Generation of Group Storytelling in Post-decision Implementation Process

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Abstract

Post-decision implementation process involves the execution of organizational process, people with different skills and knowledge, which can contribute in future decisions and best-practices. The aim of this paper is to analyze the creation of group storytelling as a mechanism to represent tacit knowledge in the scope of post-decision implementation process. The concepts of post-decision and group storytelling are presented and discussed. A technological support (tool) is proposed.

1. Introduction

Decision-making process has been a research topic for many years. Several initiatives were proposed to understand, solve and improve this process, including influences from different areas like computer, management and decision sciences. From the perspective of computer science, systems like Decision Support System, Group Decision Support System and Organizational Decision Support System are examples of those proposals to support the decision-making process. This paper discusses a different approach, which is based in a decision cycle (figure 1).

Figure 1. Decision cycle

The pre-meeting phase involves the organization of a meeting: bringing new decisions that have to be made, as well as pending ones, the discovery of material to support new proposals, negotiations about who should participate in the meeting and the definition of an agenda. During the meeting phase, where decisions are made, other demands are raised. For example, the recovery of historical data related to the present problems, the recovery of lessons-learned to help improving the decisions to be made, the definition of who is going to be responsible for each task implementation, at which time-schedule and consuming which type of resource. The post-meeting phase is when the implementation of the decisions is executed. In this phase, new demands appear like the use of past successful steps and lessons-learned about past mistakes. However, we believe that this phase also involves knowledge that can be useful in future instances of the cycle. Experiences of the implementation phase can provide indicators for new meetings, and stories about what was implemented with or without success.

We will concentrate our proposal on the activities related to a decision implementation, included in the third phase of the cycle, where knowledge is also generated and normally not documented. We will discuss how the use of group storytelling can contribute to transform tacit knowledge into explicit knowledge within the context of post-decision implementation.

Section 2 presents the concepts of post-decision implementation and knowledge management problems of post-decision implementation. Section 3 presents the concepts and use of group storytelling in the context of post-decision implementation. Section 4 presents the requirements for a support tool and section 5 presents the final comments and conclusions.

2. Post-decision

One problem that has been mentioned for a long time in several distinct researches is the scenario of decision-making process. How shall a decision-making be more effective, involving teams, complex problems and its consequent implementations? Problems related to capture, measure and improve the quality of decisions have been cited for many decades. Since the 80’s authors suggest this complexity. For example, DeSanctis in 1987 makes a reference to previous researches that say, “our society is experiencing the emergence of a post-industrial environment characterized by greater knowledge, complexity, and turbulence” (cited by Huber 1984b) and “one effect of this trend is that decision-related meetings are becoming more frequent and more important. At the same time, the decisions confronting groups are becoming more complex and must be more quickly, and with greater participation than in the past” (cited by Huber 1986), see [6]. And still, this scenario has not changed expressively in spite of the initiatives proposed during the past years as [6], [8], [17], [13] and [14].
Another problem, which is also an open problem, is how to provide a follow-up of a decision-made implementation. Many researchers are interested in what happens during the process of decision making, but what happens after the final decision and its consequent steps? How are the steps related? How can they contribute to improve organizational processes or to help in new decisions? The gap between the moment a decision is made and its corresponding post-decision implementations may, in fact, turn several decisions inconsequent, due to the lack of appropriate support to the implementation follow-up. As pointed by Russo [16], it is not enough to simply make a decision and move on. We must periodically review our decisions and consider that if we fail to track the results of our decisions, and fail to analyze them to reveal key lessons, we are wasting good opportunities for improvement. Also, from the perspective of Hammond et al. [7], a decision is not made in a vacuum, most of them are linked to those that proceed and succeed it.

2.1. The concept of post-decision

This paper considers the process that takes place after a decision is made, referred here as “post-decision” phase. The concept includes the idea that after a decision is made several elements are generated: an implementation plan (containing: timing constraints and interdependencies between tasks) is created, a list of people involved (containing: the responsible for each task, as well as the list of participants for executing tasks) is defined and deliverables (containing: documents, meetings, trips, etc) are expected to be created and to take place.

