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Efficient use of Sounding Board Method at project milestones and its potentials for virtualization

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Abstract

Project milestones in major product development projects are often the only possibility to discuss critical points with all relevant stakeholders. This is even truer in the context of globalization as these projects are run by worldwide spread teams integrating a growing number of stakeholders. One way to improve the involvement of all stakeholders is the application of the Sounding Board Method which concentrates on the content of feedback while suspending defending of results or ideas. In this paper the authors present a case study which was conducted with a German automotive manufacturer showing how to adapt the Sounding Board Methods for the efficient use at project milestones. In this context it is shown how collective intelligence can be used also for non-virtual collaboration. Subsequently the authors present a study outlining possibilities to implement the Sounding Board Method also for virtual project milestones in the future.

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1. Motivation and State of the Art

1.1. Feedback

Feedback serves to correct actions, behavior or measures subsequently [1]. It confronts us in our everyday life in different ways. Besides our actions and behavior feedback may also refer to a product or performances [2]. Consequently feedback influences a company's success essentially. It is even stated that in the medium-term non-functioning feedback systems endanger the business' viability [3].

However, to ensure a functioning feedback culture and a high quality of feedback it is important to stick to certain rules. Typical feedback rules in a professional surrounding are the limitation of the feedback providers to comment only on behavior and not personal characteristics. It is even more important that the feedback receivers are willing to accept the feedback and avoid defending themselves. [4]

Those kind of rules should especially be observed when giving feedback at project milestones which has a great influence on successful proceeding in product development [5]. After every product development phase there is a project milestone where the development teams present their intermediate results in front of the customer [5, 6]. The relevant stakeholders meet to discuss critical points and bring in new ideas. Therefore, it is recommended to consider methodical support. This may assist to comply with feedback rules, stick to time restrictions and concentrate on textual aspects. Methodical support can be e.g. the deployment of objective moderators and an appropriate feedback method.

Due to globalization, however, companies face extensive challenges. More and more worldwide spread teams are formed which are consequently not able to meet at the same place regularly. Though communication in this context is even more important most of it takes place in a virtual environment using electronic media [7]. Therefore, it is even more important to provide support in this context.

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1.2. Sounding Board Method

One suitable method for structuring and organizing feedback efficiently is the so-called Sounding Board Method which was developed in the context of change management [8]. The expression "sounding board" originates from the field of music as it means the enhancement of vibrations, e.g. in a piano [9]. In context of business, a sounding board is a group of experts, managers and employees who comment on certain ideas of others while bringing in their own. The size of the group can extend up to 50 people because the members' competencies may differ and hence should be used for different topics. For implementing the sounding board's feedback, the members meet in an early phase of the development process. [10]
The method's advantages are the involvement of different hierarchy levels and the enabling of open-minded discussions. However, in order to implement the method successfully every participant must be willing to reflect openly. Furthermore, an independent moderator should lead the workshop. [8]
For efficient implementation of the Sounding Board Method it is useful to implement the following steps in the procedure. First, the persons in charge present their work results to the feedback providers using a single-page format like a poster or a workshop wall. Second, all feedback providers evaluate the results on their won. To indicate that they want to give feedback to a certain aspect they mark it at the poster e.g. using a sticker. The color of the sticker can be used to distinguish different types of feedback, e.g. concerning content, relations or format. As a last resort, the moderator ensures that the indicated feedback is actually articulated until all feedback marks are completed. To ensure an efficient procedure and proactive reaction of feedback receivers discussions are not allowed during this procedure.

1.3. Collective intelligence

In context of this paper the expression collective intelligence is used in connection to the following definition: "groups of individuals acting collectively in ways that seem intelligent" [11]. Thus, collective intelligence not only refers to the field of information science but also to behavioral science in which it is e.g. examined how regulatory mechanisms can influence collective intelligence. An example for an intellectual product created by collective intelligence is Wikipedia [11].
The following principles of collective intelligence derive from this example:

- No central control

There is no central control which monitors the contents as the mass regulates itself (e.g. by voluntary rules).

- No influence of hierarchy or expertise

Everybody can contribute their knowledge regardless of hierarchy or expertise

- Creation of a joint knowledge base

The aroused knowledge base is not a product by individuals but by the group.

- Joint review of facts

By repeating to evaluate facts the mass reviews results together. An example is GuttenPlag Wiki which is a German platform to identify plagiarism together.

- Constant feedback iterations

A product by collective intelligence is constantly evaluated by feedback iterations. Thus, Wikipedia has a discussion area which enables to criticize content.

1.4. Research environment ProVIL

This research paper's results are based on studies which were conducted in the context of "ProVIL – Product development in a virtual idea laboratory" at IPEK – Institute of Product Engineering at Karlsruhe Institute of Technology in 2016. ProVIL is a product development project with 32 master students of mechanical engineering, 10 innovation coaches (master students of industrial engineering) and a project partner who defines a real product development mission [12]. In 2016 the project partner is the Dr. Ing. h. c. F. Porsche AG, a German automotive OEM. The product development task is worked on by the students in groups of four taking about 13 weeks divided into four project phases which is presented in Fig. 1. The teamwork mostly takes place on the innovation platform SAP Innovation Management [12]. The innovation platform is a web-based tool which supports open innovation. The intention behind these kind of tools is to include the "employees' creativity in the innovation process" [13]. The ProVIL process by itself is modelled using the integrated Product engineering Model (iPeM) [14]. During the process the students make use of appropriate development methods [15] and creativity methods [16] which take place mostly in the virtual environment.

Fig. 1: Project phases [17]

Besides the character of an innovation project ProVIL is used as a Live-Lab providing a yearly panel to continuously research development methods for virtual teams in product development. A Live-Lab is a research environment which enables investigation on methods and processes in the field of product development considering realistic conditions and influencing boundary conditions. It is filed between laboratory studies and field studies in companies. [17]

2. Aim of research

Even if the Sounding Board Method is a very useful method to organize feedback processes in groups it has hardly been researched in the context of product development. Especially milestones in product development projects with stakeholders from different countries and sites milestones tend not only to have a controlling or planning function but are also a central