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Implementing an Effective Lessons Learned Process in a Global Project Environment

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Abstract

A Lessons Learned Process is one that crosses functional boundaries and allows an organization to learn from both its mistakes and its successes. An effective Lessons Learned process should prevent us from repeating our mistakes and allow us to repeat our successes. It should be an instrumental part of any organization's overall "continuous improvement" process.

Unfortunately, very few organizations can claim they have an effective Lessons Learned process that spans their global project operations. This paper discusses the barriers to implementation of an effective Lessons Learned process as well as the keys to success in overcoming these barriers and having a process that truly adds value to the organization.

As with any significant organizational change, the implementation of an effective Lessons Learned process requires strong leadership and an atmosphere where people are not afraid to admit to mistakes – and, in fact, are rewarded for doing so. It also requires that the organization's project management methodologies include processes and procedures that ensure lessons are captured, validated, institutionalized and utilized on future projects.

Introduction

Since 1997, I've taught project management in both the public and private sectors. I always ask my students, "How many of you believe you have an effective Lessons Learned process that covers projects across your entire organization?" Seldom, do I ever see a hand go up. And when a hand does go up, and I investigate further, it usually is a process limited to "my department" or to "my business unit" or to "large special projects." A number of students acknowledge their companies have formal or semi-formal Lessons Learned programs, but they are generally viewed as ineffective. And yet everyone believes an effective Lessons Learned process is important if an organization is going to be able to continuously improve on its project performance. In fact, in the Project Management Institute's own *A Guide to the Project Management Body of Knowledge (PMBOK® Guide, Third Edition)*, the term "Lessons Learned" appears 63 times, which is no small indicator of the emphasis PMI® places on the subject.

The *PMBOK® Guide* defines Lessons Learned as "The learning gained from performing the project. Lessons Learned may be identified at any point." Learning can come from successes where we did

something creative or imaginative and we would like to see it repeated on future projects -- and learning can come from our failures where something failed to meet our expectations and we would like to improve and not make the same mistake again. It would be nice to say most of the learning comes from our successes, but the reality is that most of the learning comes from our failures.

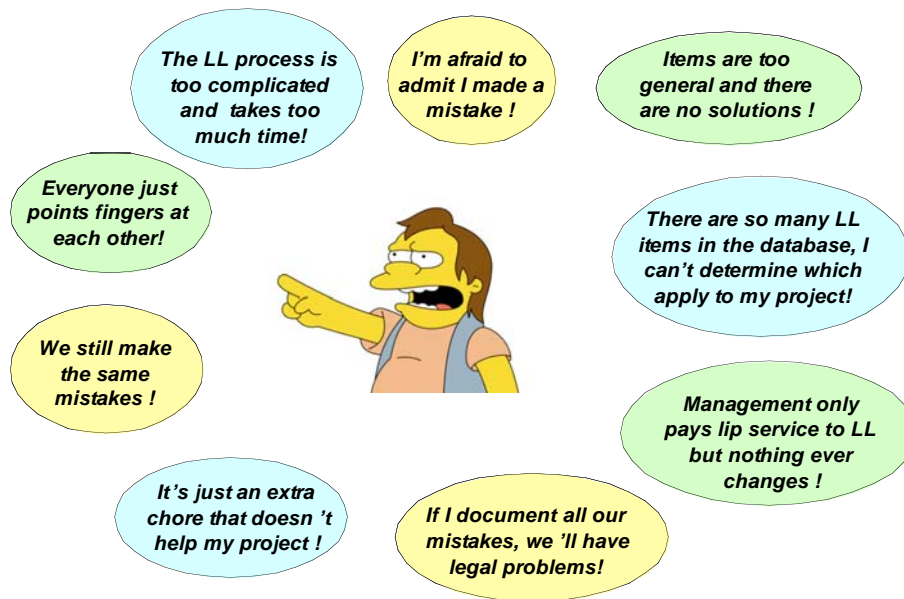
In a survey by Ernst & Young of 130 PMI® members and guests at a PMI® meeting in October 2006, although 91% of the respondents believed Lessons Learned reviews on projects were important, only 13% said their organizations performed them on all projects and only 8% believed the primary objective of the reviews was to understand the benefits that would accrue to the organization.

This paper discusses the barriers that prevent effective implementation of Lessons Learned and the keys to success in addressing these barriers and developing and maintaining an effective Lessons Learned process that can span the organization and be a valuable contributor to the organization’s overall goal of continuous improvement.

Overcoming Barriers

Barriers to Effective Lessons Learned

Below are a few “barriers” that I think we all recognize. Now let’s see how we can deal with and overcome them.



