How to Incorporate “Lessons Learned” for Sustained Process Improvements

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Presentation Agenda

- Introduction
  - “Lessons Learned” … or were they?
- Issues involved
- Current state of practice
- Opportunities for improvement
- Recommendation – “A Five-Step Approach"
- Conclusion
- Final thoughts
“Lessons Learned” … or were they? - 1

Our experiences, whether “good” or “not so good” teach us important lessons

- Individually, do we really learn from these lessons?
- Even if we learn some of the lessons, do we always share our key learnings with others?
- Even if we share our key lessons with our team members, are they shared with larger entities (projects/organizations)?
- Even if some of these lessons are shared at larger levels, do most of the projects/organizations really learn from and apply them?

Not always!
“Lessons Learned” … or were they? - 2

Ideally, if we really learned lessons from various project experiences, then…

- One project's mistakes will usually not be repeated on another project
- Process improvement will be a trivial exercise
- Projects will usually be on time, within budget, and deliver high quality products
- Customer and user satisfaction will be higher
- Organization will function more effectively
“Lessons Learned” … or were they? - 3

We often hear:

- “Didn’t we have the same problem earlier?”
- “I know Joe had encountered this problem on his project!”
- “I thought project XYZ had solved this problem long ago!”
- “I really wish we had learned our lesson from their experience!”
I’d like to share what I know but no one will listen

I’ll be damned if I am gonna let the world know I made a mistake!

I could have told them it would/wouldn’t work - I have tried it

The problem is other people!

I didn’t know how to do this but if I ask it’ll make me look stupid

I wish I could talk to someone who has done this before

If I tell them what I know, what’s to stop them getting rid of me?

I haven’t got time to share my knowledge/experience

I’ll be damned if I am going to change after all this time.

I’m not interested in hearing about mistakes - I want to know about successes

Yes! But my project is different.

It’s safer to follow procedures rather than experiment.

I haven’t time to learn, I have a deadline to meet!

I know what’s best for me!

There’s nothing I can learn from them.

I’ll send them on a course and then they’ll know how to do it

I could have told them it would/wouldn’t work - I have tried it

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Reality is …

- We often reflect on our individual experiences and apply the lessons learned into our own work

- Some cohesive teams share and incorporate project experiences in their future work

- Some organizations facilitate cross-learning through proper organization structure, open culture, and good tools/technology

But these are exceptions!
Challenges are …

- Today’s corporate environment poses several challenges
- Project teams are:
  - Multi-functional
  - Constantly evolving to meet business and resource constraints
  - Matrix structured
  - Culturally diverse
  - Geographically distributed
The Result is …

- Today’s corporate culture is not very conducive for effective communication and cross-team learning
- In spite of organizations’ intentions to integrate, several cross-team learning opportunities are missed
- Organizations pay a steep price for repeating similar mistakes and missed opportunities

Lessons are learned, but after missing the boat a few times
The Issue is …

In today’s competitive environment, organizations cannot afford missed opportunities and repeated mistakes.

The Resolution is …

Organizations must:

- Constantly and quickly leverage from each other’s experiences
- Provide organizational, cultural, and technological infrastructure to facilitate cross-team learning
- Enforce the process discipline

*The next best thing to learning from your own lessons is to learn from other’s lessons – Gains without much pain!*
Current Practices

Some projects:

- Perform end-of-phase and/or end-of-project retrospective and collect observations/lessons learned

- Store lessons learned in a searchable database or even in a sophisticated knowledge repository

- Encourage people to use lessons learned

- Periodically review the collected lessons learned and make process improvements for persistent problems
Problems with the Current Practices

Significant variability in practice causes inconsistent results:

- Not all projects conduct end-of-phase and/or end-of-project retrospective and collect lessons learned
- Collected lessons learned lack appropriate categorization, context, problem statement and/or solution
- Repositories lack easy access, good navigation, and/or sophisticated search & retrieve capability
- Overtime, the repositories grows to be big, resulting in stale information, slow searches, and even irrelevant results
- Retrieving relevant information is too time consuming and thus people use the practices they are accustomed to
The Answer is …

“Good ideas are not adopted automatically – they must be driven into practice with courageous patience”  
- Admiral Hyman Rickover
Guidance from CMMI

Organizational Process Focus (OPF) Level 3 Process Area – Practice SP 2.4 : Incorporate process-related experiences into organizational process assets:

