

# Initiatives as Knowledge-Creating Entities

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## Abstract

Initiatives are 'a principle mechanism through which organizations develop new competitive advantages. This paper proposes a view of initiatives as processes that recombine previously disconnected knowledge domains, with the firm's knowledge base serving as a platform from which the initiative creates its own knowledge base. During this process initiative members couple themselves tighter in order to integrate their specialist knowledge into detailed action. This coupling causes the initiative to set up its own specific organizational form, administrative and incentive systems, and roles, effectively creating an appropriate context of its own within the firm. The firms in which they are embedded can constrain their knowledge development but also serve to enable their launch and development. Based on an analysis of 36 initiatives in three large firms, distinct patterns of knowledge formation could be discerned that lead to recommendations for managers and theory.

Keywords: knowledge creation; initiatives; dynamic capabilities, organizational knowledge

Suggested track: B - Knowledge creation and innovation, e.g., in R & D

## **1 Introduction**

Initiatives are ‘a principle mechanism through which organizations develop new competitive advantages (McGrath, MacMillan, and Venkataraman, 1995: 252).’ Not surprisingly, they have become an important field of study alternatively labeled intrapreneurship or internal corporate venturing. Yet, notwithstanding this large body of research, there still exist many conflicting findings, there is a lack of definitions and unclarity about what exactly facilitates initiatives. We suggest this is because existing studies have focused on organizational conditions, such as the often-mentioned availability of champions, that facilitate initiatives rather than on issues relating to their content-wise development.

This paper, instead, proposes a view of initiatives as processes that recombine previously disconnected knowledge domains. The firm’s knowledge base serves as a platform from which the initiative creates its own knowledge base. The knowledge-creation process occurs in three phases, linking, interpreting, and integrating, during which the initiative members couple themselves tighter in order to integrate their specialist knowledge into detailed action. This coupling causes the initiative to set up its own specific organizational form, administrative and incentive systems, and roles, effectively creating an appropriate context of its own within the firm. The firms in which they are embedded can constrain their knowledge development but also serve as knowledge platforms enabling their launch and development. Based on an analysis of 36 initiatives in three large firms, distinct patterns of knowledge formation could be discerned that lead to recommendations for managers and theory.

## **2 Theory**

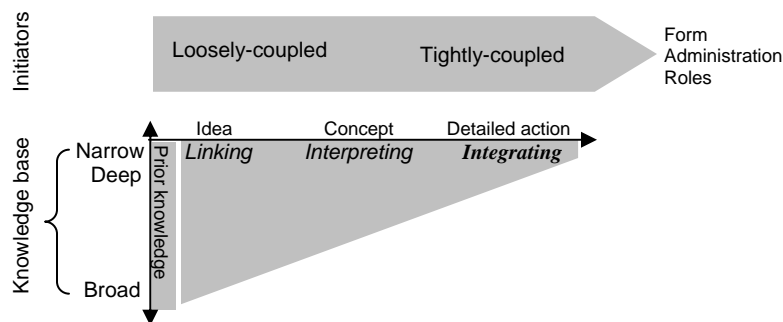
Initiatives have previously been identified as knowledge-creating entities, as is evident from Spender’s (1996: 47) description of firms as “enduring alliances between independent knowledge-creating entities, be they individuals, teams or organizations.” Such a knowledge-creating perspective of initiatives draws upon various knowledge literatures. For example, the literature that uses a knowledge perspective to explain the existence of firms (Grant and Baden-Fuller, 1995; Grant, 1991, 1996a,b; Spender, 1996) offers the notion of new knowledge as a recombination of previous knowledge. Consequently, it looks at relevant issues such as innovation (i.e. Zahra, Nielsen, and

Bogner, 1999), knowledge brokering (i.e. Hargadon, 1998), knowledge transfer (i.e. Nonaka, 1991), and knowledge integration (i.e. Grant, 1996b). The creativity literature offers a deeper insight into the creative processes that enable the recombination of knowledge (i.e. Amabile, 1988, 1996; Woodman, Sawyer and Griffin, 1993; Ford, 1996; Drazin, Glynn and Kanzanjian, 1999). The learning literature offers an understanding of how the knowledge-creation processes at the individual and group levels lead to organizational learning (Levitt and March, 1988; Huber, 1991) and how this occurs over various phases (i.e. Drazin et al, 1999; Crossan, Lane, and White, 1999). Taken together these literatures offer an understanding of (1) different types, i.e. classifications, of knowledge and (2) of the different phases of the knowledge-creation process.

A well-known classification of knowledge distinguishes between deep and broad knowledge (Iansiti, 1993; Leonard-Barton, 1995). *Deep knowledge* refers to deep functional knowledge (Iansiti, 1993; Leonard-Barton, 1995), and is alternatively labeled specialized (Demsetz, 1991), specialist (Grant, 1996b), or complex knowledge (Hansen, 1999). *Broad knowledge* refers to a knowledge base that is so wide-ranging that it manages to explore interfaces between different specialist areas (Iansiti, 1993; Leonard-Barton, 1995) and resembles to some extent the labels common (Demsetz, 1991), integrative (Grant, 1996b), or simple knowledge (Hansen, 1999). Leonard-Barton has described broad and deep knowledge using a T-shape. The cross in the T-shape represents broad knowledge. The vertical line of the T-shape, in turn, represents deep specialist knowledge. The broader the knowledge base, the more it can bring together disconnected knowledge areas. The broader the knowledge the more it enables distant search (Cyert and March, 1963), which is a search for different knowledge that has a higher chance to lead to more innovative ideas. The deeper the knowledge the more it can refine knowledge within a specialist area. One can therefore claim that the generation of ideas requires broad knowledge, whereas their detailing requires deep knowledge.