Leadership

“The lack of leadership involvement in and commitment to the learning process is the most critical barrier.” (*Dressler, 2007, p. 40*) An effective Lessons Learned process means having a disciplined procedure that people are held accountable to follow. It means encouraging openness about making mistakes or errors in judgment. It often means cultural or organizational change, which does not come

easy in most organizations. It means leading by example. If management is unwilling to learn from their mistakes, it is unlikely that the rest of the organization will be willing to admit to mistakes. In fact, management must reward people for being open and admitting to making mistakes, bad decisions, judgment errors, etc. This, of course, flies in the face of many corporate cultures.

Process Change versus Accountability

When something goes wrong on a project, there is someone accountable. One of the biggest problems in implementing an effective Lessons Learned process is to separate the “accountability” issue from the “process” issue. Accountability is important, but is something to be dealt with by management. Lessons Learned must deal with the process deficiency that caused the problem (e.g., inadequate procedure, too much of a rush, inadequate training, poor communications, etc.). Once a Lessons Learned process focuses on “blame” or “finger pointing,” the process will soon fade into oblivion.

What’s In It for Me?

Lessons Learned captured on a project seldom benefit that project. They benefit future projects. Often, a project manager sees capturing Lessons Learned as simply another chore that provides his or her project with little value, especially if the Lessons Learned procedure is complex and takes a fair amount of resources and time to implement, and management has not provided adequate resources to perform the work. The solution here is to have a simple procedure, ensure projects have the resources and time to implement the procedure, and hold project managers accountable for following the procedure. The “lack of value to my project” problem can be alleviated by proving to people the value of Lessons Learned to the organization and by ensuring that projects in the planning stages incorporate Lessons Learned from prior projects.

Capturing the Lessons -- Timing is Everything

On small projects, one can often wait until the end to capture and document the Lessons Learned. On larger, longer term projects, the Lessons Learned should be captured during or at the end of each project stage (e.g., Planning, Detail Design, Construction, Start-up, etc.). As time passes, memories fade, people leave the project and, if not captured in a timely manner, significant lessons are likely to be lost. All projects should have a formal post-project review. The purpose of this review is to review the Lessons Learned on the project (i.e., confirm those that have already been captured and/or add new ones). Post-project reviews can be stressful, especially when the project failed to meet its stated objectives. On large projects especially, it is essential that these reviews are effectively facilitated to ensure the focus is on process improvement and not on “who to blame.” Norman Kerth expressed it well when he stated, “... we assume that everyone did the best job that they could, given what they knew at the time. We are not here to pass judgment on what happened but to learn and grow from our collective experience.” (*Kerth*)

Validation

For many problems, the root cause of the problem is not always apparent. Learning cannot take place until the root cause(s) have been properly identified and appropriate corrective action(s) taken. This requires that each Lesson Learned be analyzed and validated by a subject matter expert (SME) before it is entered in the database. The validation process must be simple and straight forward. “A major contributor to making things too complicated is management’s insistence on a lengthy validation process. This

discourages sustained, meaningful contribution, because people quickly become frustrated with the formal system and return to the simpler water-cooler method of knowledge sharing.” (Murray, 2007)

The Lessons Learned Database: Solutions, Not Problems

Lessons Learned should be captured and placed in a database that is readily available to everyone in the organization. Unfortunately, many well-meaning Lessons Learned databases focus more on the problem than the solution, are difficult to search and provide little help to future projects. Like any effective database, the Lessons Learned database must have an administrator whose job is to ensure that:

- Each lesson has been validated by the appropriate SME
- Each lesson focuses on what was learned that will benefit the performance of future projects. Future projects need to understand what went wrong on your project, but what they really want to know is what to do to not make the same mistake.
- Each lesson is entered in the database in such a fashion that there is no finger pointing or blame attached. Nothing will kill a Lessons Learned process quicker than finger pointing.
- The database is kept current, is easily accessible and is easily searchable. I have heard numerous times from students that, in their corporate Lessons Learned database, they could never find information that applied to their projects. It’s important that the data entered in the database is clear, concise and has the appropriate key words to facilitate effective searches. It also helps to reference the individuals who can be contacted for more information.

Institutionalize the Lesson

Placing Lessons Learned in a database only means we have documented and communicated the lessons. The “learning” part only comes when the lesson has been institutionalized (e.g., changing a policy, writing a procedure, revising a standard, issuing a new specification, improving a work process, etc.). This is the tough part of Lessons Learned. As author Alvin Toffler stated, “It is always easier to talk about change than to make it.” Until the learning has become a part of the way we do business, we will always be prone to make the same mistakes. The Lessons Learned database will contain many different types of learnings, but the Lessons Learned process must ensure that the most significant lessons are institutionalized.

