Suggestion systems: transferring employee creativity into practicable ideas

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Nowadays many companies are aware of the importance of employee creativity. Suggestion systems are among the instruments for channelling creativity. However, companies vary strongly in the success with which they use suggestion systems. This article aims to clarify the organisational conditions for the successful use of suggestion systems. The Creativity Transformation Model encompasses the main factors that influence the functioning of suggestion systems. The model is tested within specific divisions of three companies that can be considered best practices in the use of suggestion systems. By applying the model, companies will be able to transfer employee creativity optimally into practicable ideas.

1. Introduction

Most companies underline innovation in their strategy but, inconsistent with that strategy, fail to fully utilise the creativity of their employees. This incompetence undermines their power to innovate, for it is the creativity of employees that forms a source of new ideas, which in their turn create the starting point for innovations (Twiss, 1992; Voorendonk, 1998). Suggestion systems, the most classic of which is the suggestion box, are put to use to capture the ideas from the employees' minds. The following step, capitalisation, involves the transfer of these ideas into innovations. These can be product, service, process or organisational innovations. From a perspective of knowledge development and diffusion in the firm, suggestion systems aim at capturing good ideas, the first part of the 'knowledge-brokering cycle' (Hardagon and Sutton, 2000), and they are an example of externalisation of knowledge (Nonaka and Konno, 1998; Nonaka and Takeuchi, 1995). Suggestion systems are considered an important support for the entrepreneurial spirit in innovative firms (Hamel, 1999,

2000, pp. 253–256) and can contribute to the organisational routines supportive of innovation and competence development (Teece et al., 1997). Ekvall (1971) gives a definition of a suggestion system: an administrative procedure for collection, judging and compensating ideas, which are conceived by employees of the organization. Ekvall is one of the few authors that has conducted extensive research on the functioning of suggestion systems. His research in several large Swedish industrial companies showed that over 60% of the employees that ever had a good idea did not communicate it through the suggestion system. Apparently, there is a large dormant reservoir of useful ideas in many companies, but communicating these ideas is not simply a matter of offering large bonuses. This has been demonstrated by comparing research done in American[1] and Japanese companies.[2] Although the rewards at American companies were a hundred times higher than those at their Japanese counterparts, American companies received only 1% of the number of ideas that were received by the Japanese. In this article we demonstrate that there are many factors other than financial incentives which

influence the functioning of suggestion systems. These factors, their interdependencies and their specific influence in the transfer of employee creativity are put into perspective in the CreativityTransformation Model. This model will enable companies to optimise the design of their suggestion system. In return, a properly designed suggestion system will work as a catalyst for generating any type of innovation, it being a technological, a market related innovation or a combination of both (Abernathy and Clark, 1985).

First we give a brief summary of the literature in the field of creativity enhancement. The layout of the model is based on this literature. Then we will explain the model in more detail. We test the model on the suggestion systems of specific divisions of three companies, KPN, Shell and Xerox, which are considered to be best practices in this field. For every company representatives of middle management, employees and the people responsible for the suggestion systems were interviewed with open-ended questions. The practical application will not only confirm the validity of the model, but will also identify the elements that are key factors in the success of the suggestion systems. The relationship between the design of suggestion systems and the type of innovations that are generated is discussed in 4.2. The article will conclude with a reflection on the CreativityTransformation Model and make suggestions for further research.

2. Theoretical perspective

Little literature is available on the transfer from employee creativity to practicable ideas. There is much literature on the enhancement of creativity and the management thereof. This is usually called creativity- and idea-management. We will use this more general type of literature for the development of our model concerning suggestion systems. Part of this literature focuses on the factors that are related to the individual, here called 'individual related factors' (Amabile, 1983; Ekvall, 1971; Guilford, 1950; Simonton, 1976). Another part focuses on organisation related factors. The literature on individual related factors deals with the influence of the personalities of creative individuals

