

2008 NDIA CMMI Technology Conference

Lessons (Not) Learned



SEIPartner

*By three methods we may learn wisdom:
first by reflection, which is noblest;
second, by imitation, which is easiest;
and third, by experience, which is the
bitterest.*

- Confucius

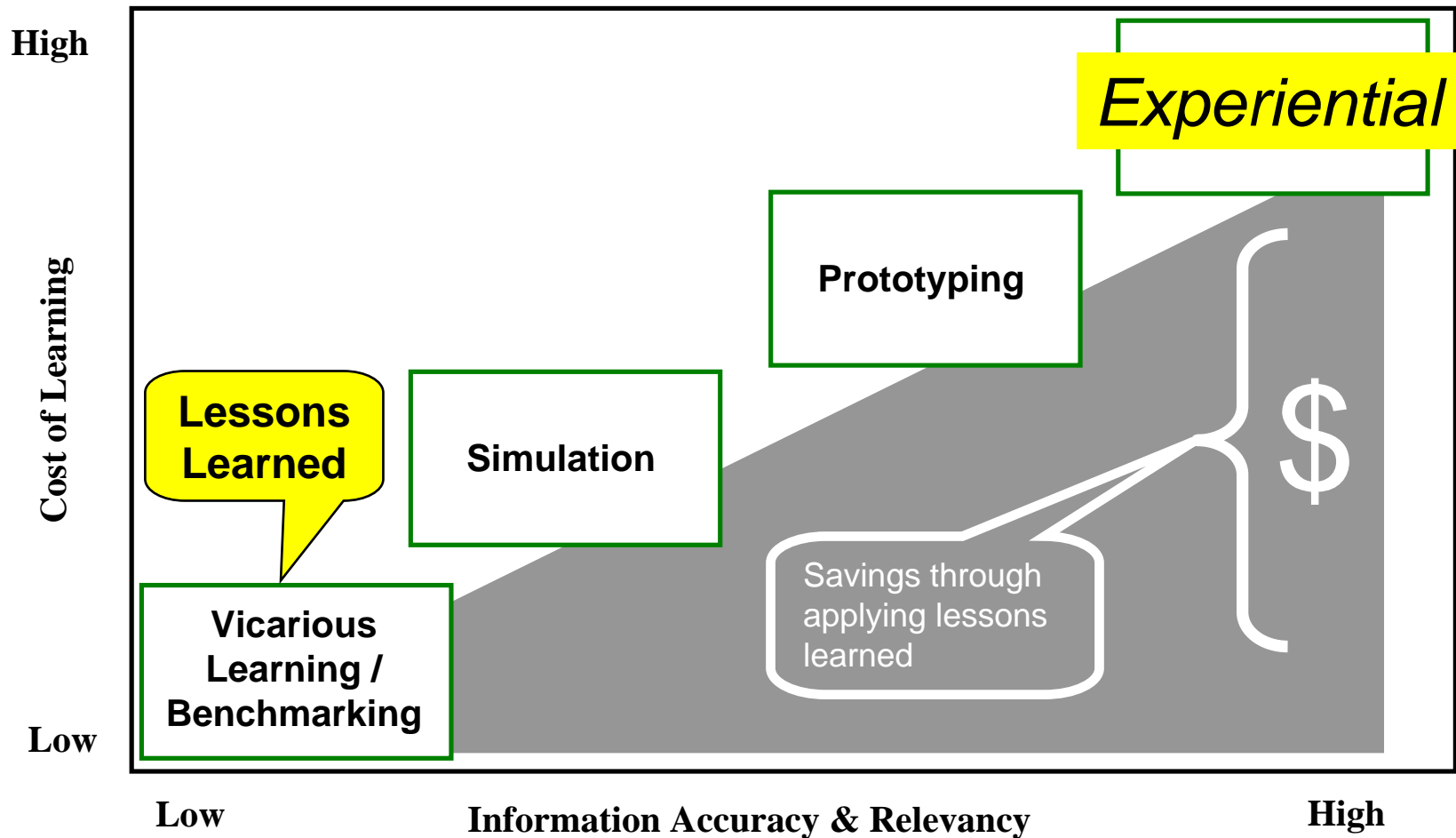
Content

Definition	4
How People Learn	5
The Value of Lessons Learned	6
What Doesn't Work	7
Getting People Involved	10
Institutionalizing Lessons Learned	11
Recommended Approach	12
Discussion	22

Definition

A lesson learned is a documented and shared experience concerning an action deemed worthy of promoting for its benefits or to warn others of its pitfalls.

How People Learn



The Value of Lessons Learned

There are compelling business reasons for implementing and institutionalizing lessons-learned programs:



One person's lesson learned can enable rapid vicarious learning by many others, and save the organization time.



Lessons learned and implemented can reduce waste and rework, which can save money.



