Purpose

The purpose of this document is to provide guidance on the practice called **Lessons Learned** and to describe the practice overview, requirements, best practices, activities, and key terms related to these requirements. In addition, templates relevant to this practice are provided at the end of this guide.

Practice Overview

Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) defines lessons learned as the learning gained from the process of performing the project. Formally conducted lessons learned sessions are traditionally held during project close-out, near the completion of the project. However, lessons learned may be identified and documented at any point during the project's life cycle. The purpose of documenting lessons learned is to share and use knowledge derived from experience to:
* Promote the recurrence of desirable outcomes
* Preclude the recurrence of undesirable outcomes

As a practice, lessons learned includes the processes necessary for identification, documentation, validation, and dissemination of lessons learned. Utilization and incorporation of those processes includes identification of applicable lessons learned, documentation of lessons learned, archiving lessons learned, distribution to appropriate personnel, identification of actions that will be taken as a result of the lesson learned, and follow-up to ensure that appropriate actions were taken.

Lessons learned document the cause of issues and the reasoning behind any corrective action taken to address those issues. When thinking about how to effectively document a project's lessons learned, consider these types of questions:
* What was learned about the project in general?
* What was learned about project management?
* What was learned about communication?
* What was learned about budgeting?
* What was learned about procurement?
* What was learned about working with sponsors?
* What was learned about working with customers?
* What was learned about what went well?
* What was learned about what did not go well?
* What was learned about what needs to change?
* How will/was this incorporated into the project?

Lessons learned should draw on both positive experiences– good ideas that improve project efficiency or save money, and negative experiences– lessons learned only after an undesirable outcome has already occurred. Every documented lesson learned should contain at least these general elements:
* Project information and contact information for additional detail
* A clear statement of the lesson
* A background summary of how the lesson was learned
* Benefits of using the lesson and suggestion how the lesson may be used in the future

At any point during the project life cycle, the project team and key stakeholders may identify lessons. The lessons learned are compiled, formalized, and stored through the project's duration. Upon project completion a lessons learned session is conducted that focuses on identifying project success and project failures, and includes recommendation to improve future performance on projects.

The lessons learned session is typically a meeting that includes:
- Project team
- Selected stakeholder representation including external project oversight, auditors, and/or QA
- Project support staff

Participants in lessons learned sessions typically discuss questions similar to the following:
- Did the delivered product meet the specified requirements and goals of the project?
- Was the customer satisfied with the end product(s)? If not, why not?
- Where costs budgets met? If not, why not?
- Was the schedule met? If not, why not?
- Were risks identified and mitigated? If not, why not?
- Did the project management methodology work? If not, why not?
- What could be done to improve the process?
- What bottlenecks or hurdles were experienced that impacted the project?
- What procedures should be implemented in future projects?
- What can be done in future projects to facilitate success?
- What changes would assist in speeding up future projects while increasing communication?

Lessons learned and comments regarding project assessment should be documented, archived, presented, and openly discussed with the intent of eliminating the occurrence of avoidable issues on future projects.

The ultimate purpose of documented lessons learned is to provide future project teams with information that can increase effectiveness and efficiency and to build on the experience that has been earned by each completed project. If documented and disseminated properly, lessons learned provide a powerful method of sharing ideas for improving work processes, operation, quality, safety and cost effectiveness, etc. and helps improve management decision making and worker performance through every phase of a project. They also helps validate some of the tougher times endured during the project's life and helps future Project Managers avoid similar difficulties.

Best Practices
The following are recommended best practice approaches to **Lessons Learned**:
- **Include All Experiences** - Lessons learned should draw on both positive and negative experiences.
- **Act Quickly** - Obtain feedback as quickly as possible to avoid people forgetting the challenges faced during the course of a project.
- **Document** - Store lessons learned throughout the project in a central repository.
- **Make Accessible** - Make lessons learned accessible to other projects.
- **Archive Lessons** - Lessons learned should be archived as historical project data and incorporate into the organizations lessons learned.
- **Disseminate Lessons** - Disseminate lessons learned to the project management community.
- **Reuse Lessons** - Reuse lessons learned from past projects to help better manage current projects.
- **Involve Stakeholders** - Involve all project participants and stakeholders in the lessons learned process.
- **Solicit Feedback** - Conduct a post-project survey to solicit feedback on the project from the project team, customers, and stakeholders who were well-acquainted with the management of the project.
- **Identify Lessons Learned** - Convene a lessons learned session to promote the success of future projects.
- **Archive Data** - Archive all project data in a central repository. Include best practices, lessons learned, and any other relevant project documentation.

Practice Activities

- Identify lesson learned
- At project end, conduct lesson learned session
- Document lesson learned and corrective action take in central project repository
- Disseminate lesson learned to other projects if appropriate
- Incorporate project lessons learned into organization lessons learned
- Archive project lessons learned with along with historical project data

Practice Attributes

This section provides a list of practice attributes to help project teams determine when and how **Lessons Learned** impacts a project.

Practice Owner	CDC UP Project Office – NCPHI
Criteria	All projects regardless of type or size should conduct some type of lessons learned activities.
Estimated Level of Effort	Minimal
Prerequisites	N/A
Practice Dependencies	Relate lessons learned to new project
Practice Timing in Project Life Cycle	Project Lesson Learned is an ongoing activity that takes place throughout the project lifecycle, at the end of the project life cycle, phase, iteration, etc.
Templates/Tools	CDC_UP_Lessons_Learned_Post_Project_Survey.doc, CDC_UP_Lessons_Learned_Log.xls, CDC_UP_Lessons_Learned_Checklist.doc
Additional Information	N/A

Key Terms

Follow the link below to for definitions of project management terms and acronyms used in this document.
http://www2.cdc.gov/cdcup/library/other/help.htm

Related Templates/Tools

Below is a list of template(s) related to this practice. Follow the link below to download the document(s).
http://www2.cdc.gov/cdcup/library/matrix/default.htm

- A Project Lesson Learned Log template to record project activities
- A survey for effective Project Lessons Learned
- A checklist for effective Project Lessons Learned