

Simply putting project lessons into a database does little to spread them around the organization. In fact, many such repositories continue to grow, but don't deliver a corresponding return. Nancy Dixon says this is because organizations haven't paid enough attention to the demand side of knowledge sharing – those who are doing the asking. Here, she describes how to link the lessons learned database with a social process that truly allows the organization to benefit from what it knows.

DOES YOUR ORGANIZATION HAVE AN ASKING PROBLEM?

A step-by-step process to capture and reuse project knowledge

By Nancy Dixon, Common Knowledge



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Capturing and reusing lessons learned from project teams is an idea that organizations find very attractive, but have found extremely difficult to make work. The idea is appealing because projects are costly and lessons learned from other projects could improve quality and save time and money. In the hopes of achieving that goal many organizations have purchased software-based knowledge management systems. While this technology offers remarkable capability, it seldom works as anticipated. The overriding difficulty is that the lessons that populate most databases are mundane and have questionable value to users. The main reason is that the lessons aren't connected to social processes – the development of relationships, reflective conversations, probing questions and in-depth interactions – that are the backbone of knowledge sharing.

Linking the database with social processes

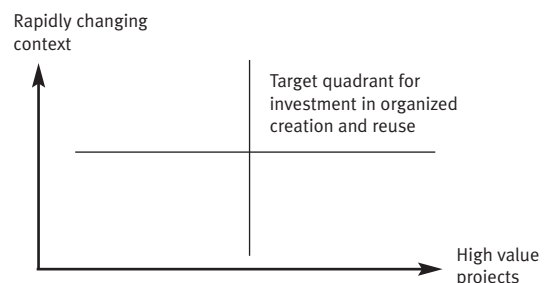
The idea that a lessons learned database must be married to social processes is not new – almost every description of knowledge management acknowledges that need. Unfortunately there has been a scarcity of

solutions about how to actually make that marriage happen. Drawing on five years of work with organizations implementing knowledge management, this article describes a way to link social processes with a lessons learned database to make the lessons relevant and get them into the hands of team members who can reuse them.

Judging whether reuse is worth the cost

The system is designed for teams that are working on projects that are of considerable significance in terms of money or outcomes. The meetings and interactions outlined take time, so the outcome must be worth the time expenditure (see Figure 1, below).

Figure 1: When should you invest in reuse?



When is it critical to spend the time to make sure teams learn from what others are doing in the field? Only when 1) the context of a project is continually shifting due to changing technology, new markets, economic fluctuations and innovations, and 2) if the cost of projects is high. In this case, a single lesson from another team can make a competitive difference.

Common Knowledge

is a consulting and research firm working with organizations interested in increasing the effectiveness of their knowledge-sharing initiatives. One current research effort is a study on knowledge transfer within strategic alliances.

KEYPOINTS

- Drawing on five years of work with organizations implementing knowledge management, this article describes a way to link social processes with a lessons learned database to make the lessons relevant and get them into the hands of team members who can reuse them.
- The system is designed for teams that are working on projects of considerable significance in terms of money or outcomes. The meetings and interactions outlined take time, so the outcome must be worth the time expenditure.
- The first and most critical step in making lessons meaningful is for members of the originating team to figure out exactly what they learned.
- It's an interesting phenomenon that by explaining the project to others, the originating team also learns. They see their that others interpret some words and phrases very differently, and they learn what doesn't need to be said.
- Placing a lesson learned in a database does not constitute spread. Spread is the movement of knowledge from person to person, and that happens primarily through relationships. The key is not to send the product to as many people as possible but to send it to the few people who the sender believes are likely to be interested in it.

Implementing the approach outlined here takes considerably more time than what has become the norm for lessons learned, where one team member may spend three or four hours at a desk writing a summary of the project to send into the database. While leaving this chore to one person is certainly low cost, it's not surprising that there is little return on investment. The true cost, however, is the time wasted by 30 or 100 people who retrieve a "lesson learned" that yields little useful help.

Wasted time, poor morale and disillusionment in the system are only a few of the consequences of a system that doesn't take users into account. A basic premise of the knowledge transfer system in this article is that the team that conducted the project – hereafter known as the "originating team" – gains the perspective of potential users – hereafter referred to as "reuse teams."

Knowledge creation and reuse is a circular process. There certainly can be no reuse without the creation of knowledge – the supply side of knowledge. And likewise there is no need for knowledge creation unless the intent is to reuse what was learned – the demand side.