Process and product quality can improve by preventing repeated mistakes through lessons learned.



Some people will have greater job satisfaction when learning is integrated with work.



Lessons Learned on Lessons Learned: What Doesn't Work – 1

Common barriers to organizations successfully implementing and institutionalizing lessons learned include:

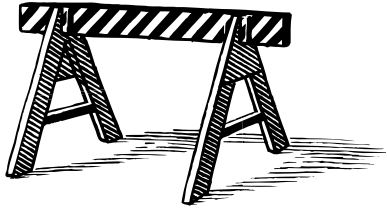
1. Failing to establish incentives for participating in lessons learned, which ensures LLs will not become a priority activity
2. Placing too much emphasis on negative lessons (what went wrong), and not enough emphasis on positive lessons (what went right)
3. Having little or no criteria or structure for defining lessons learned, which leaves the quality of LL information to chance.
4. Failing to train people in lessons learned (their value, processes, and tools), which causes people to perceive that LLs are not important



Lessons Learned on Lessons Learned: What Doesn't Work – 2

Common barriers (continued):

5. Failing to train people in how to create and use lessons learned, which also leaves the quality of LL information to chance.
6. Inaccessible or difficult to find relevant lessons learned information, which discourages people from seeking and applying LLs
7. Cultural dynamics that are often counterproductive to a lessons learned program being established and institutionalized:
 - A. Mistakes (learning opportunities) are punished, consequently, the admission of mistakes is repressed
 - B. Political correctness can stifle critical thinking and observations, thus diminishing the value and applicability of LLs
 - C. Failure to value or view learning as an essential component of work will not motivate people to contribute to or use LLs.



Lessons Learned on Lessons Learned: What Doesn't Work – 3

Common barriers (continued):

8. Restricting collection of lessons learned to exclusively occur at the end of projects without regard to the project duration can cause the loss of lessons learned; they're forgotten
9. Suppression of candidate organization lessons learned by individuals who think they already have learned the lesson.
10. Requiring the adoption/use of new technology to capture or access lessons learned can create resistance to participating in lessons learned
11. Failing to address systemic or recurring issues or opportunities revealed by patterns in LLs can cause people to lose interest; they don't want to keep looking at the same LLs in perpetuity


Getting People Involved in Lessons Learned

As with other initiatives, it is challenging to get people interested and involved in lessons learned. For people to care, lessons learned will need to be:

- ❑ Compelling:
 - ❑ Interesting
 - ❑ Entertaining
 - ❑ Relevant, applicable, useful, functional
- ❑ Easy to access and easy to find relevant LLs
- ❑ Adoptable and adaptable
- ❑ Something people perceive as beneficial to them



Institutionalizing Lessons Learned



To ensure the long-term viability and success of a lessons learned program, the culture needs to encourage and support lessons learned:

- ❑ Facts, measures, and evidence are at least as important as intuition and perception.
- ❑ Acquiring knowledge, sharing knowledge, and applying knowledge are rewarded more than merely possessing knowledge; we change our definition of “expert.”
- ❑ If software development is knowledge acquisition and storage, and if the most difficulty and risk is in acquiring unknowns, then the most valuable lessons learned are those that transform unknowns into knowns.



Recommended Approach – 1

Natural SPI recommends this structured approach to implementing and institutionalizing lessons learned:

1. Conduct a lessons learned on lessons learned
2. Present the business case for lessons learned to leadership; find out what it's worth to pursue
3. Define a model and attributes for a lesson learned
4. Adapt current technology to enable lessons learned creation, organization, and access
5. Establish and implement incentives and motivation for lessons learned contributors and users
6. Periodically measure and monitor the value of lessons learned, and communicate results



Recommended Approach – 2:

Conduct Lessons Learned on Lessons Learned

Before embarking on an effort to implement lessons learned in the organization, it seems reasonable to learn vicariously what has worked and not worked (LLs on LLs):

1. Conduct research on lessons learned programs in external but related businesses and organizations
2. Collect lessons learned on lessons learned from people within the organization; they won't hesitate to tell you what doesn't work, and they might have good ideas on what does work

The goal of LLs on LLs is to avoid repeating mistakes made by others, and to plan and implement an effective lessons learned program.

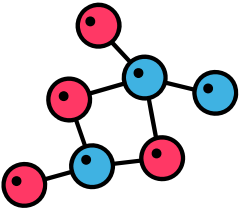


Recommended Approach – 3: Define and Present LL Business Case

A business case for process improvement should be defined, and should address these questions:

1. Why do we want to implement and institutionalize lessons learned? What do we believe will be the benefits of doing so?
2. What will be the cost of implementing lessons learned:
 - A. The cost of adopting and adapting a system and process to enable lessons learned
 - B. The effort required for people to participate in lessons learned
 - C. The cost of incentives or motivation to get people to participate

Leadership should use the business case to determine if there will be a positive return on the investment in lessons learned.