We aim at capturing and organizing the information and knowledge involved during the post-decision implementation, and make them available can contribute to avoid past mistakes and to help to find out best organizational practices. We base this idea on previous research from Ramesh, Stewart, Markulla and O’Leary [17], [16], [10] and [12] that summarized can be point out as the following assertions:

- Many mistakes are frequent in organizations and some of them are related to the lack of information and knowledge about previous experience;
- Other mistakes are frequent because of the lack of planning and control of decision implementation;
- Knowledge and information are generated during a decision implementation;

Several technologies can be used to capture, organize and dispose information or knowledge in the context of post-decision implementation like intranets, workflow management systems (WFMS), document management systems, automated to-do lists, database management systems, email and so on. There is not a formal definition about the best or more adequate technology to support post-decision implementations.

For example Borges [1] proposes the use of a process pattern approach based on WFMS. In this approach, a number of process patterns is made available to the designer based on the characteristics of the domain, in this case, the post-meeting processes. A pattern is defined as a generalized description of a set of recurring rules that can be associated with a workflow schema [1]. Following this approach, designers can reuse previous experiences to improve the speed and the quality of the schema design process [2].

Markulla [10] proposes the use of intranet and extranet to provide follow-up as well as an organizational memory for software development projects. She mentions some benefits that support the ideas presented in this paper, for example, the possibilities of:

- Easier to find information and documentation;
- Time saving through reuse;
- Knowing of existing projects;
- Easier familiarizing of a new project member;
- Learning from other projects;

Independent of the technological support, it is important to realize that in a post-decision implementation both tacit and explicit knowledge are generated and accessed. Systematizations of processes are examples of explicit knowledge and the skill one person has about executing certain task can be one example of tacit knowledge.

2.2. Tacit knowledge and post-decision

Tacit knowledge is highly personal and hard to formalize, making it difficult to share with others. It is embedded in an individual experience and it involves intangible factors such as personal belief, perspective and the value system. Subjective insights, intuitions, and hunches fall into this category of knowledge [11]. Tacit knowledge is tricky. And the proof for this interpretation is visible when we try to explain or to represent something we know. Sometimes the difficulty is related to the lack of capacity of recognizing that we know something (for e.g. an innate skill), or because of a lack of vocabulary to represent the knowledge.

We think that great part of the knowledge involved during a post-decision implementation is tacit. Participants in post-decision implementation face daily problems and solve them using their tacit knowledge. Choices are made, options are discarded and this knowledge normally is not represented through any technology. Great part of the knowledge involved in post-decision implementation is lost or not available. But where is this knowledge? Definitely, it is inside the mind of the participants of the processes.
In the context of post-decision implementation, tacit knowledge is composed by the experiences and skills participants can make explicit and that can contribute to future decisions to be made. Experiences about successful or wrong choices are normally not represented in organizational processes, but they are part of the expertise acquired by the participants during processes implementation. But how can organizations make this knowledge explicit and available to others?

In the following section, we discuss the idea of using group storytelling to systematically support the transformation of tacit knowledge into explicit knowledge in the scope of post-decision implementation.

3. Group Storytelling

A story can be defined as “a narration of a chain of events told or written in prose or verse” [3]. And “narration” comes from the Latin “narrere”, meaning “to pass on knowledge”. Thus, story is one possible mechanism to transmit knowledge.

Storytelling is as old as the history of man. The Egyptians registered stories through pictures. Later with the invention of writing stories were registered by several civilizations. Indians still have the oral storytelling as the main way of propagating knowledge inside tribes through different generations. Stories can be used for different purposes, like teaching, entertainment and knowledge transferring; they can have different scripts, linear ones or a broken alternative order; they can cause different emotions like sadness, happiness, excitement and fear. Thus, storytelling is not an optional extra, but an old skill in a new context. The new context is the emergence of Knowledge Management [19].