(Guilford, 1950), of the educational background and living conditions (Amabile, 1983; Simonton, 1976), and of the different types of skills of the individual (Amabile, 1983). Since it is very difficult for a company to control these factors, in this article we mainly focus on organisation related factors (Tropman, 1998; Imai, 1986). Several authors have indicated the importance of organisation related factors for the management of creativity. We can distinguish between factors that concern the culture and factors that concern the structure of the company. The first category includes factors such as the management support (Amabile, 1996; Tropman, 1998; Voorendonk, 1998), the preparedness for changes (Voorendonk, 1998), a clear mission and strategy (Christensen, 2000; Farnham, 1994; Robinson and Stern, 1997) and the attitude of fellow workers (Amabile, 1996; Ekvall, 1971; Delbecq and Mills, 1995). The second category, structural factors, includes factors such as the existence of adequate evaluation procedures (Ettema, 1982; Voorendonk, 1998; Tropman, 1998), the presence of a rewarding structure (Ekvall, 1971; Imai, 1986) and the allocation of means to support and work out ideas (Delbecq and Mills, 1995; Robinson and Stern, 1997). Many of the organisational factors exert their influence by means of their effects on task motivation, although task motivation is also influenced by the above-mentioned individual related factors. Amabile (1983) finds it of the utmost importance that this factor is shaped in such a fashion that individuals are intrinsically motivated.[3]

One of Amabile's experiments indicated the importance of intrinsic motivation. Two test groups were given the assignment of solving as many puzzles as possible in a given time. Only one group was promised money (extrinsic motivation) for every solved puzzle. In between the testing times, the groups were allowed short breaks. They were told that the results obtained during these breaks were not taken into consideration. The experiment showed that only the intrinsically motivated group continued its work during the breaks (Amabile, 1983; see also Lepper *et al.*, 1973). Ekvall (1971), on the other hand, concludes that employees would judge the abolition of financial rewards as unfair. This means that a rewarding structure is needed
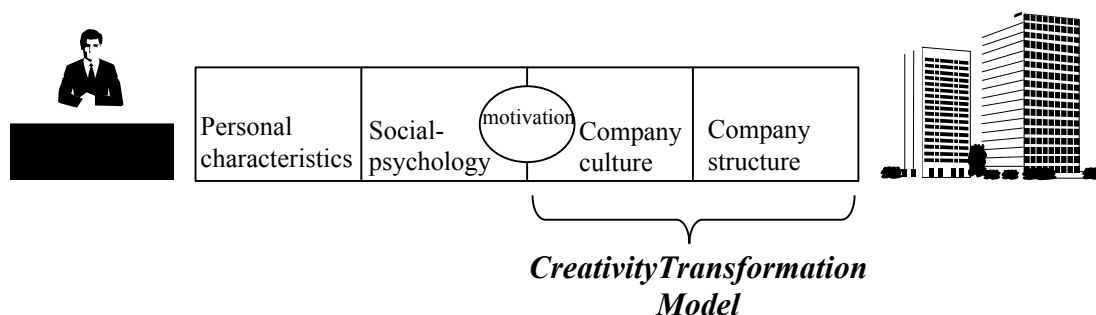

Figure 1. Types of factors that are of influence on the transfer of ideas from creative individual to practicable ideas.

that includes financial incentives but does not let external motivation become prevalent. Although the other organisation linked factors do not have such a dual impact on task motivation, their influence on the creative individual needs to be considered at all times. The manner in which both individual and organisational factors surround the transfer from employee creativity to innovation is visualised in Figure 1. Since the factor motivation is both related to the individual and to the organization, we have placed it in between these two types of factors.

3. The CreativityTransformation Model

3.1. The phases in the process

The two types of organisational factors, namely the organisational cultural and organisational structural factors, create the layout for the CreativityTransformation Model (see Figure 1). The organisational culture and organisational structure form the co-ordinating determinants for the transfer from employee creativity to practicable ideas. This is shown in Figure 2.

The functioning of suggestion systems can be divided into three phases: *idea extraction*, *idea landing* and *idea follow-up*.

The first step in the transfer involves the willingness of the employee to share his or her idea with the organisation. The company needs to be able to extract the idea from the employees' minds. This is only possible if a cultural environment that stimulates the communication of ideas surrounds the individual.

