

# Idea Management System Planning

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# Idea Management System: Planning

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## Abstract

*When implementing a successful Idea Management System in an organization, there are two major aspects to consider: Its process structure and its planning. Idea Management Planning is constituted by the definition of roles and responsibilities of the people involved in implementing the process. This paper focuses on these roles and responsibilities, including the definition of their corresponding tasks and activities. Moreover, this paper will give some recommendations of how to reward and get the entire organization involved in the Idea Management System, beginning from the upper management team and their supervision and decisions to the technician on the factory floor. Then, a model is presented which supports the selection of an appropriate IT-Tool for an effective Idea Management System. The results of this paper are based on case study research with 14 Swiss companies.*

## 1. Introduction

The goal of an Idea Management System is to increase the innovation capacity of the firm, allowing the organization to handle more innovation activities that drive growth and process improvement. Idea Management achieves this by tapping into the creative potential of all employees to produce a pipeline of actionable concepts that yield business value. The process of Idea Management involves the collection of ideas from a diverse population, the development of those ideas into concepts through a collaborative process, and the selection of top concepts through an evaluation phase. The diverse population of contributors is typically made up of employees from various parts of the organization, some directly involved in a topic or project, and the rest only tangentially involved. The goal of this paper is to present a framework which covers the major steps of planning an Idea Management System with its respective roles, responsibilities and rewards, and offers recommendations of a successful best approach for the implementation of an Idea Management IT-Tool.

## 2. Theoretical Background

Idea Management has been a research topic over a decade now. There are several models, which recommend a structured approach in generating; collecting and selecting the generated ideas in an enterprise (cf. 2, 3, 6, 8, 10). Emphasizing the roles and responsibilities discussed in existing literature, Deschamps (6) recommends the creation of two organs supporting this idea management strategy: An innovation committee, organizing and managing the idea processes, and venture groups, carrying the responsibility for the selection of ideas worth pursuing. Another

important model is the one of Cooper (2, 3). He brought out the so-called stage-gate-process. Coopers approach was to analyze the reasons of failures of new products and comparing them with successful product launches. Using this as a starting point, he developed a generic process which is flexible enough to be applied to all kinds of innovation processes with flexible role and responsibility assignment (4, 5, 8).

## **2. Research Methodology**

The purpose of this paper is to contribute a theoretical and practical finding of how to define a structured Idea Phase within the front-end of the innovation process, the so-called Fuzzy Front End (FFE). In order to derive recommendations for idea management planning, the paper reviews current idea management processes and practices, provides explanations of the existing models and offers a possible solution of a successful implementation.

The research was carried out between 2003 and 2006. A qualitative case study design was selected as most suited to the objectives of this particular enquiry, in order to come up with new insights about how Idea Management Systems are implemented in industrial practice. Therefore, several cases were studied in detail to gain an in-depth understanding of their natural setting, complexity, and context (12). The data for this research was provided by an analysis of the FFE processes in selected company cases. Overall, 23 interviews within 14 companies were conducted. Responsible persons managing operative work (normally directors and managers in R&D functions) in these cases were interviewed. The interview sessions lasted approximately two hours. During these sessions, questions related to activities and tasks of the Idea Phase were asked. In addition the most valuable processes, activities and competencies were covered in order to get a holistic understanding of the cases.

Based on the insights from existing idea management approaches and the successful practices of the companies investigated, a framework for a structured Idea Management System was developed. This occurred by a systematic comparison of core aspects from literature and identified processes and sub-process within the FFE activities of the companies investigated. From this framework, the corresponding roles, responsibilities and rewards within the Idea Management System could be derived. Furthermore, the framework provided the fundament for the development of model for Idea Management IT-Tool selection.

## **4. Framework of a Structured Idea Management System**

This section presents the framework for a structured Idea Management System which was developed based on the insights from existing Idea Management approaches and the successful practices of the companies investigated. An overview on the framework is shown in figure 1.