Stories are a very powerful way to represent complex, multi-dimensional concepts. While a certain amount of knowledge can be reflected as information, stories hold the key to unlocking the vital knowledge, which remains beyond the reach of easily codified information [15]. Still reinforcing this idea, the same author suggests that stories are great vehicles for wrapping together the many elements of knowledge. A good story combines the explicit with the tacit, the information with the emotion.

Based on this concept, knowledge and story are inextricably connected, and stories are partial, structured memories of observed and articulated reality, aims Roger Schank and Robert Abelson, cited by Davenport [4].

Stories can be created and transmitted by one person or by a group of people. In the context of this paper, we are considering the second possibility. Group storytelling means that more than one person is contributing to create a story, synchronously or not, at the same place or not, as one of the taxonomies used in CSCW proposes.

We think that group storytelling is more adequate than single storytelling when applied to the scenario of post-decision implementation. Since within this context many people are involved in implementing tasks and also, the knowledge generated in the end is the combination of the skills acquired by each participant during the processes execution. We think the group story can contain many more valuable details if more than one person participates in its creation, since an experience about a post-decision phase normally involves more than one individual.

3.1. Group Storytelling and Post-decision Implementation

In the context of post-decision implementation, tasks are implemented through the efforts of several people, concurrently or one after the other. Emails, discussions and documents are generated and all these objects contain part of the knowledge concerned with the activity being executed.

Our proposal is to use group storytelling as a mechanism to register part of the tacit knowledge involved during post-decision implementation. In the next topics we discuss some perspectives of this approach.

What is a story in post-decision implementation

The first item to be discussed is the definition of what is considered a story in the context of post-decision implementation. The first idea is that every fact or a part of it can be a candidate to become a registered story.

But nobody has time to register all the details that take place in an organization. Our opinion considers stories the experiences that contain enough information and knowledge to make a specific fact a valuable one for future reuse. Besides this, stories must be understandable by the aimed audience and mainly they should be true ones.

The choice of defining what is a good story might be subjective and dependent on the participants involved, but some examples of executed tasks and experiences that are candidates of tacit knowledge, which can be transformed into explicit knowledge are:

- Procedure reports: how predicted steps were developed in reality, what were the problems encountered and how they were solved.
- Innovative situations: what were the innovative situations and what did they bring to the expertise of the organization or to the groups involved.
- Interdependence between involved groups and processes: justification why certain people were involved in tasks, somehow indicating who is the expert in each subject.
- Difficulties: what were the barriers to execute certain tasks or processes.
• Results: what was the end of the processes, with description of the reached results.

These examples could be part of the experience a senior employee has in an organization. However, there is no formal mechanism to put this knowledge available, except by the normal procedure of a conversation, i.e., asking and listening to reports of such experiences. Our idea is to use the technique of group storytelling to help in making this hardly reachable knowledge available to others who do not have the experience.

Media type

There are several ways of registering a story. Among them are text, photos, audio, video or a combination of them. Within the context of post-decision implementation, we consider that all of these types can be valid. Video and audio help to bring to life the ideas by adding more non-text clues including body language, graphic illustrations, and sound effects or music. This helps activate many more parts of the brain than text alone, increasing most people’s ability to pay attention and to recall what they have heard, plus it draws in people who are not as comfortable in purely text-based communications [15]. It is clear that the use of various technologies, like multimedia, is much richer than simple text, but they demand a richer production, as well as techniques that normally people do not have, like the definition of a good script, or the storyboard to be used, a good voice, a good make-up, good quality pictures, etc.

Considering that in a KM programme it is very important that the activity of capturing and organizing knowledge should be as smooth as possible, and as much as possible integrated in the daily activities, the use of text-based storytelling seems to be the most adequate proposal to register stories of post-decision implementation. Although we are aware that when written down, stories suffer the same problems that all explicit representations of knowledge face: disconnection from the teller, locked linearity, and a certain element of petrification that is required of any snapshot as point by Ruggles [15].

