avoiding to repeat the same mistakes

• Different formats and levels of formality are possible

• Unsuccessful projects provide a lot of information

• Useful lessons also from successful projects (what worked, what we could have done better)
Structure of a Post-Mortem

• **Conduct project survey**
  Elicit main issues and strengths of the project

• **Collect objective information**
  Elicit quantitative measures about the project

• **Hold a debriefing meeting**

• **Conduct a project history day**
  Find the root causes of problems

• **Publish the results**
  Make sure your organization, your team, and you can learn from the experience
Post-Mortem Metrics

• A quantitative assessment allows a more precise evaluation of the project
• Data can be used for future estimations
• Metrics include:

<table>
<thead>
<tr>
<th>Cost Metrics</th>
<th>Schedule Metrics</th>
<th>Quality Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Effort and Estimated SLOC</td>
<td>Original Schedule</td>
<td>Errors at each stage</td>
</tr>
<tr>
<td>Actual Effort and Actual SLOC</td>
<td>Final Schedule</td>
<td></td>
</tr>
<tr>
<td>History of changes to requirements and code</td>
<td>History of schedule slippage events</td>
<td></td>
</tr>
</tbody>
</table>
Post-Mortem Results Structure

• The outputs of a post-mortem audit are published in a document

• The document can be used to disseminate the lesson learned and to work as a reference for future similar project

• A post-mortem report can be organized as follows:
  – Project description: information about the project, to give context
  – The good: what worked well
  – The bad: the three worst factors that impeded the teams to meet goals
  – The ugly: a prescription for improvement
Releasing Staff

• Transition to new activities can be disruptive for the team (consider, e.g., a project lasting for years)

• Two important aspects:
  – Ensuring proper recognition to experience gained in the project and results obtained
  – Ensuring proper tasks are assigned to the team members