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## **Emergence and Implementation of Idea Management Systems: A Behavioral Theory Perspective**

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### **Abstract**

By integrating insights from the behavioral theory of the firm, we develop a model that explains why and how managers in large organizations choose to design, develop and implement internal idea management systems (IMS) in different ways. While prior studies have elaborated on the benefits of using these systems internally to generate innovation, we suggest that they often discard alternative explanations for why managers decide to implement them. We draw on a qualitative, multiple case study of five large organizations to examine managers' strategic thinking and decision-making in relation to their development and implementation. We find that managers' decisions to employ IMS are driven by: (1) the need to improve innovative performance (i.e. problem-stimulated); (2) the opportunity to achieve future gains in innovation by driving an internal cultural change (i.e. opportunity-driven); and (3) the need to signal a view of the organization as innovative both internally and externally (i.e. legitimacy-seeking). As such, our findings challenge more functionalistic explanations for organizing innovation offered by current research. Moreover, we show how differences in managers' interpretative schemes may contribute to bias the way an IMS is constructed, leading to different patterns and outcomes. Implications for both organizational research and practitioners are discussed.

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**Keywords:** Idea management systems; new technologies; behavioral-theory of the firm; interpretative schemes; decision-making

## **Introduction**

Scholars highlight the role of search in accessing a variety of inputs and ideas for innovation (Laursen and Salter 2006). They claim that organizations need to perform distant search for ideas and solutions by going beyond their organizational boundaries. This is reflected in the increasing use of various web-enabled technologies and tools – such as online crowdsourcing platforms – to support the collection of ideas from external sources to feed the innovation process (Bayus 2013, Dahlander and Piezunka 2014). At the same time, an approach that is receiving substantial attention is the increasing implementation of web-enabled idea management systems (IMS) in large organizations to generate innovation from internal sources (van den Ende et al. 2014). As such various studies highlight that employees still constitute a critical source of knowledge for innovation and that IMS may help organizations expand their innovative search efforts beyond the R&D lab by involving the internal crowd of distributed employees (Neyer et al. 2009, Deichmann and van den Ende 2014). Therefore, managers increasingly face the challenge of involving employees in setting strategies for innovative products or services through their use of IMS.

However, recent studies also show that most initiatives to implement these systems fail, either because they do not succeed in driving innovation or in fostering employee participation (Birkinshaw et al. 2011). A key question is then why managers continuously decide to implement these new technologies for innovation and how this adoption decision affects the way IMS are subsequently developed and implemented. The primary emphasis of current innovation research is placed on evaluating the performance consequences of IMS implementation – thus, adopting an ‘ex-post’ view on their use (Frese et al. 1999). However, our knowledge about the antecedents of why and how these systems are adopted, developed and implemented is limited.

Many studies take a useful but functionalistic approach, focusing on the output of these systems in terms of quantity and quality of submitted ideas (Frese et al. 1999, Bjork and Magnusson 2009). These studies hint that the emergence of IMS is related to managers' need to generate innovation and access diversity of inputs, but do not address other potential theoretical explanations behind their use. Arguably, understanding the triggers of managers' decisions for IMS implementation is critical for innovation scholars. As pointed out by Alexy et al. (2016, p.3), current studies on the adoption of new practices and technologies for innovation "lack of theoretically motivated work that puts strategic managerial action at the center of attention". Relatedly, innovation studies seldom address managers' strategic thinking and decision-making for innovation - i.e. their assumptions, interpretations and arguments as they develop and implement such a system. Similarly, Garud et al. (2013) emphasize the importance of a better understanding of the innovation processes, how they unfold within organizations and their inherent complexities.