Roles in group storytelling

The idea of creating a story with the participation of a group of people can bring contributions like richness from the different perspectives, but can also bring difficulties like the lack of common opinions and different ways of expressing ideas. Trying to avoid these disadvantages, we propose the use of some roles for the participants of a group storytelling: storyteller, associator, indexe and organizer.

➤ Storyteller

Independent of the media used to tell a story, the greatest stories are those told by great storytellers. We believe that the skills of the storyteller will influence considerably the quality of the story. The narrators shall be able to use a great range of expressions, to use a certain way to organize the story being told so that the tacit and explicit knowledge can be well represented. We think that in a group storytelling one person has to have the initiative to start registering a story and then this same person has to make others aware of her interest so that others can contribute as well. Again, the technological support can help in this sense. A person can register the idea of a story she considers important to the context of the post-decision implementation and other can be automatically notified about this new idea.

➤ Organizer

After a story is registered it is necessary to go back and check the quality of the whole script, if the parts are related to each other, if there is a logic sense for those who are going to read, listen or watch the story. We propose the role of an organizer to be responsible for these. This person should organize and edit the story and give a final format to it.

➤ Associator

After a story is created we consider extremely important to associate it to other knowledge and information already available (for e.g. other stories, or documents) within the organization. The role of an associator is related to this activity. She is going to look after other sources related to the story registered so that the KM process is improved, allowing that once a person wants to recover a story about a decision implemented, she can also learn with associated information or knowledge generated.

➤ Indexer

The role of the indexer is to classify correctly the story registered, helping others to recover meaningful stories. This person is going to look for keywords that represent the contents provided. We also think this is the last activity to be done in a process of storytelling. This person should also be responsible to put the final version of a history available for further consultation.

➤ Story listener

In the scope of an organization, which is going to use storytelling as a KM support, a good story listener becomes extremely as important as a good storyteller. Those able to realize the different perspectives of a story, considering what is implicit and explicit, as well as what is emotional and only a simple narration, are the ones who will get the benefits from the stories available.

Note that different people must not necessarily execute these roles. Maybe one participant in a group storytelling can have two roles. But it is important to emphasize the need of these different and complementary points of view that each role can bring to the story.

Ideally the participants of the post-decision implementation should execute all these roles. These people are the best candidates to give meaning and context to the stories registered.
4. Requirements for a Group Storytelling Support Tool

We suggest that the proposed storytelling mechanism should be hooked to a technological solution that supports post-decision implementation. Thus, if the organization uses project management tools, or CASE tools, or a document management tool, or a workflow management system, or an intranet to register and provide follow-up of decisions under implementation, the mechanism of registering storytelling should be integrated to the specific system.

Considering a time-life on the creation and use of a story (figure 2) we propose some features that could be used as requirements for constructing a group storytelling support tool.

<table>
<thead>
<tr>
<th>Story Idea!</th>
<th>Template Choice</th>
<th>Recovery of data</th>
<th>Automatic Semantic Arrangements</th>
<th>Group Editing</th>
<th>Deploying</th>
<th>Accessing the Story</th>
</tr>
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**Figure 2. Story’s time-life**

Our proposal starts at the moment a user wants to create a story. The tool could provide some story templates or skeleton structures with the main topics suggested, to guide and facilitate the creation of a new story.

Then, since the process of creating a story is part of the context of post-decision implementation, the story has to be related to the activities and artifacts generated during the execution of tasks. The tool should facilitate the creation of stories using data that are already available in management systems, which were generated during the decision implementation. These data can be documents, processes instances, images, graphics, audios, videos, calendar items, reports from meetings, registered chats and emails. The tool should provide a first semantic arrangement of these artifacts, i.e., grouping artifacts that are related (e.g. emails with a document, documents versioning), providing a draft of these “branches” of related information. This first arrangement can also bring the names of participants of the process, who are going to be the best candidates to create a group story, and even provide a formal invitation through a communication tool (e.g. email). Such awareness features were discussed by Prinz in [21].