Knowledge-creation occurs over various phases, as proposed by the learning literature. Crossan, Lane, and White (1999), discuss four phases: intuiting, interpreting, integrating, and institutionalizing. With respect to the initiative process, the institutionalizing process comes after the approval of the initiative as it describes the transfer of already created knowledge to the rest of the organization. It is therefore laid aside in this thesis. Regarding the intuiting phase, this has also been termed the linking

phase (Clark and Fujimoto, 1991; Hedlund, 1994) because one first needs to link to other knowledge in order for intuiting to occur. Based on the learning literature one can therefore depict the initiative phases as linking, interpreting, and integrating. The *linking* phase starts with getting into contact with other knowledge and intuiting the existence of an opportunity. “*Interpreting* has to do with refining and developing intuitive insights (Crossan, Lane, and White, 1999: 525).” The *integrating* phase is aimed at detailing and implementing the concept, in other words securing “coherent, collective action (Crossan, Lane, and White, 1999: 528).”



**Fig. 1.** Knowledge-creating view of initiatives

Based on the above discussed knowledge literatures, in particular the broad-deep knowledge distinction and three knowledge-creation phases, we suggest the following model of initiative formation (see figure 1). When initiators manage to link some part of the firm’s platform of prior knowledge to some other knowledge an initiative is potentially born. We propose that as the initiative moves through the three phases (1) linking, (2) interpreting, and (3) integrating it develops a knowledge base of its own that preferably shifts from initially broad (suitable for idea generation) to finally deep knowledge (suitable for implementation) over the three phases. In order to enable this, the initiative members, who are constructing the knowledge base, move from being loosely coupled –across various boundaries- to being tightly coupled to each other (Weick, 1982). This tightened coupling expresses itself in the formation and formalization of the initiative’s own distinct organizational form, administration, and roles.

### 3 Methodology

A multiple-case study of 25 initiatives was carried out within three firms in the Netherlands, KLM Cargo, Van Ommeren, and Ericsson ETM. These firms were selected on the basis of the following criteria (1) had a presence in the Netherlands for reasons of access, (2) sales of over 50 million euros, and (3) participated in a global industry.

<i>Firm</i>	<b>Van Ommeren</b>	<b>Ericsson</b>	<b>KLM Cargo</b>	
<i>Initiatives</i>	Tallin Latin America Tank Container Cooperation Eastman Splitter	Internet Internet Billing Telfort Cable Dect Unax SDH EDI Unisource Strat Distr. Term. Glass box	NVOCC Jumpstart SCU BU Logistics E-Status Cargo Info. System Tracking & Tracing System Profit Man. Product Portfolio Express	
<i># embedded cases</i>	6 initiatives	10 initiatives	9 initiatives	25 initiatives

**Fig. 2.** Investigated initiatives

In each firm initiatives were then selected in manner similar to Birkinshaw's (1997) selection method. Firstly, senior management suggested about six initiatives that they considered particularly interesting from their viewpoint. Secondly, in order to offset the selection bias of the top managers somewhat, in each firm a smaller set of about three initiatives was analyzed that had been serendipitously encountered during our investigation, which in each firm lasted approximately six months. As for the kind of initiatives that were selected the criterion was that the participants in the initiative needed to consider the initiative to be an opportunity to create future goods and services for the firm that might potentially impact the firm's strategy. Similar to Ancona and Caldwell (1992) these initiatives were at various stages of development: some had just started, while others were already completed. In this way we arrived at around 9 initiatives per company leading to a total of 25 initiatives (see figure 2).

The initiative process was analyzed in a manner similar to the studies described by Pettigrew (1992), Burgelman (1983), and Birkinshaw (1997), namely by interviewing key people that were of influence to the initiative during its life cycle. The key actors thus functioned as key informants (Campbell, 1955; Huber and Power, 1985; Kumar, Stern, and Anderson, 1983; Phillips, 1981; Seidler, 1974). Because in all instances there were

various people involved in an initiative these were always multiple key informants (John and Reve, 1982; Phillips, 1981; Seidler, 1974). Although there are known liabilities when using key informants (Huber and Power; 1985), we found that the liabilities involved in using key informants were offset by their thorough understanding of the initiative. Moreover, the key informants were always the key players, thus covering the important viewpoints. The interviews were semi-structured in that they contained both general and more specific questions and were used as an interview guide similar to what Dutton and Dukerich (1991) and Eisenhardt and Bourgeois (1988) have done, and as has been suggested by Yin (1989). As suggested by Pettigrew (1990) for the data collection a different research team was used for each firm; thus there were three research teams in total who each collected data on initiatives in a single firm. As explained by Eisenhardt (1989: 538) "the rationale behind this tactic is that investigators who have not met the informants and have not become immersed in case details may bring a very different and possibly more objective eye to the evidence."