In the centre of Figure 2 we find the *idea landing*; this is the phase in which the idea is set down in the organisation. This phase stands at the centre of the problem area we are dealing with, namely, the ineffective use of suggestion systems. The employee has to be supported in this phase. This means that cultural factors need to be in place to secure a positive reaction towards the initiator of a new idea. It also requires structural factors such as an accessible suggestion system.

In the third phase of the transfer, the idea receives its follow-up. This is partly the back-office of the

suggestion system (which is, at the same time, the front office of the innovation process). This phase deals with the processing of the idea into a project proposal. This requires substructures within the organisational structure that regulate the processing of the idea.

3.2. The CreativityTransformation Model on the second level

Figure 2 has given us a layout of the organisational context that surrounds the transfer from employee creativity to practicable ideas. It, however, fails to show two essential issues. First of all, the unilateral arrows in Figure 2 suggest, wrongly, that going through the different phases is a one-sided process. In fact, this is a multilateral process (Harter, 1978), which involves a great deal of interaction (Voorendonk, 1998; Deci, 1972; Robinson and Stern, 1997). The line of reasoning behind this is that an employee will not be very eager to suggest another idea if his or her previous ideas were not used. A second shortcoming in Figure 2 is the general nature of the main determinants that surround the different phases in the transfer. Figure 3 gives a more detailed version of the organisational context by showing the specific factors, and relationships between them, that influence the transfer.

The specific factors that influence the different phases in the transfer are shown in Figure 3 under the headings of *encouragement*, *organisational support* and *committed resources*. As we will explain below, these three types of factors have the most direct influence on the phases *idea extraction*, *idea landing* and *idea follow-up*. The arrows in Figure 3 show the interactions that exist between these types of factors and thus indirectly between the different phases in the transfer.

Encouragement. The first phase, as has been mentioned above, is that of *idea extraction*. The employee needs to be motivated to do something with his or her idea (Amabile, 1983, 1996). This will only happen in a direct organisational culture that stimulates the individual to express creativity (Farnham, 1994). Several
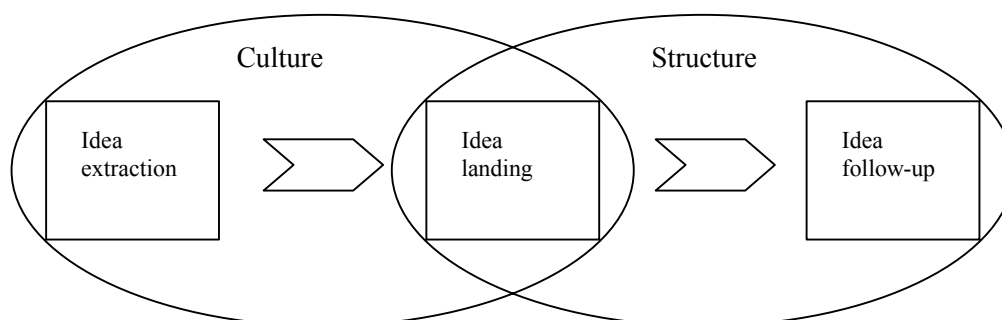