In a survey of 36 owner and contractor companies, the Construction Industry Institute found that a number of the companies had well-defined procedures for collecting Lessons Learned, but most were considerably less effective in actually analyzing and implementing solutions. (CII, 2007)

Don’t Forget the Good Stuff

Since Lessons Learned mostly come from the things that didn’t go well and need improvement, we tend to focus on these “negative” learnings. Many times, however, our project teams come up with imaginative and creative ways to do things that save time, money and improve performance. These “positive” learnings also need to be institutionalized and repeated. We need to make sure these “positive” learnings get in our Lessons Learned database and, this time, it’s also okay to “point fingers.”

Legal Issues

If you document your mistakes, publish them in a database and make the database virtually accessible to everyone, are you opening yourself up for legal action? In today’s litigious society, there is certainly some

risk. The Construction Industry Institute indicates that “most legal experts agree that the possible use of lessons learned documentation during discovery has legal consequences such as failure to follow standard processes or not taking corrective actions due to past mistakes.” (*CII, 2007*) I’m afraid, though, that if you get your lawyers involved in the validation process, nothing will ever make its way through to the database. I believe this is an issue where management must decide on how to handle the trade-off between improving project performance and risking legal action.

Is It Working?

Periodically, management should review the organization’s Lessons Learned process to ensure it is continuing to add value to the organization. The review should address the following questions:

- Are all projects participating and following the organization’s Lessons Learned procedure? This includes both incorporating and capturing Lessons Learned on active projects.
- Do project teams “perceive” the Lessons Learned process is adding value?
- Are the Lessons Learned actually adding value to the organization? --- This means we must have some way of measuring “value.” Measures might be quantitative (e.g., cost savings, increased productivity, etc.) or qualitative (lower risk, safer work environment, etc.)
- Are the significant Lessons Learned actually becoming institutionalized?
- Are we making sure Lessons Learned are not “pointing fingers”?
- How can the Lessons Learned process be improved?

Conclusions

In 2001, the U.S. General Accounting Office issued a preliminary report (GAO-01-101R) to the Subcommittee of Space and Aeronautics entitled "Survey of NASA's Lessons Learned Process." The report gave the results of GAO's surveys of 192 NASA managers overseeing 240 NASA programs and projects. The final report (GAO-02-195) entitled “Better Mechanisms Needed for Sharing Lessons Learned” was issued in January of 2002. The key findings of this report are (*Maya, 2005*):

- There is no assurance that lessons learned are being applied;
- There is unfamiliarity with lessons learned across centers/ programs;
- Cultural barriers inhibit sharing, capturing, and submitting lessons;
- There is an apparent lack of support from agency leaders;
- Success in industry comes from commitment to knowledge sharing.

Although these key findings reflect Lessons Learned at NASA in 2001, I think they would probably apply to many large organizations today; organizations, like NASA, that have multi-locations, that have complex management structures, and that have a very diverse portfolio of programs and projects.

In most organizations, it seems that Lessons Learned, if they are captured at all, are captured on an ad-hoc basis or captured only within one segment of the organization. Mistakes are often repeated from one project to the next. For those few organizations that have an effective Lessons Learned process that spans globally across all projects, the key success factors include:

- Strong leadership that encourages and rewards openness and instills a culture aimed at performance improvement as opposed to placing blame
- Having a simple, yet formal, Lessons Learned procedure that is proven to add value and that is able to focus on process improvement and not point fingers
- Holding projects accountable to follow the procedure

- Providing adequate time and resources to capture, analyze and institutionalize the Lessons Learned
- Holding post-project reviews to ensure Lessons Learned are captured
- Maintaining a well administered database of Lessons Learned that is easy to access and easy to search
- Following up and actually institutionalizing the most important Lessons Learned
- Periodically reviewing and improving the organization’s Lessons Learned process

Implementing an effective project-wide Lessons Learned process is no easy task and means culture change in most organizations. For organizations, especially large ones, that wish to implement a Lessons Learned process, my recommendation is to follow the Deming “plan-do-check-act” model:

1. Pick a portion of the organization for which success seems most likely and develop a simple Lessons Learned procedure
2. Train the project staffs and implement the procedure
3. See how well the procedure works and modify accordingly
4. Repeat the steps until the process works as expected and then apply it to the entire organization

It’s my belief that an effective Lessons Learned process will pay for itself many times over.

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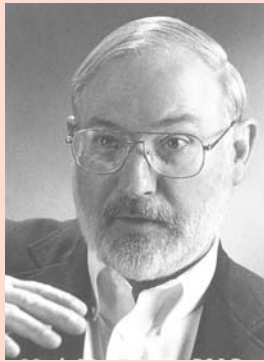
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