Initially the analysis focused on understanding each initiative separately. The transcripts pertaining to a single initiative were read several times to grasp what the interviewees were saying. Then a case description was made and the general trajectory plotted into a process diagram similar to that used by Burgelman for describing his internal corporate ventures (1983a). These case histories were then sent to the key informer of each initiative to verify that the case description was a fair representation.

All the initiatives within a single firm were then compared with each other to detect general patterns. First, the initiatives were analyzed by comparing the process diagrams and summaries of the separate initiatives and grouping them into similar categories. Then the initiatives were plotted in a table, in accordance with the general categories just found, and cross-compared for various dimensions. This step was fed back to the firms by means of a report and a separate presentation to each of the firms involved.

Finally after having compared within a firm, a single table was then put together from the three separate firm tables. This table was then used to detect patterns across the three firms. Again we focused on comparing the same dimensions as were mentioned in step 2, namely the elements that stem from the proposed framework. In this step, we particularly focused on major pattern differences between the firms. During

a workshop this cross comparison was discussed with the participating firms in which the overall project results were presented.

## 4 Results

The main task of initiatives is to build up a knowledge base of their own during their life span. The knowledge base that is built up stems from prior knowledge, other specialist knowledge, and integrative knowledge that spans the two. The availability of these kinds of knowledge in the three firms explains the distinct initiative patterns present (see figure 3).

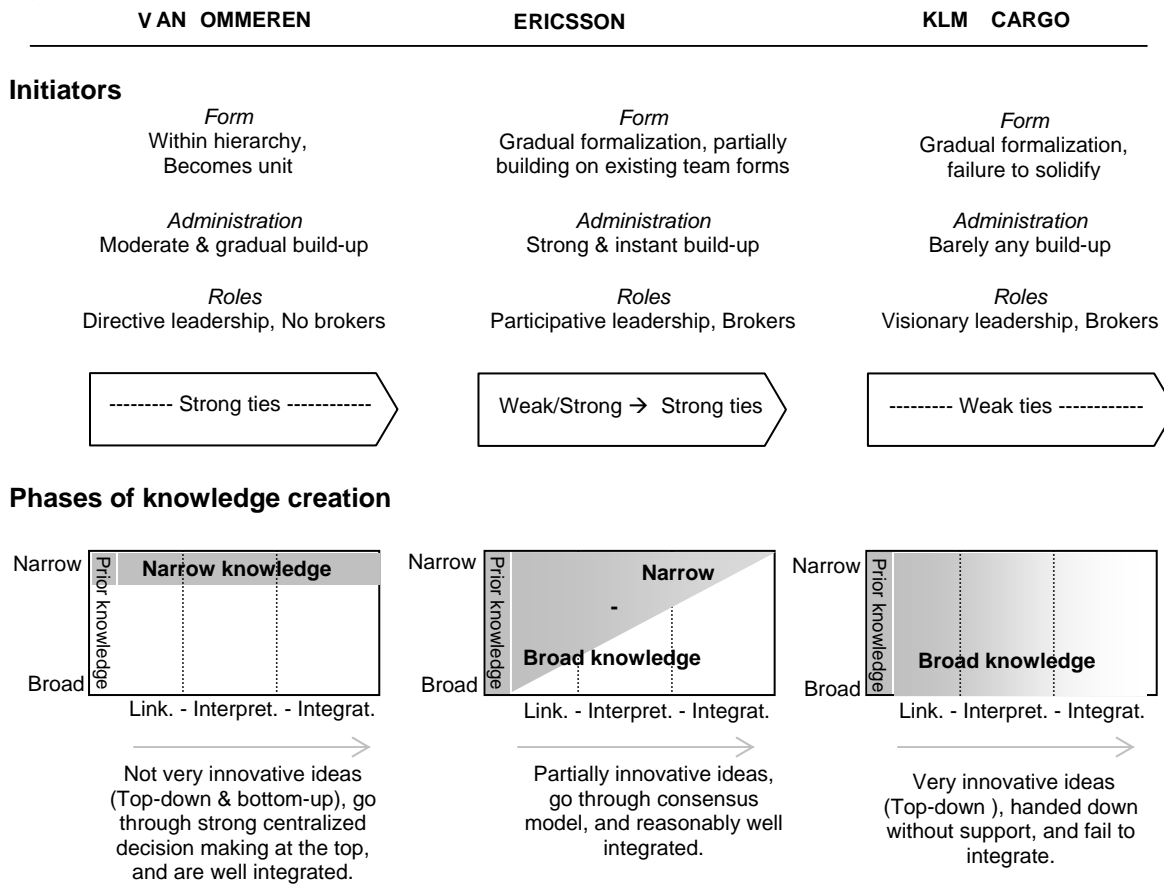


Fig. 3. Cross-case comparison

## 4.1 KLM Cargo

**Prior knowledge.** At KLM Cargo there existed a very broad integrative knowledge base that embarked on new domains previously unknown to KLM and the airline industry at large. This was reflected in its visionary plans that KLM Cargo launched in 1994 in its 'Division in Transition' program, developed by the Cargo Development unit. No longer did KLM Cargo consider itself as merely a traditional cargo carrier. Instead, it perceived itself as a provider of integrated logistics (Volberda, 1998). This led the international Air Cargo Association to give KLM Cargo an award in 1998 for being "the first to push the boundaries within the industry to a new dimension, [thus] forcing a change and giving air logistics a new meaning (Nelms, 1998: 166)."