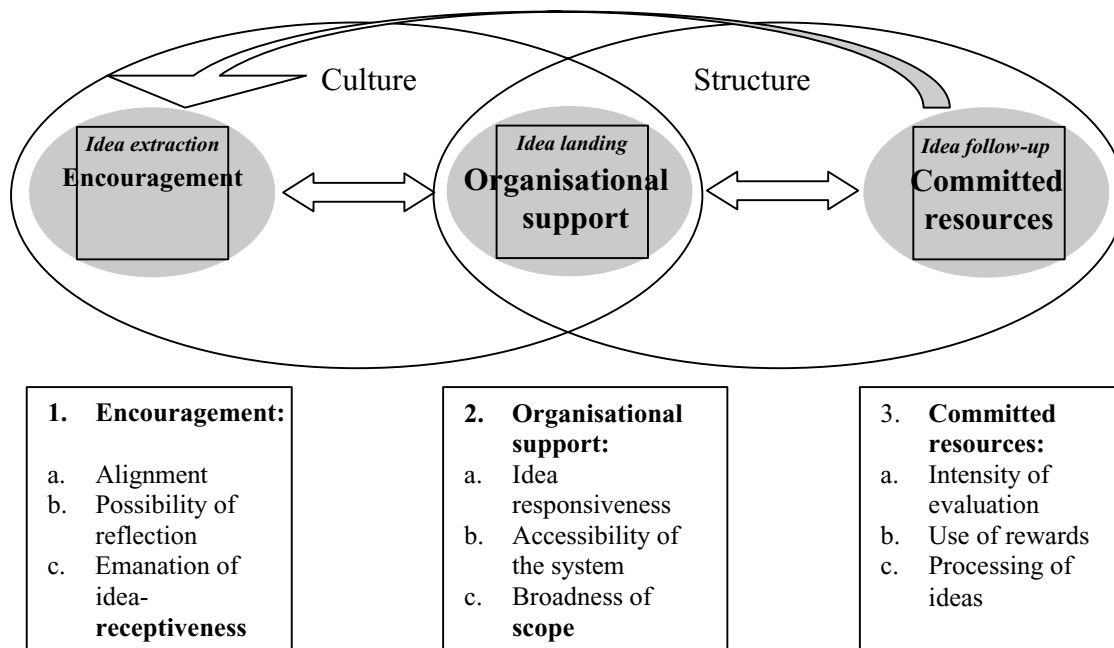Figure 2. The phases in the transfer of creativity to practicable ideas.

Figure 3.   The specific factors in the model.

factors, belonging to the organisational culture, are said to be of influence in this phase. Robinson and Stern (1997) regard *alignment* as one of the most important factors. An aligned environment envelops employees, bombarding them with a consistent set of signals so that the company's ideology and its attitude towards creativity cannot be misunderstood (Collin and Porras, 1994). Some authors emphasise the inextricable tie between *alignment* and processes of transformation (Bacharach *et al.*, 1996). Another part of *encouragement* is made up by the possibilities for employees to find sounding boards for their ideas (Delbecq and Mills, 1995; Ekvall, 1971; Tropman, 1998), here called the *possibility of reflection* that the employee has in his working vicinity. Other factors that belong to *encouragement* are the clarity with which an organisation welcomes creative initiatives (Voorendonk, 1998). This boils down to the *emanation of idea receptiveness*, the image of innovation that a company has towards its employees. These factors have a major influence on the *idea extraction* by intrinsically motivating the employee (Amabile, 1983).

Organisational support. The phase *idea landing* is determined by the extent to which possibilities within the organisation exist, and by the extent to which support is available, to introduce ideas effectively into the suggestion system. Many researchers consider the actual reaction that is given to the employee by its manager when presenting an idea, to be important in this respect (Amabile, 1983, 1996; Delbecq and Mills, 1995; Tropman, 1985; Farnham, 1994). We have included this factor in the CreativityTransformation model under the heading of *idea responsiveness*. The second factor that belongs to organisational support is

that of the *accessibility of the suggestion system*. A system that is very inaccessible will undoubtedly diminish participation. Jaoui (1980) speaks of the necessity for an available system dedicated to suggestions that fall outside the daily routine. The *broadness of the scope* relates to the 'net' that the company throws out to get ideas from its employees. Many authors have stressed the importance of a wide net to reel in ideas (Gundry *et al.*, 1995; Majaro, 1992; Wheelwright and Clark, 1992).

Committed Resources.   The last phase in the transfer is that of *idea follow-up*. This phase mainly consists of the commitment of means to facilitate the absorption and processing of the idea in the organisation. This 'back-office' of the suggestion system is in fact the 'mouth' of Wheelwright and Clark's (1992) development funnel, and thus the front office of the innovation process. Ideas are evaluated in this phase. The quantity of attention and resources dedicated to the evaluation procedure is taken up in the model as the *intensity of evaluation* (Ekvall, 1971; Voorendonk, 1998).