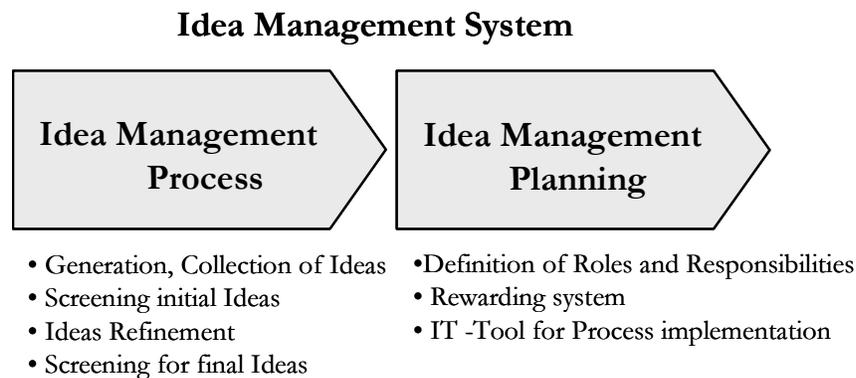


Figure 1. Framework of an Idea Management System

The first phase within the Idea Management System, the Idea Management *Process*, encompasses the generation, collection, development, evaluation and selection of business ideas. Typical tools and methods used in this phase include brainstorming, creativity techniques, focus groups, online idea capture, and management systems. Also a second phase within the Idea Management System, Idea Management *Planning*, is required for a successful implementation of an Idea Management System. It consists of defining the roles and responsibilities necessary to implement a capable Idea Management Process, a strong Rewarding System for realizing promising ideas, as well as an IT-Tool, for the process accomplishment. This second phase is presented in the following.

## 5. Idea Management Planning

According to the elements which constitute Idea Management Planning, this sections first gives an overview about the roles and responsibilities, second about a Rewarding System, and third it introduces a model which supports the selection of an appropriate IT-Tool, helping to the accomplishment of an Idea Management System.

### 5.1. Roles and Responsibilities

For implementing a successful Idea Management System, the roles and responsibilities should be well defined, including the aspects about who and what tasks or activities a team member has to perform at which stage in the process. The analysis of the case data showed that, in general, the roles can be divided into two groups: First the obligatory roles and second the alternating roles. Members of the obligatory group will be fully involved from the beginning, starting with the idea generation phase and ending with the final filter, where members of the alternating group will be involved partially in the process. The tasks for each group member are described in the following.

The obligatory roles comprise of an Innovation Manager, a Process Driver, a Product Portfolio Manger and the Management Team. Table 1 gives an overview of the responsibilities associated to each role.

Table 1 the obligatory Roles and Responsibilities of an Idea Management System

<i>Roles</i>	<i>Responsibilities</i>
<b>Innovation Manager</b>	<ul style="list-style-type: none"> <li>• <i>Definition of business goals and strategies</i></li> <li>• <i>Development of innovative business opportunities</i></li> <li>• <i>Identification and analysis of potential threats in a defined market and product portfolio</i></li> <li>• <i>Funneling, classification, and rating ideas</i></li> <li>• <i>Allocation of tasks to Innovation Teams, Innovation Project Teams, and Experts Teams</i></li> </ul>
<b>Process Driver</b>	<ul style="list-style-type: none"> <li>• <i>Definition of the Idea Management Process</i></li> <li>• <i>Implementation of the process within the organization</i></li> <li>• <i>Maintaining the continuous process improvement</i></li> <li>• <i>Fostering innovative culture and creativity within the organization</i></li> <li>• <i>Campaign decision together with Marketing and R&amp;D Departments</i></li> </ul>
<b>Product Portfolio Manager</b>	<ul style="list-style-type: none"> <li>• <i>Strategic, technical and commercial positioning of the product portfolio in the market</i></li> <li>• <i>Selection of innovative ideas that fit into the product portfolio</i></li> </ul>
<b>Management Team</b>	<ul style="list-style-type: none"> <li>• <i>Strategy definition and decision of whether a disruptive idea will be part of divisional portfolio or the establishments of an alternative business model</i></li> <li>• <i>Allocation of resources for the selected idea concepts</i></li> </ul>

The alternating roles comprise of the Idea Author and Contributor, Experts Team, and the Innovation Project Team, who is a cross-functional Team from different departments (Marketing, R&D, and Manufacturing). Table 2 gives an overview of the responsibilities associated to each Team and role.