### **Phases of Knowledge Creation.**

*Linking.* Because most initiatives are based on the conceptual strategy that resulted from the 'Division in Transition' program the initiatives' knowledge base starts out at a very broad conceptual level. Most initiatives at KLM Cargo were driven by the new Integrated Logistics strategy and accompanying reorganization (7 out of 9), with approximately half of those generated by Cargo Development: a unit that develops corporate strategy. The new strategy caused the existence of new business units that still required further refining: the BU Logistics initiative represents the setup of such a unit, the Jump-start SCU initiative is about the longer term strategy of such a new business unit, and the NVOCC initiative moves from decoupling Cargo not just from the Passenger division, but from flights as well. The new strategy also required new systems and services: the System Profit Management initiative deals with setting up a decision system for initiatives, the Product Development initiative is about setting up a system for dealing with client requests, the Tracking and Tracing initiative is about setting up a system for tracking goods, and the Cargo Information System initiative is about setting up a better internal information system. Clearly, strategy rather than the market drove initiatives at KLM Cargo. Only two initiatives were driven by the market: a demand for the transport of dangerous goods drove the E-Status initiative and a demand for express products drove the Express initiative. Development of the initiatives' conceptual knowledge base was thus very much tied to the Cargo Development unit, which set up the 'new' strategy. Because, the knowledge is so conceptual and so much based on a



single source - Cargo Development - there was almost no cross-linking to other units. The only linking is a vertical one to the Cargo Development unit, to check the strategic fit.

*Interpretating.* Once the concepts are born - often strategic in nature - the top transfers the initiative to the middle level. The initiative is either operationalized within an existing unit (4 of 9) or in a project team that is formally installed by top management (5 of 9). From then on, top management - in the form of a body called the System Profit Board - follows the development of the initiative from a distance. Because the initiative is already considered to fit with top management's strategy, the initiative focuses on operationalizing the project during the interpretation stage. This operationalization of the broad conceptual knowledge into more practically applicable knowledge proved difficult, as there was no prior specialist knowledge from which to bridge to other specialist knowledge.

*Integrating.* After having come to grips with what the initiative is all about, the initiative members move on to detail it in terms of the parties and systems that are to implement it. This integrating phase proves to be extremely problematic for the initiatives. Firstly, because they are confronted with 'old' modes of thinking, systems, and infrastructure, which were suitable for the 'old strategy,' but not for the initiatives based on the new strategy. Secondly, because the units that have been set up on the basis of the new strategy lack appropriate control systems and are still too chaotic to ensure effective implementation. The horizontal knowledge flows were thus hindered by the absence of vertical knowledge flows. As such initiatives remained very much in the concept stage, failing to translate into tangible outcomes. As the Cargo Information System initiative exemplified: "People are not accustomed to explicitizing knowledge or updating it. And the disciplinary handing over of such knowledge was also a problem." This led to a situation in which initiatives fail to become integrated, or as the NOCC manager said: "We have great difficulty in getting this project embedded in the organization and to keep it embedded."

**Knowledge outcome.** The knowledge content created in the initiatives at KLM Cargo was much more innovative than at the other two firms. Given that the initiatives were based on the corporate strategy this is not that surprising. That this strategy is far-reaching is illustrated by the manager of Cargo Development when he says: "We do not

want to show the world all that we are capable of...There is a lot of magical power in the organization that cannot be made explicit.” That corporate strategy was so far reaching also constituted a problem as many KLM Cargo employees found it difficult to grasp it themselves. The product champion of the NVOCC initiative explains: “Very few people understand the project. This is because the project is so abstract and so broad. Many people just do not get the possibilities yet.”

### **Initiators.**

*Form.* At Cargo no teams were formed in the linking stage, almost all teams were formed during the interpreting stage, with one team formed during the integrating stage. They typically functioned as operationalizing rather than idea generating mechanisms. Although the teams were formal, in the sense that they had formally been appointed, the teams were not structured when they started out, but became somewhat more structured along the way as is exemplified by the Express manager: “Cooperation arose through coincidence. Through informal contacts we found out who else was busy with an express product and then we sought agreement.” If we take into consideration that the Cargo Information Systems team also started out less structured, we can conclude that most formal teams (4 of 5) at Cargo started without a detailed structure.

*Administration.* At KLM Cargo all the initiatives, whether they were developed within an existing unit or in a team, had very little administration when they started out. As the product champion of the NVOCC initiative illustrates: “The roles in the project have not been clearly determined, but are instead very vague. The organization [form and administration of the initiative] is also very vague.” The project leader of the NVOCC initiative underscores this when she says: “Projects in Cargo are never formal, because project based work is not common at Cargo. There is a lot of teamwork but it is more ad-hoc.” Even the team structures, which might seem more supportive for initiatives, were chaotic in nature as is illustrated by the Sales manager said: “Although working in teams occurs, these are not well-defined project structures.” And the project leader of the Product development initiative said: “Cooperative procedures have not been documented.”

*Roles.* Apart from the visionary management in Cargo Development that initiated and brokered most of the initiatives, there are no clear roles played by initiative members

from other echelons. A sales representative said it quite blunt: "There are no clear and fixed roles."