Sensemaking – what did we *really* learn?

The first and most critical step in making lessons meaningful is for members of the originating team to figure out exactly what they learned. This "sensemaking" exercise requires a no-holds-barred, face-to-face dialogue. The team must take into account their actions, external events, decisions, costs and outcomes, both intended and unintended. The meeting should be facilitated by a neutral professional who can point out unconscious assumptions and probe the real reasons behind the team's actions.

Sensemaking is knowledge creation. Each team member leaves the meeting with a broader and more accurate mental picture of the relationship between the team's actions and the outcomes achieved. Without this critical discussion each team member will certainly develop and retain the learning from his or her specialty, but has no way to verify, correct or expand that understanding to reflect the reality and the complexity of the outcomes that the team has achieved – whether positive or negative. In other words, the multiple perspectives of team members correct the cognitive bias to which all humans are subject.

The sensemaking meeting isn't intended to generate reports for others about what was learned or accomplished. There are two reasons for keeping the focus of this meeting on those who were involved:

1. Learning requires team members to be open, honest and self-critical. If team members think

there is potential for embarrassment, they will quite naturally guard what they say, speak in abstractions and fail to raise difficult issues – all of which decreases the chance for learning.

2. Most of the notes, flip charts and minutes produced in a sensemaking meeting are of little use unless you were there.

Sensemaking in this design is initiated at the end of a project. For projects that last months or even years, it's essential to have interim sensemaking meetings, as well as a comprehensive meeting at the end of the project. Such meetings should occur at natural phases of the project or at regularly scheduled times. Far too much is lost or misremembered if months have gone by without the team making sense of what they are learning. The knowledge gained from interim meetings needs to be kept for use at the final sensemaking meeting.

Translation – teaching to understand

The second step is a "translation" meeting to figure out how a reuse team might use what's been learned by the originating team (See sidebar, page 21). A few members of the originating team meet with colleagues from other projects who take the role of potential users. The goal of this meeting isn't to persuade their colleagues to use the lessons, but to find out what potential reuse teams would need to know about the project and its lessons to make use of it. The translation meeting is a listening task. A facilitator can help to create the context for listening as well as help to focus the questions.

The originating team members, having taken part in the earlier sensemaking meeting, can tell the "whole story" of the project, not just the part they experienced. Even so, they won't have answers for all questions, but answering isn't the critical

task in a translation meeting. It's learning what are the reuse issues. After the meeting the originating team members can return to their colleagues to gain the further understanding needed to produce user-focused knowledge.

As the old adage goes, "to really understand something, you have to teach it." By explaining the project to others, the originating team also learns.

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They see that others interpret some words and phrases very differently, and they learn what doesn't need to be said. The translation meeting, like the earlier sensemaking meeting, spreads knowledge. In this case, the spread occurs when those who have come from other projects incorporate the ideas they have absorbed in the translation meeting back into their own projects, and when they talk about what they have learned to colleagues who are working on

yet other projects. It's in this gradual and incremental way that innovative ideas are spread.

Spread – how to share the learning

The output of the translation meeting is used to reformat the knowledge originally produced in the sensemaking meeting into a useful product for the benefit of reuse teams.

One of the members of the translation team formats the lessons into a usable product. Often this product is a written document that will be sent to a lessons learned database. It could also be a presentation at a conference, a videotape or a peer assist. This is not a trivial task; it may require conversations with other members of the originating team to clear up a point or to obtain a needed document. It may require adding more context or discussing unresolved issues. Almost always it means adding examples and stories to make the actions more concrete for the reuse team. It's more than a writing task, however. It requires thinking like the customer.

One of the challenges is embedding the hopes, values and emotions that were a part of the project in a written product. First-person stories, in the language of the people that lived the experience, are helpful, and so are pictures and brief video and audio clips. With the increased home use of digital cameras and video recorders, there is little technical difficulty in obtaining such clips. They do, however, still require considerable extra time and effort.