Table 2 the alternating Roles and Responsibilities of an Idea Management System

<i>Roles</i>	<i>Responsibilities</i>
<b>Idea Author/ Idea Contributor</b>	<ul style="list-style-type: none"> <li>• <i>Submission of Ideas to the System (owns the Idea)</i></li> <li>• <i>Consultation with Innovation Project Teams regarding information towards the submitted Idea</i></li> <li>• <i>Fellows Idea progress and decision</i></li> <li>• <i>Presents and further develops the Idea</i></li> </ul>
<b>Innovation Project Team (Cross-functional Team)</b>	<ul style="list-style-type: none"> <li>• <i>Classification and funneling of generated Ideas</i></li> <li>• <i>Prioritization and selection of Ideas for further development</i></li> <li>• <i>Allocation of Experts for Risk Assessments</i></li> <li>• <i>Idea concept and preliminary Business plan development</i></li> </ul>
<b>Experts Team</b>	<ul style="list-style-type: none"> <li>• <i>Consulting the Innovation Project Teams with know-how related to Risk Assessments and Idea concepts development</i></li> </ul>

An overview of the generic Idea Management Process and the defined roles for each stage are presented in figure 2.

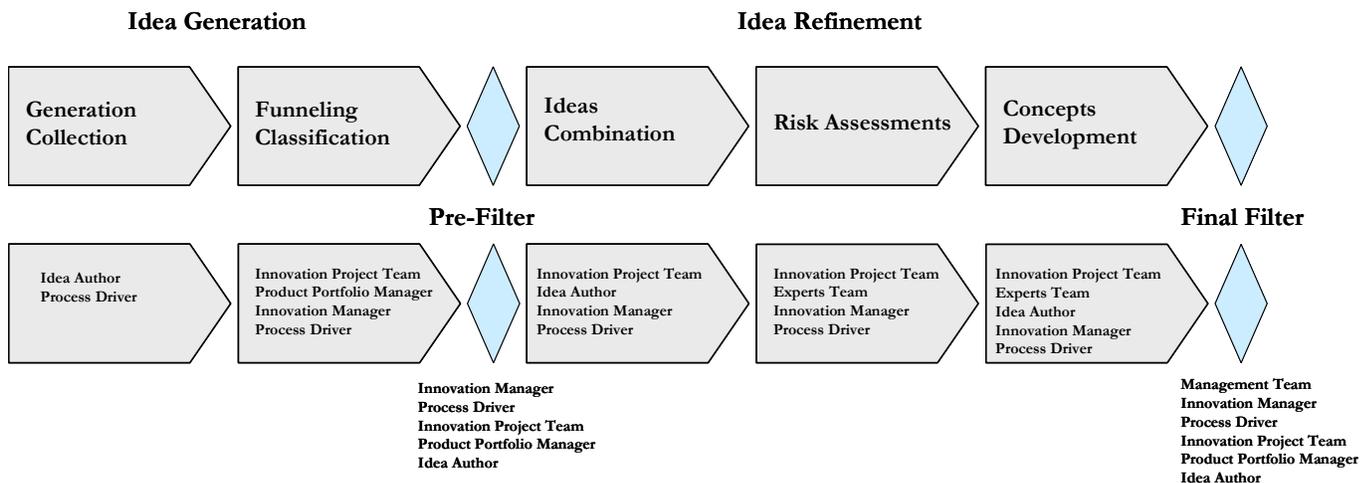


Figure 2. Idea Management System: Process and Roles

## 5.2. Rewarding System for Idea Management

Besides precisely defined roles and responsibilities for an Idea Management System, also a Rewarding System for its participants has to be established carefully. Literature has shown that rewarding systems have to respond to the motives which are the drivers behind employees' contributions and these motives have to be understood (1). Empirical research has indicated that the rank order of motives that drive employees to make their ideas available for product innovations and further inter-company improvements varies in two directions. First, motives vary among product categories and include ego-enhancing as well as extrinsic motives, such as monetary rewards (7, 1). Second, motives vary according to the position and responsibility of the individual in the organization: Upper management teams and their supervision act according to other motives than the technician on the factory floor (11). Possible motives include the following:

- Reimbursements that reflect the value of the contribution.
- Private or public honorable mentions as the originator of a product idea, which may be of value to the employee because it impresses his or her peer group.
- Demonstration of creativity to the concerned principals.

The organization and communication of the processes of idea selection can also influence employees' motivation. Employees may derive value from knowing the selection procedure and feel honored if their contribution is chosen (1). However, the value of the reward could spoil employees' behavior, should the employee be promised high rewards for new product ideas. As a result, employees might generate suggestions not because of their interest in better new products but because of their interest in winning the reward. To balance this behavior, the reward should

either be low, which can be problematic because it may not represent a motivation for customers to participate, or be tied to the intensity of future orders of the resulting new product. However, because few employee contributions lead to entirely new products or solutions, it is rather difficult to determine their contribution to the total value of a particular innovation based partly on their input (1). As a result, the set up of rewards for idea management has to be adjusted carefully to the culture and context of each company and requires some experience to release employee's contributions in a most effective way.