#### **4.2 Van Ommeren Tank Storage and Shipping**

**Prior knowledge.** At Van Ommeren there was a narrow knowledge base, with barely any integrative knowledge that was of a broad nature. This was not surprising given that the firm had just restructured and now concentrated on what it considered its core again: tank storage and shipping. As one of the board members explained: "We are on the verge of transforming from a conglomerate to a focused organization. Only afterwards is it possible to peek over the fence again. But at the moment we are not ready for that yet. In this painful phase of cutbacks you cannot walk too far ahead, that is not good and causes mixed signals. The matter has to come to rest first, especially emotionally, before you can start becoming somewhat more adventurous again."

#### **Phases of Knowledge Creation.**

*Linking.* Most initiatives represented opportunities to operationalize the existing knowledge base. They were (1) all organizational in nature, and were (2) both strategy and market driven. They were all organizational in nature because they affected the organization: the Splitter and Eastman initiative were about linking processes directly with a client; Tank container, Latin America, and Tallin were about expanding the organization in new geographic areas; Cooperation was about creating synergy within the organization. Most of these initiatives (5 of 6) were organizational in the sense that they were about adding something on to the existing organization: either a link to a client or an investment in a new business or geographic area. Only one initiative, Cooperation, was about a change within the existing organization, namely creating synergy between existing operating companies. The knowledge that was contributed by the initiatives to the existing knowledge base at Van Ommeren was therefore quite limited. In order to prepare for the decision-making process in the next phase, this initial phase involved much informal vertical knowledge flows, as the director Marketing/Business Development explained: "There will soon be a recommendation to the management board, who will probably accept it because there has been extensive consultation

beforehand. Because of the short lines and the informal contacts it has already been precooked.... I meet them in the corridors and in the bathroom where the official presentation is precooked.”

*Interpreting.* The interpretation stage was characterized by a strong centralized decision-making system at Van Ommeren that was located in the management and supervisory board. The initiatives could not circumvent the board of directors' decision-making procedures. Therefore, most initiatives took quite some effort to inform the board about their progress. In the Splitter initiative, for example, "Mary [fictitious name] and all other personnel made reports of all visits and circulated it around the board." The Tallin initiative was terminated exactly because the board was not involved, as a director of one of the operating companies explains: “the board was involved much late, causing the termination of the ‘Tallin’ project.”

*Integrating.* Initiatives that have entered the integration stage - Cooperation, Eastman, and Splitter - showed little difficulty in getting integrated. New specialist knowledge was easily integrated, because it was closely related to the prior knowledge and because of the strong control systems at Van Ommeren. Most initiatives were basically investment proposals and the kind of knowledge that was sought was predominantly market data. Because Van Ommeren already had a lot of marketing knowledge, the amount of new knowledge acquired was thus limited.

**Knowledge outcome.** Few innovative ideas were born at Van Ommeren. The strong centralization of decision-making killed off entrepreneurial behavior. As one of the interviewees said: "Everything that is new is kind of suspect; there is no entrepreneurial culture present. The current older generation are not the most entrepreneurial people." The ideas at Van Ommeren were often ideas that had been around for a long time or that fit well with the existing activities. Only the Cooperation initiative formed more of a departure from the existing mode of thinking, but it showed to evolve slowly. Tank container was a new line of business for Van Ommeren, but it was something they had done some years earlier. All other initiatives were strongly related to Van Ommeren's existing business. Overall, the initiatives at Van Ommeren were not very radical in nature. Moreover, the amount of ideas encountered during the investigation was less than those in Ericsson and KLM Cargo. It seems safe to conclude that Van Ommeren

displayed little entrepreneurial activity, which in itself is not that surprising given the bulk industry that it operates in.

### **Initiators**

*Form.* Most initiatives were carried out within the existing units in the hierarchy. As the director of an operating company explicated: "In case project teams would have been put on the splitter project it would not have worked. Project teams have the tendency to become bureaucratic. Moreover, the project is then being pulled into various directions, whilst there is one clear direction necessary." The only formal body that was sometimes introduced in the interpretation was a steering committee. It was installed by the management board to aid in the screening process. Task force or project team like settings were often used in the integration phase of the initiative: the Splitter initiative in an informal project team, the Eastman initiative in a formal project team, and the Cooperation initiative in an operational meeting. These teams were kept away from the head office to avoid meddling by headquarters. As the director of one of the Tank storage company said: Director Tank Storage: "The team leader is on location and not at the head office because then he is open to too much political danger... The preparations and operationalization of the project is carried out by a work group."

*Administration.* As the initiatives functioned primarily within units in the hierarchy they could lean on the latter's administrative structure. This structure was sometimes, if a team was formed in the integrating phase, carried forward to a newly formed unit.

*Roles.* Besides the directive leadership, exemplified by the strongly centralized decision-making process, roles were well structured in the initiatives, as a Splitter initiative member explained: "The project teams are put together [with] for example, a technical guy such as James [fictitious name], a lawyer, a financial guy and a commercial person." This is not surprising given that they were positioned within the hierarchy. As opposed to the other two firms, there were no brokers involved in the initiatives, which again is not surprising given the narrow knowledge base involved.