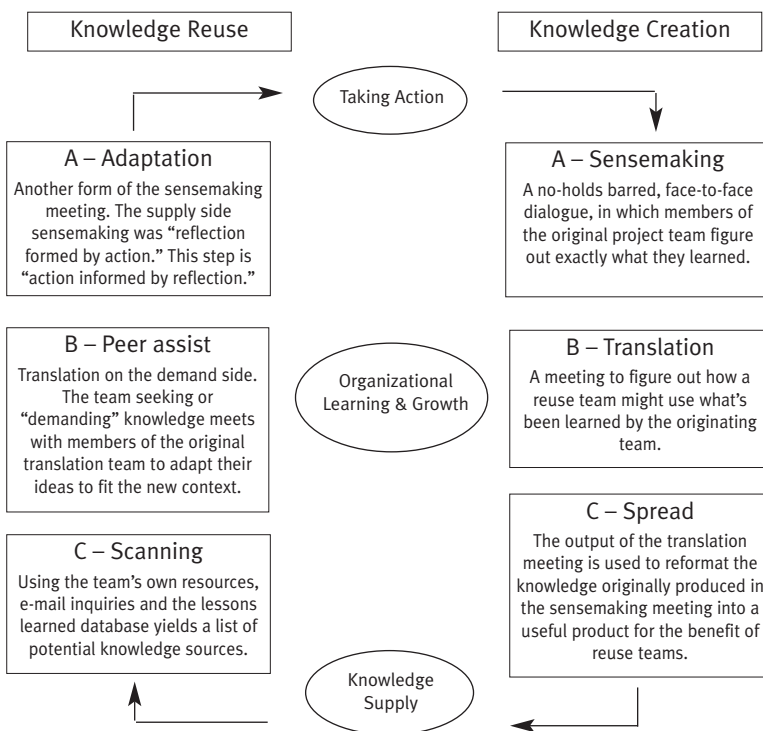
For some projects it's useful for the format to be constructed as modules so that lessons related to different parts of the organization can be routed to appropriate people. For example, there may be specific lessons related to communication or measurement.

Two or three "ambassadors" are assigned to each completed product, and they agree to make themselves available to talk to others. The best ambassadors are people who have been in on both the sensemaking and the translation meetings, so they can tell the whole story. Ambassadors should be available for presentations, to answer questions by phone and meet with new teams for assistance.

The product that has been formatted is placed in a database so that others can find it on an as-needed basis. However, placing it in a database alone does not constitute spread. Spread is the movement of knowledge from person to person, and that happens primarily through relationships.

The key is not to send the product to as many people as possible but to send it to the few people who the sender believes are likely to be interested in it. Potential users are much more likely to take the time to look at lessons learned that come from

Figure 2 - Knowledge creation and reuse



The right side of this figure represents the supply side of knowledge – how knowledge is created in an organization. On the left is the "demand" side. Without demand, the supplies just sit there. Unfortunately, this is what happens with too many databases that are filled with lessons learned – there is very little demand. The demand side shows a systematic process that supports the active seeking of knowledge and assists the translation to facilitate its use.

someone who knows them and whom they believe has their interests at heart. It's the personal recommendations of trusted colleagues that piques the interest of others in a lesson learned.

This is similar to the way gossip spreads. The gossip tells someone who is acquainted with the story's central character, and who would therefore be interested in hearing it. Gossip is targeted, not broadcast. There are two already established sets of relationships that will help spread lessons learned – those who attended the sensemaking meeting and the translation meeting. A personal note should be attached, asking them to forward it on to a few people who they feel could benefit from it. Returning the product to the originators who were in the sensemaking meeting serves a second purpose. It honors their contribution to the project and ensures it doesn't embarrass them.

Spread begins between members of the sensemaking team, it grows through the translation team's interaction with other projects, and it enlarges farther yet when the product is sent to a targeted group. Placing it in the database with appropriate keywords is a further element of spread.

“Scanning” rather than “asking for help”

Knowledge sharing begins with a request, not with a solution. No matter how much knowledge is presented at conferences, held in databases or e-mailed to colleagues, knowledge won't be reused unless a team has a need, something they are struggling with.

Managers sometimes tell me that people in their organization have a problem with sharing knowledge; but more often than not, people aren't “asking.” The organization has an asking problem, not a sharing problem. When people ask, the sharing problem becomes moot.

How organizations talk about “asking” is critical. When company officials say to professionals, “Don't be afraid to ask for help,” their words actually work against asking. Asking for “help” denotes helplessness. No competent professional wants that image attached to his or her performance. What professionals do need is to be able to tap into organizational knowledge that is growing and changing – to tap into what others are learning from their ongoing experience. I have labeled this step “scanning,” which connotes an active seeking for something of value.