In this phase employees are also rewarded; the degree to which appropriate rewards, both financial and non-financial, are given is expressed in the factor *use of rewards* (Amabile, 1983; Ekvall, 1971; Farnham, 1994; Imai, 1986). Rewards also influence the other phases (shown in Figure 3 by the arrows pointing to the left). As we have seen above, the *use of rewards* can have a dual influence on the motivation of the individual: high financial rewards can motivate extrinsically because obtaining the rewards will become the employee's major concern (Sathe, 1995). However, using only (high) financial rewards runs the risk that

employees will not communicate ideas that they believe to have an insignificant financial impact on the operational costs. This can explain the aforementioned difference between the participation in suggestion systems of American and Japanese companies. This does not automatically mean that financial rewards for suggested ideas should be abolished. It does, however, show the importance of the creation of a reward structure that pays a great deal of attention to the use of non-financial rewards, such as promotional titles, certificates of appreciation and small symbolic rewards. Japanese companies do this by rewarding *every* suggestion, mainly in a non-financial way (Robinson and Stern, 1997). Besides this, employees are frequently rewarded with a small amount of money for their creative efforts. Ideas that have a significant impact on the profits are rewarded with a sum equal to a certain percentage of the increased profits (Imai, 1986). In short, rewards need to be used in such a manner that the intrinsic motivation is not undermined by too strong an emphasis on extrinsic motivators.

The last factor of this type is *idea processing*. This processing represents the initial elaboration of the idea, so that the aptitude of the idea for complete integration into the products, services or processes of the organisation can be determined. Several authors underline the importance of this factor (Imai, 1986; Robinson and Stern, 1997). Without idea processing, the implementation of the idea is often impossible. Moreover, processing of the idea usually means a visible acceptance of the idea, which stimulates the suggestor.

3.3. Relationships within and between the different types of factors

The nine factors in the CreativityTransformation Model are not independent from each other. Between some of them a positive relationship exists; e.g. a strong *alignment* and *idea responsiveness* will contribute in a positive way to the *emanation of idea receptiveness*. Some factors are even unilaterally influenced by other factors. The *possibility of reflection* and the *emanation of idea receptiveness* are heavily influenced by the other seven factors. Because of this, these factors do not control the model and need less attention when implementing a suggestion system. Other relationships between factors are negative; an increase in one factor will weaken the

other. A high *accessibility of the system* and a *broad scope* will cause a sudden sharp increase in numbers of submitted suggestions, thus frustrating the *evaluation* and *processing of ideas*. A *broad scope* will also hamper high *idea responsiveness*, as most managers do not have the time to receive large numbers of employees with new ideas. Such effects need to be closely monitored because they threaten the success of the suggestion system.

4. The best practices

In recent times, KPN, Xerox Venray and Shell have been able to implement successful suggestion systems. Table 1 shows the main indicators of their suggestion systems.

- Degree of participation: the percentage of employees who participate in the system
- Degree of adoption: the percentage of submitted suggestions that are implemented
- Savings realised: through implementation of the accepted ideas (in euros).

A comparison of the results of the suggesting systems of KPN, Xerox Venray and Shell with the national averages, indicates why these suggestion systems can be seen as best practices. There are, however, striking differences between the three companies. This will be explained in paragraph 4.2. First of all, we will give a short summary of the three suggestion systems.

4.1. The suggestion systems of Xerox Venray, KPN and Shell

Xerox Venray. Xerox Venray is the largest outlet of Xerox in the Netherlands. This outlet forms the logistic centre of Europe and produces document processing equipment, xerographic parts and electronics. Xerox Venray employs 2000 people. Until 1992, Xerox Venray had a centralised suggestion box. Workers from different parts of the establishment had to write their idea on a sheet of paper and send this to a central secretarial office, which was managed by a full time employee. This office then had the suggestion reviewed by several experts. These experts ranged from supervisors and managers to engineers. These experts

Table 1. Main indicators for the suggestion systems of Xerox, KPN, Shell and national averages.