### 4.3 Ericsson

#### **Prior knowledge.**

Ericsson represents a mixture of the above two firms in that both broad integrative and specialist knowledge are present. Being a technological firm there is much prior knowledge within the firm. This technological focus is underlined by the presence of the large R&D department in Ericsson. Simultaneously the firm, perhaps because of its links with other subsidiaries and the involvement of employees in scenario planning and the set up of the strategic plan, possesses much integrative knowledge, much broader than Van Ommeren albeit somewhat less broad than KLM Cargo. Because the specialist knowledge that is required is often located in other units, subsidiaries, or even outside companies, a lot of knowledge sharing occurs with these units. Ericsson thus possesses a mixture of horizontal and vertical knowledge flows that enable it, much better than the other two firms, to develop its knowledge base.

#### **Phases of knowledge creation.**

*Linking.* In the linking phase we see that initiatives tend to (1) be driven by non-strategic reasons, (2) shop around for necessary competencies, and (3) quickly test the reaction of higher echelons all the way to headquarters in Sweden. Although new knowledge is incorporated in the initiatives there is not a single initiative that does not build on existing knowledge in Ericsson. Two initiatives, EDI and Unax, show a limited need for incorporating new knowledge and are better typified as implementation projects. All the rest (8 of 10) involve a search for new knowledge, especially during the linking and interpretation stages. Initiatives at Ericsson ETM are (1) mostly not driven by strategy, and (2) are either of an organizational or product type. Most initiatives (8 of 10) were solutions to problems or issues that customers were faced with. In four cases the ideas came directly from the client: EDI, Glass Box, Cable Dect, and Telfort. In two cases, Unax and SDH, the initiatives were driven by existence of some problem. In two other cases, Internet and Internet Billing, it was employees who had an interest in Internet technology who pushed the idea. There were only two initiatives that could be classified as being driven by strategy: Unisource and Strategic Distribution Terminals. However, even in these cases the strategy that they were based on was a response to

market developments. Overall, most initiatives are not driven by strategic intent, but represent a response to market developments or problems that arose.

*Interpreting.* The interpretation phase is characterized by (1) the use of a consensus model, (2) the use of teams, and to a lesser extent (3) the use of steering committees, and (4) the need for clients to get approved. The bottom-up trajectories tended to seek approval far up the echelon as top management at Ericsson ETM was involved in all instances (10 of 10), and headquarters in Sweden in a large portion (8 of 10). Nevertheless, this was often in vain because these top levels tend to ask for consensus at the lower levels before they will sign on to the initiative. The interpretation phase therefore shows to be the phase where initiatives encounter some difficulty in getting through. Because of the consensus model quite some time delays occur and more radical initiatives tend to be held back, as a business manager explained: "I would say that Ericsson's culture of consensus has its disadvantages ... Basically because everyone has their own budget ... See, you have to have consensus and that takes a lot of time." The consensus model operates not just at the local subsidiary level but also at the level of the headquarters, as is exemplified by a remark of the business manager involved in the SDH initiative: "We had to involve our colleagues in Switzerland, Sweden, and Spain because we alone were too small and could not influence decision making in Stockholm [headquarters]. Because of our alliance we were able to commit Stockholm to a second attempt at developing an SDH [lower level] portfolio."

*Integrating.* However, once initiatives do pass this selection by consensus they are smoothly implemented. Those initiatives that enter the integration stage (6 of 10) - SDT, Unisource, EDI, Glass Box, Cable Dect, and SDH - were implemented very smoothly. Interviewees confirmed that as a result of the consensus model there is agreement amongst all relevant parties concerned and that therefore there is no difficulty in implementing the initiative. Besides agreement, it is notable that at Ericsson ETM the control systems operate effectively during this stage ensuring the implementation of selected projects. Even the transformation of two initiatives into an organizational unit or division of the formal Ericsson ETM organization is flawless: the Unisource customer axis and the Mobile division. This mirrors the expertise that has been built up within Ericsson on acquiring new customers, setting up a new customer unit, and rolling out a telecom infrastructure for the new customer.

## **Knowledge outcome**

The kinds of ideas at Ericsson are definitely more innovative than those at van Ommeren, but less so than at KLM Cargo owing to the consensus model used for decision-making. As a marketing representative explained, “the closer the idea is to the current frame of mind of people, and let’s say you can do it, then a lot can happen. But if you talk about totally different areas where we are not a player yet, then it is a really painful way in this organization.”

## **Initiators**

*Form.* The new organizational (matrix) form of the Ericsson ETM organization has a positive effect on the manner in which the initiatives create their own ‘organizational’ form. Particularly the use of teams and steering groups stand out. Generally speaking, many initiatives (8 of 10) would initially consult strong ties; if the strong ties could not help them out, they were referred on to weak ties. Of these strong/weak ties based initiatives most (6 of 8) would transform into a team form. This process is explained by a Division manager: “Especially in the start-up stage, few people were involved ... If we find a client [sponsor], the number of people will grow and the organization needs to be more formal and outlined.” The team structure is used in most initiatives (9 of 10) at Ericsson during the interpretation phase. All top-down initiatives, not surprisingly, have a formal team structure in this phase. Of the six bottom-up initiatives, two already had a formal team structure from previous activities - the Glass Box and SDH initiatives -, and three set up an informal team structure in this interpretation phase – Internet, Unax, and Internet Billing -. Overall the process at Ericsson suggests that initiatives make wide use of team structures, be they informal or formal. It is also evident that in many instances (6 of 10) these team structures emerge out of weak and strong ties that predated the team.