The faster the rate of change in an industry the more critical the need for scanning. The salient question is, “In the last few day, weeks or months, what has been learned in the field by our peers that could inform how we move forward on this project?”

Substituting the term “scanning” for “help” isn't enough to make “asking” happen of course. It's also necessary to have a process in place to legitimize and facilitate the asking. That process

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begins with a team meeting to identify potentially useful knowledge across the organization. For example, a team might ask, “Who has worked with this contractor before? On this particular problem? With this technology? In this country? With this size of data set?” Team members will have ideas about who might have useful knowledge within the community because they will have been the recipients of lessons learned that other teams have produced through their sensemaking meetings. And they will themselves have served on translation teams in the supply side of this process. So the reuse team does not start their scanning with a blank slate. In a community that has been actively translating and spreading lessons learned, reuse team members may be adequately apprised of potentially useful knowledge to begin the process of contacting them.

The initial scanning using the team's own resources, e-mail inquires, the community of practice leader (who often can connect them to people with relevant experience) and the lessons learned database yields a list of potential knowledge sources that are related to various topics the reuse team will be addressing. However, each of these scanning tools only reveals a possible knowledge source. It does not serve up the knowledge, for

Found in translation

The concept of translation is most easily understood through an analogy to the early versions of computer manuals. The ones written by the same technicians that built the machines were nearly useless. The reader often had to know nearly as much as the technicians to get a question answered. Computer manuals have greatly improved over the years because now someone else writes the manuals – someone who thinks like a customer, not a hardware engineer. The same kind of translation problem shows up in most of the lessons that populate lessons learned databases – they are written from the perspective of the people who lived the experience, rather than the perspective of the potential user.

that the team will need the sixth step of this process, translation.

Peer assist – mining what others have learned

Peer Assist can be thought of as another translation task, similar to the one on the supply side. In the supply-side translation meeting, the originating group translated what they had learned for the benefit of potential reuse teams. The translation task on the demand side calls for the originating team to translate again, but this time the translation assignment is very different – they need to translate what they know for a specific context.

This is accomplished in a meeting between the reuse team and the originating team. The reuse team, having identified an originating team that they believe could inform their project, invite the team to a meeting – often for a day or two. Such meetings do not usually involve the whole originating team, more commonly it is two or three members who attend, often those who were selected as ambassadors.

The reuse team is asking the originating team to reach deep into their experience to pull out those ideas that fit the reuse situation, perhaps shaping that knowledge into a construct tailored to the reuse situation. They are asking the originating team to share tacit knowledge that goes far beyond the explicit knowledge they have already written up and placed in the database.

A fundamental question for knowledge sharing is, who makes the translation, the originating team or the reuse team? From my experience, it's both effective and more efficient for the originating team to do the translating. Effective because the pool of knowledge the originating team is drawing on is larger and richer than what they can present; efficient because they can offer “just in time” knowledge. The originating team needs to understand a considerable amount about what the reuse team's goals, requiring an in-depth dialogue that involves:

- Building a comprehensive picture of the reuse team's situation, including the technological challenges, political issues, resource constraints, time frame and cultural issues.
- Understanding the questions and issues the reuse team has framed.
- Understanding what the reuse team doesn't know that it doesn't know – the most effective knowledge conversations address the unasked, as well as the asked question. Gaining these unexpected nuggets is usually one of the most useful and valued parts of the exchange.

The dialogue serves another essential purpose, it

establishes a relationship of trust and respect between the two teams, which is the foundation for an ongoing dialogue. I have been speaking of peer assist as though it involves one meeting – one conversation. But in fact, the interaction between the originating team and the reuse team often involves many conversations in many formats, over the weeks and months of the project. Some of those conversations may occur between two individuals, some may be over the phone and others face to face, depending upon the need. I know of an oil exploration team working in, what was for them, very deep water, that met with the same originating team three times; at the beginning of the project to help them get a handle on the scope of the task they were facing; then nine months later, when they had collected considerable data, to assist them in looking at what new issues that data raised; and again at the end to help them think through what they had learned.