- Conduct a periodic review of the effectiveness and suitability of the organizational process assets
- Obtain feedback about their use
- Derive lessons learned
- Make lessons learned available
- Appraise the process, methods, and tools in use and make improvement recommendations
- Manage process improvement proposals
Recommendation: Five-Step Approach

Systematically apply the following five-step approach to capture and translate key lessons learned into improved practices for sustained process improvements:

- Step 1: Capture lessons
- Step 2: Catalog and save lessons
- Step 3: Communicate and apply lessons
- Step 4: Incorporate lessons into process assets
- Step 5: Rollout and institutionalize enriched processes
Step 1: Capture Lessons

Capture lessons from the following three major sources:

- After every major work product inspection, isolate the systemic problems and note key issues/observations.

- Project functional teams must conduct a periodic or end-of-phase retrospective to identify key issues.

- For all operational high severity/impact problems, perform root cause analysis and isolate key issues.

*Derive “Lessons” - extrapolated knowledge in terms of Do’s and Don'ts from these issues/observations.*
Step 1: Capture Lessons (cont.)

- Reflect and capture lessons in terms of both - what particularly worked well and what did not

- For each lesson, record:
  - Project name
  - Project size
  - Project type
  - Project phase
  - Project environment
  - Functional discipline
  - Issue / problem
  - Resolution / Solution
  - Context and key words
  - Scenario, if applicable
Step 2: Catalog and Save Lessons

- Create a single learning/knowledge repository to catalog and save collected lessons
- Perform a sanity check on collected information
- Repository should be
  - Searchable by key project attributes such as name, type, size, phase, functional area, and key words
  - Easily accessible, web-based, and secure
Step 2: Catalog and Save Lessons (cont.)

Having a single repository for the organization has several benefits:

- Quickly and easily identifies pattern of similar problems
- Easier for practitioners to look and search one common repository as opposed to searching three different ones
- Easier to update and maintain
- Better utilization of resources
Step 3: Communicate and Apply Lessons

- Disseminate all the recently submitted lessons periodically to project teams (relevant to each functional group)
  - E-mail notifications
  - Organizational meetings
  - Organizational newsletter

- Seek opportunities to apply lessons
  - A successful pilot of a lesson would validate it and pave the way for incorporating it in the process
Step 3: Communicate and Apply Lessons (cont.)

Benefits:

- Brings information to practitioners
- Increases the chance of someone in a project team to apply a relevant lesson
- Encourages everyone to submit to and retrieve lessons from the knowledge pool
- Allows for informal scrutiny of lessons from peers
- Permits further improvisations and innovations of lessons
Step 4: Incorporate Lessons into Process

- Identify lessons that can be incorporated into the process:
  - Exhibit a pattern of belonging to a similar problem or solution
  - Have been successfully piloted in another project
  - Have relatively lower process overhead or lesser risk in changing the process

- Improve the process by incorporating the lessons
Step 4: Incorporate Lessons into Process (cont.)

Improving the process may mean one or more of the following:

- Enhancing planning templates
- Enhancing checklists
- Introducing additional process activities/steps
- Making steps optional or mandatory
- Changing sequence of certain activities
- Suggesting use of new tools/technologies
- Introducing additional inspections or reviews
- Changing focus of certain activities
- Improving tailoring criteria and/or choices
- Collecting additional measurements
Step 5: Rollout and Institutionalize Process

- Announce and release enhanced processes periodically in various modes, especially highlighting changes in processes:
  - Organizational meetings
  - Organizational newsletter
  - Process release communiqué

- Provide training and/or FAQs for updated processes, as needed

- Maintain knowledge repository:
  - Archive lessons already incorporated in the process assets
  - Keep the repository accurate, concise, and current
Conclusion

- Each organization has an enormous cumulative intellectual capital of experience:
  - In people’s minds
  - In organizational repositories

- These pools of knowledge are not properly utilized for continuous process improvement

- A systematic five-step approach of collecting and translating key lessons into practices would yield sustained and continuous process improvement:
  - Capture lessons from various activities
  - Catalog and save lessons in a structured knowledge repository
  - Communicate and apply lessons
  - Incorporate lessons into process
  - Rollout and institutionalize enhanced lessons
In closing …

Continuous process improvement is everyone’s responsibility

Truly improving business performance demands more than simply putting more knowledge into organizational repositories

Lessons are really not learned until relevant process assets have been improved and the process has been institutionalized.
Thank You!
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