*Administration.* The initiatives display a process in which the control systems are tightened along the way, as is exemplified by the following remark by a Business manager: “To Ericsson it [the project] was a trial and error process. We gave it a lot of thought before we implemented it, but we did not write anything down in procedures and processes. One advantage is that you can start much faster and you are very flexible in the way you want to do the next step.” During the interpretation phase, about half the initiatives (5 of 10) were faced with a steering committee that was installed by the



management team to aid them in managing the initiative better. The people on board the steering committee often consisted of specific management team members that had a stake in the initiative, either because they were strongly in favor of it, or because they were strongly opposed to it. As a strategic staff member explains, these committees were sometimes considered a blockade: “At a certain moment, out of nowhere, a steering committee was formed consisting of ... and I was to report to them: as a buffer between the management team and me. ... Quite a nuisance.” Yet, these steering committees were also appreciated because they were more dedicated to the initiative than the management team, and people realized that if the committee was convinced, then management team would not pose much of a problem. Overall, the steering committee was considered an administrative mechanism that had both positive and negative aspects.

*Roles.* Top management provided participatory leadership, leaving the actual decision-making to the consensus model used. Being a very technologically oriented company the presence of the business development and R&D unit resulted in quite some ‘inventor types’ being available who proved particularly helpful in performing a broker role for others. They referred people on to others with the necessary competences. At Ericsson the initiatives display a clear division of roles. Generally speaking product champions were mainly front-liners and middle managers, whereas the organizational champions consisted of the division managers. They often headed the steering group and fought for their initiative within the management team meetings. The resource owners (Mulder, 1997) were either the same division managers or clients. The idea generator and initiator roles could not be attributed to any specific level: all three levels were involved in these roles. However, it is notable that most (7 of 10) idea generators and initiators were in direct contact with clients, be it at the division (4 of 7), business manager (1 of 7), or marketing representative level (2 of 7). The two that did not display this pattern from strong/weak ties to formal teams, merely used the ties for obtaining knowledge, as was the case in Cable Dect, or used them to create a larger consensus, as was the case in the SDH initiative.

The Knowledge-Creating view leads to propositions 2a, 2b, and 2c (see figure 9.7). Proposition 2a stated that initiatives that possess broader knowledge bases in the linking phase show better idea generation. Proposition 2b stated that initiatives that possess deep knowledge areas in the integrating phase show better implementation.

Proposition 2c states that initiatives that possess broad knowledge in the linking phase and then deep knowledge in the integrating phase have better idea generation and implementation.

Translated to the case data these three propositions lead one to suppose the following. First (2a), one would expect that KLM, with the broadest knowledge in the linking phase, would generate ideas that are the most innovative, but would find it problematic to effectuate them, because it lacks deep knowledge in the integrating phase. Second (2b), that Van Ommeren, with the most deep knowledge in the integrating phase, would be best at implementing ideas, but would in turn find it problematic to generate innovative ideas in the linking phase. Third (2c), that Ericsson ETM, with a mixture of broad knowledge in the linking phase and deep knowledge in the retention phase, would have the best throughput of ideas, with the ideas being more innovative than at Van Ommeren yet less than at KLM Cargo.

Comparing the three firms, the data indeed provides support for the three propositions of the Knowledge-Creating view. KLM Cargo, for example, with the broadest knowledge in the linking phase, has the most innovative initiatives. Van Ommeren, on the other hand, with the deepest knowledge in the retention phase showed to be much better at implementing ideas than KLM Cargo. Ericsson ETM with a mixture of broad in the linking phase and deep knowledge in the integrating phase, displays the best throughput. Compared to Van Ommeren, it has ideas that are more innovative. Compared to KLM, it might have ideas that are less innovative, but at least they get implemented smoothly as opposed to those of KLM Cargo.

#### **4.4 Cross-case comparison**

Based on the knowledge-creating view put forward in this paper, one would expect the following. First (1), one would expect that KLM, with the broadest knowledge in the linking phase, would generate ideas that are the most innovative, but would find it problematic to effectuate them, because it lacks deep knowledge in the integrating phase. Second (2), that Van Ommeren, with the most deep knowledge in the integrating phase, would be best at implementing ideas, but would in turn find it problematic to generate innovative ideas in the linking phase. Third (3), that Ericsson ETM, with a mixture of broad knowledge in the linking phase and deep knowledge in the retention

phase, would have the best throughput of ideas, with the ideas being more innovative than at Van Ommeren yet less than at KLM Cargo.

Comparing the three firms, the data indeed provides support for these three propositions. KLM Cargo (1), for example, with the broadest knowledge in the linking phase, has the most innovative initiatives. Van Ommeren (2), on the other hand, with the deepest knowledge in the retention phase showed to be much better at implementing ideas than KLM Cargo. Ericsson ETM (3) with a mixture of broad in the linking phase and deep knowledge in the integrating phase, displays the best throughput. Compared to Van Ommeren, it has ideas that are more innovative. Compared to KLM, it might have ideas that are less innovative, but at least they get implemented smoothly as opposed to those of KLM Cargo.