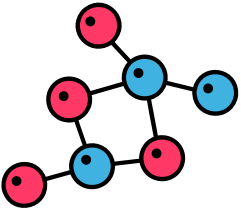
Recommended Approach – 4:

Develop Model and Attributes for a LL - 1

The quality of lessons contributed by people can be guided through the use of a model (i.e., a content standard) and attributes for documenting lessons.

Attributes of lessons could include:

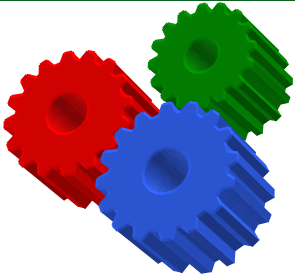
1. Criteria for capturing or recording a lesson learned
2. A concise but accurate description of what was learned
3. Identification of whether the lesson arose from something that should be repeated (good practice) or something that should not be repeated
4. Estimated value of the lesson learned
5. What should be done in the future to apply the lesson



Recommended Approach – 5: Develop Model and Attributes for a LL – 2

Attributes of lessons learned (continued):

6. Identification of the circumstances in which the lesson was learned:
 - A. A description of the circumstances or environment in which the lesson would apply in the future (e.g., “when we have to build new database tables”)
 - B. The functional role (e.g., project manager, requirements analyst, engineer) to which the lesson best applies
 - C. An estimation of the likelihood or frequency at which the lesson circumstance is likely to occur or arise



Recommended Approach – 6: Adapt Current Technology to Enable LLs

Define a simple process that describes how to contribute lessons learned, and how to access them and use them. Try to use existing technology to manage lessons learned data and information.

At a minimum, the technology used for lessons learned should:

1. Support the work practices of most of the LL contributors and users
2. Provide minimal database functionality such as sort and search capability
3. Require only typical office desktop products to access, read, update, and transform lessons learned (i.e., MS Office, IE)
4. Enable and automate the generation, collection, analysis, and communication of measures and measurement data related to lessons learned
5. Date each LL or provide “most recent LL” functionality



Recommended Approach – 7: Establish Incentives for LL Participation - 1

If participating in lessons learned (contributing, accessing, using) becomes just “one more thing” people are asked to do, and they perceive it to be additional to (not integral to) their work, the LL initiative is likely to fail.

For success, organizational leadership and management must:

1. Be explicit in articulating the new or changed behaviors expected for lessons learned to be successful
2. Promote the business case (the “why”) for lessons learned; how will the organization benefit, and how will individuals benefit
3. Establish and articulate the priority of lessons learned relative to other improvement efforts or initiatives; e.g. “collecting and using lessons learned is more important than reducing time-to-market”
4. Involve senior management in contributing and using lessons learned



Recommended Approach – 8:
Establish Incentives for LL Participation - 2

Lesson's learned incentives (continued):

5. Offer award and or recognition for lessons learned participation. For example, recognition could be given to individuals or teams for:
 - A. Most number of lessons contributed
 - B. Most number of lessons applied or implemented
 - C. Greatest benefit (cost or schedule savings, product quality) from applying a lesson learned
 - D. Highest rated lesson learned (if rating and review of LLs is implemented)

Recommended Approach – 9:**Monitor, Measure, and Publicize Progress and Success – 1**

Improvement initiatives don't gain momentum on their own; they need care and feeding until inertia is achieved. The lessons learned initiative will require these things to get inertia:

1. The lessons learned initiative needs a sponsor or sponsors who care about and drive it to success; senior leadership needs to periodically show interest and inquire about its progress and success.
2. People need to be trained in the value and use of lessons learned using the organization's normal education methods.
3. The LL sponsor(s) must monitor contributions and use of the lessons learned.

Recommended Approach – 10:

Monitor, Measure, and Publicize Progress and Success – 2

Gaining inertia (continued):

4. Sponsor(s) must measure progress and success, and promote and publicize success of lessons learned to encourage increased contributions and use.
5. Projects should assign responsibility for LL harvesting, and plan and execute activities in the project life cycle to harvest and use LLs, and contribute to LLs at least at project close.
6. Organization leaders need ensure that people feel safe contributing to lessons learned, and that they are not used as a vehicle to evaluate people.

Admiral Gehman's Philosophy

“Knowledge, jealously guarded by an individual, is not power. Quite the opposite, it detracts from the power and effectiveness of the entire organization.”

“You will be judged here by how well ‘your information’ was utilized by the organization; NOT by your cleverness in obtaining it.”

“We must adapt to new information flow. Everyone must ‘know’ what everyone else knows.”

Admiral Harold W. Gehman, Jr

Discussion and Questions

Contact:

Michael West

Natural SPI, Inc.

866-648-5508

michael@naturalspi.com