Adapting, not adopting

Having held the peer assist, the reuse team must now decide how to use what they learned from the originating team. This is a task of adaptation, not adoption. Managers sometimes tell me that a team won't use someone else's knowledge without changing it or making it their own. Often this is confided in almost derogatory terms as though the manager believes it is just exaggerated pride or inflexibility on the part of the reuse team – or an example of the “not-invented-here” syndrome, that causes them to adapt rather than adopt. But managers do a disservice to employees when they expect other's knowledge to just be accepted and used. That expectation discounts employees' existing knowledge.

Rather than discounting the reuse team's existing knowledge, managers need to provide the time and support for the adaptation of borrowed ideas. That may involve providing the time and costs for things like site visits, two groups working together for a period of time, and even personnel exchanges between re-use and originating groups. It also involves accepting the reality of “worse before better” change. Any time a team tries something new there is a learning curve and nearly always performance initially suffers as teams unlearn old and relearn new skills. What teams need during this period is encouragement to stay with it. Many new ideas fail because the initial poor results cause teams to revert to the familiar, even when the familiar was not obtaining the desired results.

The reuse team that has engaged in a peer assist, now meet to plan their path forward. One of the marvels of an adaptation meeting is that often the

new ideas the reuse team comes to agreement upon are something that the originating team would scarcely recognize as having come from them. Between the peer assist and the follow-up planning meeting, the members of the reuse team have been assimilating what they learned from the originating team, and that has spurred yet more ideas about how to proceed. In the end, it's not the originating team's ideas on which they will move forward, but the collective sense they have made of those ideas. It could not be otherwise. It's not possible for a team to effectively implement something they do not thoroughly understand and own.

Back to the start

The system now cycles back to the beginning. The reuse team will learn from its own implementation, and that new knowledge positions them as an "originating team." To fully comprehend what they have learned, they will need to hold a sensemaking meeting and a translation meeting. And they will spread what they have learned to their colleagues. They have a special debt to pay in terms of the spread because early on another team assisted them. This obligates them to let that team know how their ideas worked in this new setting, what additional things were learned – to return the favor by facilitating the continued learning of the originating team. Without this thoughtful feedback, an originating team might continue to offer ideas that work only in their specialized setting, never knowing how the lessons needed to be modified to be of assistance to others or never knowing of improvements they could make to their own already successful processes.

The final step to grow the organization's knowledge is the analysis of the samples within the database. There is a great deal that can be learned by looking across these samples at the underlying factors that could not be evident to any single team. Such an analysis needs to be conducted by subject matter experts who have been allocated the time to thoroughly study the lessons learned in order to look for underlying causative factors as well as consistent patterns across lessons. Experts functioning in this research capacity may need assistance from qualitative researchers to perform content analysis based on systematic coding. During their analysis they may form hypotheses that require them to return to the source of the data, the team members, to collect additional information. They may need to compare instances of successes with failures or conduct experiments to test the hypotheses they are drawing.

Once these underlying lessons have been developed from the analysis, the lessons need to be

Can you do a peer assist by conference call?

Can peer assists be held by conference call or by videoconference? There are three considerations:

1. Trust: Trust is formed through face-to-face encounters. Once formed, trust is like a full bucket. It's possible to dip into it by holding virtual meetings and conversations – but after a few months the bucket will have to be replenished or trust will have vanished.
2. The type of content being requested: Explicit knowledge travels well virtually, tacit knowledge does not. Explicit knowledge, e.g. "What was the author of that book you recommended?" or "Could you send me the survey instrument you developed?" requires little trust to make the request and the knowledge itself can be easily transferred through email, fax, or a voice message. Tacit knowledge, e.g. "What approach have you found useful with customer X?" requires a synchronous conversation based in a trust relationship in order to transfer knowledge effectively. If a trust relationship has been established, then a virtual, synchronous exchange can effectively carry the knowledge for a period of time before the trust bucket needs to be refilled.
3. The amount of learning the originating team gains from the exchange: One of the major reasons members of the originating team are willing to take the time to come to a peer assist is that they realize they learn. When teams meet virtually, the learning of the originating team is greatly reduced. This loss is significant in the short term, but even more significant in the long term. If originating teams consistently receive little back for their effort, the practice will die away. In the end any effective knowledge sharing system depends on reciprocity.

translated into an actionable format in order to become a significant part of the organization's knowledge. Some of these actions will undoubtedly need to be addressed at the system level rather than at the team level. In fact, one of the great benefits of this type of analysis is the ability to uncover system-level issues along with sufficient data from the analysis to compel management action on them.



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