

Closing Projects

COMP6204: Software Project Management and Secure Development

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Learning Objectives

- Describe common ways to close or terminate projects
- Discuss the process of closing a project or phase performed as part of project integration management when using a predictive approach to managing projects
- Explain the importance of a project close-out meeting and knowledge transfer
- Describe the contents of a customer acceptance/project completion form, final project report, and lessons-learned report
- Discuss unique aspects of closing agile/hybrid projects
- Summarize advice on closing projects

Introduction

- Closing projects or phases involves finalizing all activities and bringing the project or phase to an orderly end
- It includes **archiving** project information, ensuring the planned work is complete, and releasing organizational resources
- It often includes a **final** presentation and report
- It is also important to **reflect** on what can be learned to improve future projects. As philosopher George Santayana said, “*Those who cannot remember the past are condemned to repeat it.*”
- It is also important to plan for and **execute a smooth** transition of the project into the normal operations of the company

Common Ways to Close or Terminate a Project

- *Integration*: A project is completed, and products and services created are integrated into operations; most common approach
- *Addition*: A project creates a new product or service that results in a new unit in the organization, such as a department, division, or company
- *Extinction*: A project ends because it was successful and achieved its goals, or it was unsuccessful or superseded; termination by murder is when there is a sudden end to a project.
- *Starvation*: A project ends by decreasing its budget or suddenly ending funding; also known as withdrawal of life support

Summary of Project Closing Outputs

Knowledge area	Closing process	Outputs
Project integration management	Close project or phase	Project documents updates Final product, service, or result transition Final report Organizational process assets updates

Closing Outputs

- **Project documents updates:** All project documents should be reviewed and marked as final versions, and the lessons learned register should include lessons learned during the closing process
- **Final product, service, or result transition:** Project sponsors are usually most interested in making sure that the final products, services, or results are delivered and transitioned to the appropriate part of the organization.
- A final project report and presentation are also commonly created during project closing
- **Updates to organizational process assets:** Recall that organizational process assets help people understand, follow, and improve business processes. Examples include plans, processes, policies, procedures, and knowledge bases, such as templates and lessons-learned reports. During closing, the project team should update appropriate process assets, especially the lessons learned repository

Possible Final Reports Contents

- **Summary** level description of the project or phase
- **Scope objectives**, the criteria used to evaluate the scope, and evidence that the completion criteria were met
- **Quality objectives**, the criteria used to evaluate the project and product quality, and the verification and validation information
- **Schedule objectives** including planned and actual milestone delivery dates and reasons for variances

Possible Final Reports Contents – Cont.

- **Cost objectives**, including the acceptable cost range, actual costs, and reasons for variances
- **Summary of how the final project, service**, or result achieved the benefits that the project was undertaken to address.
- **Summary of how the final project, service**, or result achieved the business needs identified in the business plan.
- **Summary of any risks** or issues encountered on the project and how they were addressed

Video Highlights

- Some of the most useful lessons learned come from project failures. One very visible, painful project failure occurred in 1986 when the Space Shuttle Challenger exploded only 73 seconds after liftoff, killing all seven astronauts onboard. You can watch CNN's live video of the disaster by searching for "[Challenger disaster live on CNN](#)."
- In 2011, the Associated Press released a video called "[Challenger's Lessons Still Echo 25 Years Later](#)." Roger Launius, Senior Curate at the Air and Space Museum, stated, "What had failed was the **communication process** where people at a lower level, thought there was a problem, but that did not get to the higher level. So, communication is the key thing to change."

Just-In-Time Training Project Closing

- In closing the Just-In-Time Training project, Kristin and her team prepared:
 - A customer acceptance/project completion form
 - A final report and presentation
 - A transition plan (provided as part of the final report)
 - A lessons-learned report (after a “sticky note” party)
- Kristin also organized a lunch for the project team to celebrate a job well done

Sample Customer Acceptance/ Project Completion Form (partial)

1. Was this project completed to your satisfaction? X Yes _____ No

2. Please provide the main reasons for your satisfaction or dissatisfaction with this project.

The project met and exceeded my expectations. In my 15 years with this company, I have never seen workers so interested in training courses. Kristin effectively coordinated all of the people who worked on this project. We worked with a number of new suppliers, and everything went very smoothly.

3. Please provide suggestions on how our organization could improve its project delivery capability in the future.

One suggestion would be to try to improve our estimating and forecasting abilities. The project costs were slightly over budget, even with some reserve built in. The schedule buffer prevented the project from finishing late. We also need to improve the way we forecast the number of people who want to take courses. The demand for the Web-based courses was much higher than expected. Even though that was a pleasant surprise, it was still poor forecasting and caused extra work for project and support staff.