Averages 1997–99	National	Xerox Venray	KPN	Shell
Participation	11%	48%	18%	15%
Savings (€)	600,000	1,300,000	20,000,000	>100 million
Adoption	7%	14%	11%	5%

reported their judgements back to the secretarial office, after which a reward was determined and feedback was given to the suggestor. In a reorganisation in 1992, the suggestion system was decentralised up to the level of the newly formed Business Centres. Since then, a fully automated system had been functioning, named the Ideamanager®, which creates the possibility for employees to both give their suggestion and to monitor its progress with regard to the evaluation and possible implementation online. A separate assessment team is responsible for managing the system. Furthermore, a central co-ordinator is responsible for organising the quarterly meetings for idea committees, per Business Centre. This co-ordinator also organised days on a special theme and arranged yearly 'idea and suggestor of the year' events. To *extract ideas* Xerox Venray undertakes many activities. It communicates messages such as 'register even the smallest idea' through brochures, posters and staff magazines. The top management of Xerox also shows its commitment by presenting the rewards personally to the employees. On top of that the employees are told that they can earn an annual bonus of €700 for proven innovativeness.

To facilitate *idea landing*, Xerox has put suggestion boxes in the hallways and has also installed terminals where ideas can be introduced online. Every month Xerox focuses on a certain theme, such as safety or transport, to stimulate employees to communicate new ideas. Now and then employees are invited to attend 'round-the-table' meetings in which ideas can be exchanged.

The *idea follow-up* at Xerox consists of an evaluation system that gives suggestors, through the use of special software, online insight into the whereabouts of their idea. Some Business Centres hand out €4 for every suggestion. Others give out credits that can be exchanged for gift vouchers. On average, 25% of the suggestions are accepted, of which 80% is effectively implemented within 2 months.

After the introduction of the new suggestion system, the number of submitted suggestions exploded from 250 annually to more than 1000 annually. As is shown in Table 1, the degree of adoption is relatively high (14%). One Business Centre realised savings of €300,000 within one year. This Business Centre rewarded the suggestors with a total of €40,000.

KPN. KPN is the biggest telecommunications firm in the Netherlands. It was privatised in 1992. On a global scale KPN employs 36,000 people, of which 30,000 work in the Netherlands. KPN offers a complete set of telecom- and ICT-services.

In 1952, KPN (then still called PTT) introduced the first centralised suggestion box, which was installed in The Hague. In 1987, it was decided to decentralise this suggestion system, giving every district its own suggestion box and idea committee. One year after the privatisation in 1992, KPN launched a new system

called TIM, short for Telecom Idea Management. The idea committees were discontinued. In every district an idea manager was appointed, or TIM-co-ordinator, who reported to the quality manager. A central co-ordination point was created in The Hague. In 1997, KPN reorganised its 13 districts into 5 regions. Each of these regions now has one or two full time TIM co-ordinators. Employees send their ideas to these co-ordinators, who present them to an independent expert. The TIM co-ordinator organises the evaluation and implementation procedure. Ideas that might have national relevance are re-routed to the central co-ordination in The Hague, which is also responsible for organising promotional activities, setting up annual reports and managing the TIM-system.

To *extract ideas*, KPN puts a lot of effort into communicating its mission, strategy and importance of innovation. It does not, however, specifically emphasise the importance of employee creativity.

Concerning the *landing of ideas*, KPN makes it possible for every employee to suggest any kind of idea. It has been made possible to introduce suggestions in various ways: online, through suggestion boxes, on pieces of paper or even on coasters.

In the *idea follow-up*, KPN extensively uses rewards. TIM organises activities in which participants can win holidays, computers or city flights. A TIM-lottery has been set up, involving every submitted suggestion (even the rejected ones). The department that is judged to be the most innovative is rewarded a TIM-trophy. Also, events are organised to present rewards. All submitted suggestions are stored in a specific database. Implementation plans are made for ideas that have a substantial impact on profits. A TIM-affiliate is responsible for controlling the execution of these ideas. Ideas that are implemented are rewarded with a maximum of €12,000. Creative ideas that are not implemented are rewarded with €22–120. Ideas that are rejected receive a promotional gift. Directly after the establishment of TIM, the number of submitted suggestions increased fivefold to 5400 ideas per year.