Focusing on the successful practices from the companies investigated, they have shown that, in order to motivate employees in the full range from the upper management to the technician on the factory floor, rewards are most successful if they address all different kinds of employee motives. To give an example, a company's "best product idea" consists of a bundle of monetary (e.g. a money prize) and non-monetary (e.g. in form of a one week leave in order to work on a scientific journal article or a team event paid by the company) options, from which the winner chooses the one which suits him or her best. This approach, which earlier also was referred to as the "cafeteria concept", since everybody chooses what he or she prefers (11), minimizes the risk of setting out a premium which is not attractive for some employee segment. Overall, the rewards for idea management have to support the roles and responsibilities within the Idea Management System by promoting its relevance within the whole organization.

### 5.3. IT-Tool for Idea Management

In order to facilitate the implementation and operation of a structured Idea Management System, a model which supports the selection of an appropriate IT-Tool was developed within this research and will be presented subsequently. The application of this model as fundament for the implementation of an appropriate IT-Tool is recommended to accomplish a more structured Idea Management Process, including the acquaintance with corresponding roles and responsibilities as well as with Idea Management rewards.

Generally speaking for the context of idea management, an IT-Tool is a computer program with the purpose of guiding ideas during their development. Most of the companies which were investigated set up a complete idea management strategy introducing organs with functions similar to Deschamp's (6) innovation committee and venture groups and specific positions related to their business area before looking at specific IT package.

Within this research, an "Event Process driven Chain" (short EPC) Model was developed to ease the choice of an Idea Management IT-Tool (14). According to the classification of the ARIS tool set (13)<sup>1</sup>, the EPC diagram is primarily classified as resource view with a strong link with the

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<sup>1</sup> ARIS differentiates between 4 views which can be addressed by corresponding models:

- Resource view: a process encompasses several tasks and completes them in a specific order. The resource view includes all diagrams that incorporate this sequential aspect.
- Function view: the function view contains the description of the activities to be performed, the enumeration of the individual sub-functions that belong to the overall relationship, and relationships that exist between the functions.
- DATA view: The data view contains events and statuses. Events such as "customer order received" or "invoice written" are information objects that are represented by data. Statuses such as "customer status" and article status" are also represented by data.
- Organizational view: The structure and the relationship between users and organizations units define this view.

function view. This means that this type of representation can model events that activate tasks respectively functions. Serving as bonding elements/connection between the various events and processes are logical connectors (AND, OR, XOR, see figure 3).

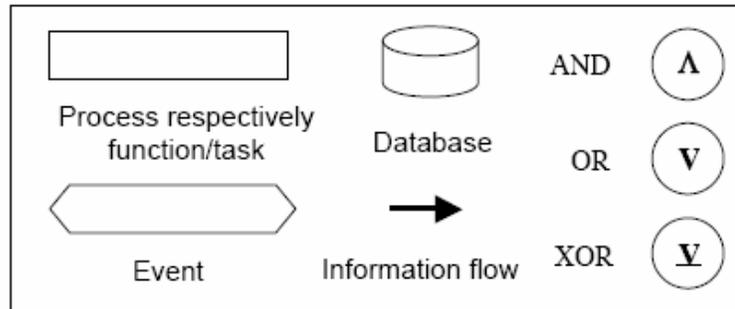


Figure 3. Elements used in EPC diagrams

This model set its accents on the classification into problem, solution and project ideas and their retrieval, once put on hold (called 'set back' in the diagram). As most other models, it is built up with three different filters, or, as cooper called them, gates (see figure 4, filters are marked in grey). After every filter, an idea is researched and analyzed or classified and entered into the database (on the right hand side).

The EPC Model begins with a generation and/or collection process of new ideas. The distinctions between idea generation and collection give the flexibility to input random ideas or ideas generated through a campaign/session designed to focus the attention onto a specific topic.

After the first filter, the gross idea either goes through a deepening phase followed by a potential analysis or, if doesn't satisfy the necessary criteria, it undergoes a superficial potential analysis. After the 'potential scouting' the idea gets discarded if proven worthless or inputted into database (DB) as a problem or a solution idea. At this point, ideas are not mature enough to qualify as project idea. If this eventuality arises, the problem and solution idea defining this project idea should be evaluated separately and only after the additional research joined as a project. This procedure should favor the search for new and innovative combination of solutions and problems.