Sample Table of Contents for a Final Project Report

Project Name: Just-In-Time Training Project

1. Project Description and Summary of Results
2. Original and Actual Scope
3. Original and Actual Schedule
4. Original and Actual Budget
5. Quality Objectives, Verification, and Validation
6. Risk/Issue Summary
7. Project Assessment
8. Lessons Learned Summary
9. Transition Plan
10. Training Benefits Plan

Attachments:

- A. Key Project Management Documentation
 - Business case
 - Project charter
 - Project management plan
 - Performance reports
- B. Product-Related Documentation
 - Survey and results
 - Summary of user inputs
 - Report on research of existing training
 - Partnership agreements
 - Course materials
 - Intranet site training information
 - Summary of course evaluations

Sample Transition Plan (partial)

Introduction

The main goal of this project was to develop a new training program at Global Construction to provide just-in-time training to employees on key topics, including supplier management, negotiating skills, project management, and software applications. New courses were developed and offered in instructor-led, CD-ROM, and Web-based formats. These courses will continue to be offered at Global Construction for the next several years. This transition plan describes the work required to support these courses.

Assumptions

- Support for the just-in-time training will be handled by staff in affected operational departments, including the training, IT, HR, and contract departments.
- Funding for the required support is budgeted at \$400,000 per year for three years. These funds will be used to pay staff in the operational departments supporting this project, experts providing information for courses, and suppliers providing training materials and courses.
- New course topics will be developed under a new project and are not part of this transition plan.

Organization

The Training Director, Lucy Camerena, will lead all efforts to support the Just-In-Time Training courses. Staff from the training, IT, HR, and contract departments will provide support as required. See the organizational chart provided in Attachment 1.

Work Required

The main work required to support the training developed from this project includes:

- Maintaining related information on the intranet site
- Handling course registration
- Determining the number of courses offered each year and when they will be offered
- Providing classrooms for the instructor-led training
- Coordinating with suppliers for all training courses
- Planning and managing the internal experts who provide some of the training and expert support for the courses
- Collecting course evaluation information and suggestions for changing the content or format of courses
- Reporting information to senior management on a monthly basis

Sample Lessons-Learned Report

Project Name: Just-In-Time Training Project

Project Sponsor: Lucy Camerena

Project Manager: Kristin Maur

Project Dates: July 1 – June 30

Final Budget: \$1, 072,000

1. Did the project meet scope, time, and cost goals?

We did meet scope and time goals, but we had to request an additional \$72,000, which the sponsor approved. We actually exceeded scope goals by having more people take training courses than planned, primarily the Web-based courses.

2. What was the success criteria listed in the project scope statement?

The following statement outlined the project scope and success criteria:

“Our sponsor has stated that the project will be a success if the new training courses are all available within one year, if the average course evaluations are at least 3.0 on a 1-5 scale, and if the company recoups the cost of the project in reduced training costs within two years after project completion.”

3. Reflect on whether or not you met the project success criteria.

All of the new training courses were offered within a year, and the course evaluations averaged 3.4 on a 5-point scale. The number of people who took the Web-based training courses far exceeded our expectations. Because the Web-based training is more cost-effective than the instructor-led training, we are confident that the cost of the project will be recouped in less than two years.

4. In terms of managing the project, what were the main lessons your team learned from this project?

The main lessons we learned include the following:

- Having good communications was instrumental to project success. We had a separate item in the WBS for stakeholder communications, which was very important. Moving from traditional to primarily Web-based training was a big change for Global Construction, so the strong communications was crucial. The intranet site information was excellent, thanks to support from the IT department. It was also very effective to have different departments create project description posters to hang in their work areas. They showed creativity and team spirit.
- Teamwork and supplier partnerships were essential. It was extremely helpful to take time to develop and follow a team contract for the project team and to focus on developing good partnerships with suppliers. Everyone was very supportive of each other.

Sample Lessons Learned Report (continued)

- Good planning paid off in when plans were executed. We spent a fair amount of time developing a good project charter, scope statement, WBS, schedules, and so on. Everyone worked together to develop these planning documents, and there was strong buy-in. We kept the plans up-to-date and made key project information available for everyone on a secure Web site.
- Creativity and innovation are infectious: Many creative and innovative ideas were used on this project. After departments had so much fun making their posters in their work areas, people picked up on the idea of being creative and innovative throughout the project. Everyone realized that training and learning could be enjoyable.
- The project steering committee was very effective. It was extremely helpful to meet regularly with the project steering committee. Having members from different departments in the company was very important and helped in promoting the training created as part of this project.

5. Describe one example of what went right on this project.

We were skeptical about hiring an outside consultant to help us develop a short list of potential suppliers for the training courses, but it was well worth the money. We gained a good deal of useful information very quickly, and the consultant made excellent recommendations and helped us develop partnerships that benefited suppliers and us.

6. Describe one example of what went wrong on this project.

The senior supplier management specialist assigned to the team at the beginning of the project was not a good fit. The project manager should have more involvement in selecting project team members.

7. What will you do differently on the next project based on your experience working on this project?

For future training projects it would be helpful to line up experts and mentors further in advance. We underestimated the number of people who would take the Web-based courses, and participants liked the interactive features, such as getting expert advice and having a list of people willing to mentor them on various topics. We were scrambling to get people and had to figure out how to organize them in an effective manner.