Shell. The Royal Dutch Shell Group employs 100,000 people dispersed over 140 countries. Until 1996, Shell made use of the old-fashioned suggestion box. In 1996, Shell Exploration and Production (Shell EP) took the initiative to start up the GameChanger (see also Hamel, 1999, 2000, pp. 260–262). Shell EP is responsible for locating and exploiting oil and gas fields. The GameChanger is in fact a kind of internal venture capitalist, meant to finance ideas that have a major impact on the business. Within a week after a suggestor submits an idea, he or she is invited by the GameChanger panel to clarify it. The panel then decides whether further funds are required for elaboration. Ideas that are accepted and elaborated are presented to an extended panel. This second panel consists of the first panel plus two or three additional

experts. For ideas that are accepted by this extended panel a pilot project plan is developed, which entails several milestones. Each time one of these milestones is reached, the idea is re-evaluated by the extended panel.

To *extract ideas*, Shell stresses the importance of innovation throughout the company, putting this on the Intranet and having its top managers communicate this in their speeches. This is, however, not directly associated with employees' creativity.

The facilitation of the *landing of ideas* is mainly done within the boundaries of one business unit. Although the GameChanger is accessible for every Shell employee, many of them do not know of its existence. 90% of the submitted suggestions come from EP-research teams.

In the phase of *idea follow-up*, suggestors from EP are always personally involved. A special budget of €12 million is reserved for starting up pilot projects. However, no rewards are given for suggestions that are actually implemented.

The GameChanger has succeeded in bringing in 150 suggestions annually from a total of 1000 Shell EP employees. Some of these ideas have created additional incomes of tens of millions of euros.

4.2. Results and discussion

In the cases above, our model concerning the influence of the organisational context on the success of suggestion systems was tested by means of a questionnaire. It appears that within these companies extensive attention has been attributed to most factors from the theoretical model. For instance, Xerox attributes much attention to *alignment*. Xerox communicates the registration of ideas explicitly on mission pamphlets and top management personally expresses commitment to the functioning of the suggestion system. The *accessibility of the suggestion system* is very high in all three companies. The companies provide possibilities to send in the ideas in other ways than in a standard format (KPN even accepts ideas on beer mats, within Xerox and Shell employees can send in their ideas on-line). The same applies to the *intensity of evaluation*; suggestors can often clarify their idea in person. Shell always invites suggestors. In two of the three firms, Xerox and KPN, the factor *use of rewards* is also prominently present. KPN gives out large sums in rewards, incentives and symbolic gifts. On this point Shell is an exception, since it does not issue rewards. They do, however, excel in the *processing of ideas*. Not only do they have a special budget for this purpose but they also involve the suggestor personally in the project and monitor the project very actively. With some notable exceptions, discussed below, the review of the three suggestion systems by means of our questionnaire demonstrated that most factors from our model have been implemented to a high extent.

On two other points conclusions can be drawn from the investigation of the cases:

1. It appears that extensive attention has been paid to control the negative relationships in the model. For instance, the negative relationship between *scope* and *accessibility of the system* on the one side, and *intensity of evaluation* on the other, are controlled by devoting sufficient manpower to the suggestion system. The appraisal committees of Xerox consist of five to eight members per business unit (300 employees). KPN and Shell have dedicated several full-time co-ordinators to the system. To control the negative relationship between the *scope* and *accessibility of the system* versus the *processing of idea*s, the companies use an automated management information system (for Xerox this is the Ideamanager®, for KPN and Shell it is a special software system). Moreover, the centralised co-ordination of the system is combined with an appraisal in a regional unit (in addition to the central TIM co-ordination, KPN uses a representative in each region) and a 'cash on the nail' policy (within a week Shell suggestors can expect a decision regarding a budget to elaborate on their ideas). In controlling the negative relationship between *scope* and *idea responsiveness*, *alignment* is a very important factor. Embedding creativity in the mission statement of the organisation will provide a broad *scope* (all employees will be aware of the importance of creativity). At the same time the *idea responsiveness* will stay high because managers in a strongly aligned environment, created for example by a program in which they educate each other to be 'creativity specialists', will be able to handle large supplies of suggestions.