*Initiative form.* The knowledge-creating view assumes that the organizational form of an initiative formalizes during the course of an initiative., i.e. that initiatives move from an informal structure in the linking phase to a formal hierarchical structure in the retention phase. It is clear that all initiatives on average formalize their organizational form during their life span. The same goes for the three firms individually; At Ericsson, KLM Cargo and Van Ommeren we see an increase in the formalization of the form during the life span of initiatives. The formalization data is in line with the finding that almost all initiatives (19 of the 25) started out with an idea before a team was formed. In these firms ideas preceded teams. This suggests, in these firms at least, that teams served not as mechanisms of idea generation but as vehicles for knowledge integration.

*Initiative administration.* Over the course of an initiative the knowledge-creating view assumed that the build-up of an administrative system would increase, i.e. that initiatives move from the absence of any administration in the linking phase to the use of its own administration in the retention phase. Initiatives' administrative systems are being built up over the course of time, certainly at Ericsson and Van Ommeren, making the assumption quite plausible. Only KLM Cargo barely shows an increase in the build-up of an administrative system within its initiatives. In terms of the starting point, initiatives at Ericsson manage to build up an administrative system of their own much quicker than at Van Ommeren. This is in line with the finding that management had a strong control focus at Van Ommeren.

*Initiative roles.* In the various sorts of trajectories - be they top-down (12), middle-up (5), or bottom-up (8) – there are various roles that stand out because they relate not

to a hierarchical position but to knowledge expertise. The players that perform these 'expert' roles are typically the inventor types, i.e. business development, corporate development, and R&D. These kinds of players are notably absent at Van Ommeren, where there was a lack of knowledge creation. At Ericsson ETM it is particularly business development and R&D that perform this expert role. Not only do they possess relevant knowledge, but they also function as brokers for referring people onward to others with more relevant knowledge. Somewhat similarly, at KLM Cargo, Cargo development's role lies in its expertise on the corporate strategy; this is the reason why they are often consulted. The roles, particularly that of the broker, are related to the task that they perform, i.e. an innovation task.

## **5 Conclusion**

The Knowledge-creating view of initiatives put forward in this paper attributes differences in initiative trajectories to differences in the organization of knowledge both in the initiatives as well as in the firms in which they are situated. Broad knowledge is considered beneficial for idea generation. This is exemplified by the KLM Cargo case, which is the case with the broadest knowledge and the most innovative initiatives. Specialist knowledge is considered beneficial for idea implementation. This is exemplified by the Van Ommeren case, which is the case with most specialist knowledge and the smoothest and quickest implementation of initiatives. The best throughput is considered to be obtained by shifting from broad knowledge in the initial stages to specialist knowledge in the final stages of the initiative process. This is exemplified by the Ericsson case, which is the firm that shifts from broad knowledge in the linking and interpreting stages, to specialist knowledge in the integrating stages. The initiatives in the three firms also display the formation and formalization of initiative forms and administrations as well as a distinct set of roles over time.

This study questions the adequacy of team structures for generating new knowledge. This study has shown that the knowledge sharing that sparked the generation of new ideas often occurred before teams were set up. Team structures were the result rather than the source of such knowledge sharing. Knowledge generation is thus more a result of cross-functional interaction than of some cross-functional structure. Although it is certainly true that cross-functional structures, such as teams, represent a form of interaction, by being structured they simultaneously limit the amount and kind of

interactions. At Ericsson, for example, many ideas were formed by visits to other firms, lectures of guest speakers, a trip to headquarters, clients suggesting ideas etc. Firms should concentrate on providing a lot of interaction rather than structuring it per se in some form.

Another crucial aspect lies in the relation of knowledge to strategy. This study shows that the knowledge base rather than corporate strategy formed the source for idea generation. In other words, people – in the lower echelons - conceived ideas because of what they were doing, rather than what they were instructed to do. This agrees with Lovas and Ghoshal (2000) who claim that Burgelman's (1983) autonomous-induced distinction is irrelevant for the idea generation stage, because idea generators behave irrespective of corporate strategy. Evidently, it disagrees with the notion of strong strategic intent (Prahalad and Doz, 1987). However, in the selection phase strategy clearly directed the process. Strategy worked directly on the selection rather than the variation – the generation of ideas -. This is very much in line with Burgelman's intraorganizational ecology view (1991) in which managers retroactively legitimize initiatives. Yet, is there no role for strategy in the initial phases at all? Are we to assume that managers can lay back for ideas to pop up and then in retrospect select? Looking closely, this study found that managers were already guiding the initiative before it was formally legitimized. This is very much what Lovas and Ghoshal termed guided evolution (2000). Managers must therefore both shape a facilitating context for knowledge sharing (Ghoshal and Bartlett, 1994) and strategically 'guide' the evolution of ideas (Lovas and Ghoshal, 2000).

The findings explain how firms can provide a broad and deep enough knowledge base for initiatives to emerge from, as well as the complementarities that are needed to rollout the desired action in the integrating phase. The view also has some limitations. First, it is path dependent. Radical innovations might be better off with a view in which power is used to combat the path dependent forces. Second, it puts much emphasis on personal interaction to facilitate knowledge sharing, but when it comes to the coordination of complex tasks such is often not feasible. Hierarchical forms seem better suited for such purposes. Yet, notwithstanding these limitations, a knowledge-creating view of initiatives does provide us with an improved understanding of their content-wise development and the role of the firm in this process.

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