After the user has a first idea of the suggested artifacts to be part of the story, it is necessary to validate the order, the groups of information and then include the knowledge about the “story”. The user should include annotations with explanation and justifications, should include her own point of view, change the order of artifacts creation, combine groups of information, delete parts of them, associate other artifacts, and so on. These functionalities allow the creation of a story using the post-decision documented artifacts, as well as the representation of tacit knowledge through the contributions of the story creator.

Once a story is created, by one or more individuals, other participants can give their contribution. This contribution can take place during the story creation or in further steps, generating a group story. We believe that with this approach of group contribution the amount of tacit knowledge available is bigger than with the opinion of only one person. We also propose that the roles provided in the previous section should be part of the process of creating a story. Thus, the storyteller, the organizer, the associator and the indexer should have these roles defined and executed during the story generation process.

Later on, the last role proposed, the story listener, should have some technical support as well. This individual will read, listen or watch to a story, and ideally learn from it. This story recovery should provide search mechanisms considering keywords, context and user interests.

5. Conclusion and next steps

The contributions of this paper include the discussion about the use of group storytelling in the field of KM, the proposal of new roles in this context and the focus on the post-decision implementation scenario. We also provided some initial thoughts on how an electronic system could support our ideas.

Several aspects could not be discussed, such as how this approach would be used combined with solutions for the post-decision implementation based on different technologies? What is difference in specific groups or teams? Different domain areas shall bring different barriers and facilities, as well. Another reflection point is about the value this mechanism can create within an organization, following a concept proposed by Davenport and Prusak [5]:

knowledge transfer = transmission + absorption (and use)

Or like Markulla [10] reinforces: knowledge has economic value only when it is used and the value of knowledge increases the more it is used. If this is achieved, then the compensation comes.

The idea of using a group storytelling mechanism is not a cheap one. It is dependent on a KM culture, as well as a group culture and it also demands the technological support. Besides that, some specific time has to be dedicated to the creation of a story, because the process cannot be completely transparent and automatized.
Although the idea of storytelling sounds nice, like "fairytale stories", organizations do not have enough time to do everything suggested as improvement to their processes. The aspect of timing dedicated to register a story has to be as long as necessary to provide qualified one, but as short as possible to release the person to continue to do her activities. Here again, the technological impact has to be re-emphasized and it can help to reduce the time needed to register a story.

A “knowledge-friendly” culture is one of the most important factors for the success of a knowledge management project. Another impact is related to the interest one has to contribute to a story. Through e-mail, groupware, the Internet and intranets, computers and networks can point to people with knowledge and connect people who need to share knowledge over distance. But, all these technologies do not create knowledge and cannot guarantee or even promote knowledge generation or knowledge sharing in a corporate culture that doesn’t favor those activities, as pointed by Markulla [10].

Another predictable impact we see from our approach is the idea of group storytelling. On one hand the richness of the story can be better if compared to a story from only one person, but on the other hand group activities bring other complexities, like negotiation, communication and some times coordination needs.

And what are the benefits one gains from the registration of stories experienced? Once more, the organizational incentives must exist as well as a practice of making use of knowledge registered. Otherwise, those who could contribute to register good stories will think they are just giving, but not receiving anything. It is also very important that evaluations are executed to figure out the participation of people, providing recognition of good contributions, and demonstration of good or bad results based on the use of stories registered. We think one of the greatest benefits of storytelling is the nature of this activity. Somehow, it is a simpler and more natural way of describing an experience than other complex technologies from Artificial Intelligence or automatically knowledge acquisition.

The authors want to continue this work implementing a prototype integrated to a document management system and executing a field study to observe the results of the ideas presented here.

6. References