2. From our investigation of the cases it appears that considerable differences exist in the types of innovation the suggestion systems aim at. Xerox solely focuses on incremental innovations, or ideas that will lead to subtle renewals (which provides an explanation for the high degree of participation and relatively low savings). The KPN system focuses on suggestions that also lead to more substantial or even radical innovations. Shell mainly aims at suggestions that lead to radical innovations, such as ideas that cause a complete shift to new technologies (this explains why Shell has the lowest degree of participation and the highest savings). From this perspective, the suggestion systems of Xerox and Shell appear to be each other's opposites. When related to the implementation of the factors from the model, a mirrored situation appears to exist between the ways in which these two companies have shaped the factors *scope*, *alignment*, *processing of ideas* and *use of rewards*. Xerox has a broad *scope*, a strong *alignment*, a broad system of non-financial and financial rewards, but this firm pays less attention

to the *processing of ideas*. Shell, on the other hand, has a very focused and narrow *scope* (only EP-research teams), a relatively weak *alignment*, but at the same time a very extensive *processing of ideas*. Shell does not, however, use any kinds of *rewards*. Apparently, a broad *scope* and a strong *alignment* is important for incremental ideas, whereas radical innovations are mainly generated by using a focused *scope* aimed at technology experts and by paying much attention to the *processing of ideas* (particularly by involving the originator of the idea in this phase). Remarkably, KPN, with its focus on both types of innovation, has the broadest *scope* (everyone is invited to send in any kind of idea) and applies the most extensive *use of rewards*. In fact, KPN is closest to the complete implementation of the model. Apparently, it is possible for organisations to adapt the suggestion system to the kind of innovations they aim at, depending on the environment in which they operate, and the strategic choices they make.

5. Conclusions

In this article we have stated that in order to handle employee creativity effectively, it is important to organise the process of idea extraction to idea follow-up properly, otherwise employees will not be motivated to put their ideas forward and many ideas will be lost. The investigated cases show that the CreativityTransformation Model is a suitable instrument to use to design an organisational context that improves this process. It leads to an organisational context in which every employee feels motivated to send in ideas (irrespective of the character of the targeted innovations). An organisational context that is shaped in such a fashion will ensure that every expression of employee creativity will be transformed into a practicable idea. Considering that none of the investigated cases has shown this capacity, there seems to be plenty of room left for improvement in present day best practices.

Although the CreativityTransformation Model acts as a guide for shaping this ideal organisational context, it is only a first start. Further research into this area is required, for example into the relation between the different factors in the model and the strategy of the company and the life cycle of the industry. In this article we have not taken these kinds of issues into consideration. Instead, our aim was to develop a generic model that is broadly applicable. The CreativityTransformation Model creates a number of conditions that envelop the design of a suggestion system but, when implemented, leaves enough room to adapt the system to the specific characteristics of the organisation.

This article has shown that the effective use of suggestion systems puts specific requirements in the organisational context. When these requirements are met, a transfer will take place from employee creativity to practicable ideas, thus giving the company a large and constant supply of relevant project ideas. With a simple instrument like a suggestion system, companies will then be able to fully exploit an essential ingredient for the capacity to innovate: employee creativity.

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Notes

1. Source: *The 1995 Annual Statistical Report on Suggestion Systems*. Arlington: Employee Involvement Association, 1995.
2. Source: *National Annual Report on Japanese Kaizen Teian Systems*. Tokyo: Japan Human Relations Association, November, 1996.
3. A person is intrinsically motivated when that individual decides to undertake something 'for its own sake' (Crutchfield, 1961). Extrinsic motivation is caused by the pursuit of an extrinsic goal (Lepper *et al.*, 1973).