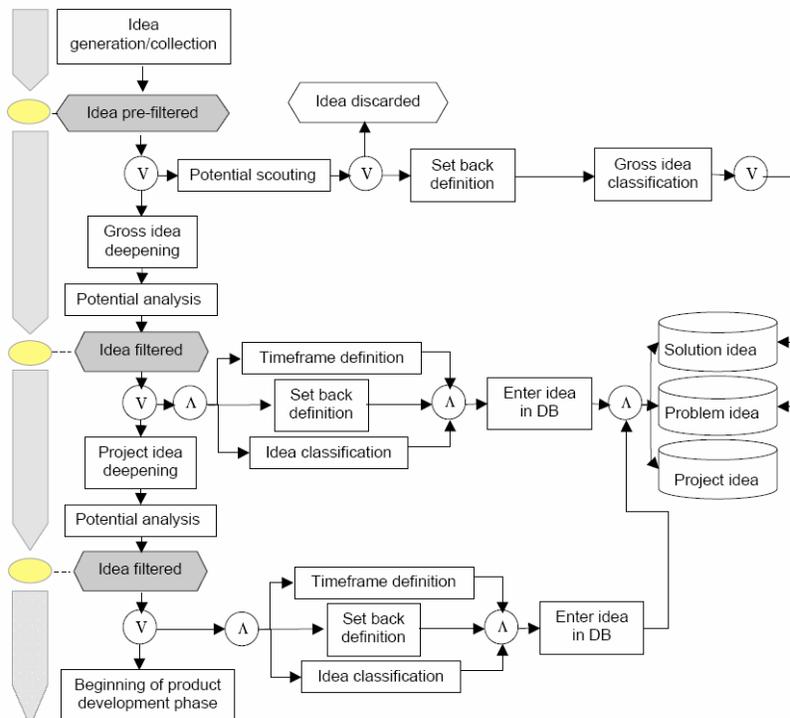


Figure 4. The EPC Model for Idea Management

Defining the ‘set back’ reason forces the evaluator to justify the decision with a short rationale and some key words. This input facilitates an eventual retrieval of the idea, either manually by searching for key words or through an automatized agent-based recovery system. At the same time, it can serve as a good feedback for the idea contributor. The evolution of the gross idea into a project idea can happen only after some further research, like looking into the database for relevant topics. A connection between a solution and a problem has to occur before continuing the process. If the result shows promise, the project is researched and analyzed as a whole for one last time. If the idea doesn’t conform to the criteria of the second or third filter, three parallel processes take place:

- Timeframe definition: By inputting a timeframe when the idea could be relevant again, the evaluator starts a process that automatically retrieves the idea after the defined period.
- Set back definition: This short rationale completed by key words facilitates search possibilities for future users.
- Idea classification: Entering the ideas as problem, solution and project permits an eventual recombination with future new suggestions.

After the definition and the explanation of the model, links with specific criteria become apparent. Does the software have a facilitated retrieval for set back ideas? Does it have a user

friendly interface? Are there structures for evaluation of ideas? Is enough transparency provided for rewarding employees handing in valuable ideas? These criteria should positively be answered when selecting an IT-Tool for complementing an effective Idea Management System.

## **6. Conclusion**

With a well structured Idea Management System, companies learn that the success of their business starts early inside the company, taking profit of their best resources and their employees. Besides a well established process for idea management, which represents the first phase of an Idea Management System, also Idea Management Planning is required to complete an effective Idea Management System. This paper aimed at contributing to this planning aspect.

An Idea Management System should be planned in a way to obtain winning ideas and to satisfy participants of the Idea Management Process. Therefore, and referring to the human aspect, roles and responsibilities have to be designed with the purpose to fulfill human expectations by keeping in contact the author with his or her idea, involving him or her in the development and provide the chance to get benefit of it. Moreover, roles and responsibilities for an Idea Management System needs to be established with a solid support form the upper Management Team. Activities corresponding to roles and responsibilities have to be cross functional in order to achieve a holistic implementation, supporting employees' motivation throughout all the different company hierarchies. Therefore, an Idea Management Rewarding System is most appropriate from which every individual can choose a benefit which remunerates him or her best. Additionally, using an IT-Tool software allows obtaining better results and establishing a common data base for the whole company. As a consequence, the company's knowledge can be shared by all participants.

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