What Went Wrong?

- Everyone seems to agree that it is important to document and share *project lessons learned*, yet a survey of 961 experienced project managers found that although 62 percent had formal procedures for learning lessons from projects, only 12 percent adhered closely to them.
- “*End-of-project post-mortems* were *infrequently* and *inadequately* performed. Project managers cited the usual problems: a lack of time, key people not available, a culture of blame.
- And, as one interviewee noted, ‘Most projects don't have enough budget to support any good closure.’”

Indeed.com Lessons-Learned Template

Date: [Insert date project was completed]

Project name: [Insert title of project]

Project manager: [Insert project manager's name]

Notes: [Insert any pertinent clarifying information here]

Lesson event #1

Lesson status: [Win or issue]

What happened: [Describe the event in detail]

Impact of event: [Describe how the event impacted the project in terms of progress, workflow, budget and other factors]

Early warning signs: [If the event was an issue, describe any warning signs your team observed that could signify the need to make a shift in the future]

Takeaway for future projects: [Describe how the lesson learned through this event may change future projects and list any particular recommendations your team will implement going forward]

Action items: [List any relevant actions your team will take to ensure recommendations are implemented for future projects]

Owner: [Name of individual who will take responsibility for any action items]

Lesson event #2

Lesson status: [Win or issue]

What happened: [Describe the event in detail]

etc.

Project Close-Out Meeting

- At this meeting, like the kick-off meeting, you should invite key project stakeholders. Some people call this *close-out* meeting a *post-mortem* since it is normally held after the project has died or been put to rest. The project champion should start off the meeting, and the project manager and his/her team should review information like the following:
 - The scope, time, and cost goals and outcomes
 - The success criteria and results in achieving them
 - Main changes that occurred during the project and how they were addressed
 - The main lessons learned on the project
 - A summary of the transition plan

Knowledge Transfer

- Employee knowledge or human capital is a key asset
- Recall that **knowledge management** is a process included under execution
- *Knowledge transfer* is the process of communicating knowledge that was developed by one person or in one part of an organization to another person or other parts of an organization
- In particular, people who will take over products or results produced as part of the project would need to spend time with project team members, so they understand what is involved in detail
- For example, people from the training, IT, HR, and contract departments would gain from knowledge transfer from the Just-In-Time Training project

Best Practice (Kent Green on Knowledge Management)

1. "Best" or "better" practices are not adopted; they're adapted.
2. As Jack Welch said, "You don't have a better or best practice until someone else is using it."
3. The learner is important and making learning easy is critical or people will recreate "good enough."
4. Focus on general, broadly applicable practices first, rather than choosing highly specialized practices.
5. To facilitate discovery of best practices, leverage communities wherever possible.

Best Practice (Kent Green on Knowledge Management)

6. Peer assistance is a critical tool to begin, and even conclude, the process.
7. Uncover success stories, communicate the stories, and assist the learning and adaption processes.
8. Facilitation is critical to the process - both the role and the capability.
9. Documentation/video/audio artifacts are the starting point for discovery and productive conversation.
10. To facilitate discovery of best practices, leverage communities wherever possible.

Closing Agile/Hybrid Projects

- Just like predictive projects, **agile and hybrid** projects should be closed.
 - Hybrid projects can use any of the project closing processes listed earlier.
- A strength of the Scrum events, if used on agile projects, is an intentional moment of closure, as follows:
 - **Daily Scrum**: You can think of these meetings as providing closure for the day before.
 - **Sprint reviews**: Sprint reviews provide closure for sprints, and sometimes entire projects.
 - **Sprint retrospectives**: This event is similar to a lessons-learned, but it only focuses on a particular sprint. When a project ends, teams should hold a **final retrospective** to focus on all lessons learned.
- Teams should still hold a **close-out** meeting and celebrate!

Advice on Closing Projects

- Plan for project closing. There should be **tasks** in the **WBS** and **resources allocated for closing**. On agile projects, there could be a user **story for closing** the project.
- It will be much easier to close a project if the project team **captures lessons learned** and other important information required for closing as soon as possible.
- Project managers should take time to thank their team and other project stakeholders and have some type of closing celebration.

Chapter Summary

- Closing projects or phases involves finalizing all activities and bringing the project or phase to an orderly end. It includes archiving project information, ensuring the planned work is complete, and releasing organizational resources.
- Closing outputs related to integration management include project documents updates, final products, services, or result transition, a final report, and updates to organizational process assets.
- Agile/hybrid projects also include closing activities. Teams should transition work to operational groups as needed, hold a project close-out meeting, hold a final retrospective to review lessons learned for the entire project, and celebrate the project's end.
- Helpful advice for closing projects includes planning for closure, documenting lessons learned and other important information as soon as possible, and celebrating project closure.

Reference

- Chapter 9: Closing Projects