In this paper, we study the strategic process through which managers choose to develop and implement IMS in different ways. We employ the theoretical lens of the behavioral theory of the firm (Cyert and March 1963). This theory focuses on the processes of organizational search and decision-making in organizations and explores how these processes affect organizational, strategic or technological changes (Greve 2003, Alexy et al. 2016). A central point of the theory is that organizations make decisions by comparing their performance with some aspiration levels – i.e. acceptable levels of accomplishment (Cyert and March 1963). For instance, managers may evaluate alternatives to current practices if they consider organizational performance relative to aspirations to be unsatisfactory (Salge et al. 2015). Similarly, managers' IMS adoption decisions may be viewed as a form of organizational search directed at finding new ways of organizing for

innovation. By integrating insights from the behavioral theory of the firm, we aim at shedding more light on the triggering mechanisms underpinning managers' decisions to adopt and implement IMS for innovation. Further, we explore how these triggers may influence the subsequent IMS development and implementation processes in different ways, leading to different patterns and outcomes. By doing so, we aim to provide more detailed explanations about the why and how of managers' decision-making processes, as reflected in the adoption of IMS in large organizations. This is important considering that such processes and their characteristics have received limited attention when it comes to managers - as many studies have focused more on how organizations search and less on individuals - with a few exceptions (Gavetti and Rivkin 2007, Li et al. 2013, Maggitti et al. 2013, Salge et al. 2015). Besides, we posit that a better understanding of managers' front-end adoption decision may also help explain the observed inter-firm differences in IMS implementation and outcomes. Therefore, we ask: How do managers' decisions to employ an IMS in large organizations influence on its development and implementation?

To generate an elaborate understanding and given the limits of extant theory, we conducted a multiple-case study of five large organizations in Denmark. The five organizations have either: (1) recently implemented an IMS with relatively successful and unsuccessful results; or (2) are in their initial phases of developing a new system after a previous unsuccessful experience. We conducted 23 interviews with innovation and general managers as well as gathered various secondary data sources to explore and capture the variation in their strategic thinking related to the system adoption, development and implementation across the different organizations.

The contributions of this study are threefold. First, we identify and discuss three main mechanisms underpinning managers' decisions to adopt and implement IMS, namely: (1) the

need to improve innovative performance (i.e. problem-stimulated); (2) the opportunity to achieve future gains in innovation by driving an internal cultural change (i.e. opportunity-driven); and (3) the need to signal a view of the organization as innovative both internally and externally (i.e. legitimacy-seeking). These findings contribute to decision-making research and the behavioral theory of the firm (Argote and Greve 2007, Gavetti et al. 2012) by showing the importance of incorporating opportunity-driven and legitimacy-seeking as additional mechanisms to explain organizational search and action, as reflected in managers' IMS implementation decisions. Such mechanisms have received little attention from researchers employing the behavioral theory of the firm to understand organizational behavior (Chen and Miller 2007, Barreto 2012, Salge et al. 2015). However, more holistic and comprehensive explanations have been advocated by recent studies (Gavetti et al. 2012). Second, our study extends such literature by showing how differences in managers' interpretative schemes – i.e. how managers view IMS adoption in the first place – contribute to guide and influence their motivations to adopt such systems as well as the extent and content of their development and implementation efforts, leading to different patterns and outcomes. Although more recent studies have advocated the need to integrate the effect of interpretative schemes in strategic search and behavioral research (Argote and Greve 2007, Gavetti et al. 2012), few studies have attempted to do so (Gavetti and Rivkin 2007, Csaszar and Levinthal 2015). Finally, our study contributes to innovation management research by providing alternative theoretical explanations for why and how IMS emerge. Contrary to what current innovation studies argue, we show that generating new products, services or processes at times may constitute a secondary motivation in managers' thinking. These findings may challenge more functionalistic explanations for organizing innovation offered by current research. Our work has implications for innovation scholars: focusing solely on the benefits of

implementing IMS may lead to partial or misleading conclusions about why these systems are implemented and why we observe differences in their performance levels. Hence, our findings may be beneficial to better understand the increasingly important phenomenon of IMS and thus further progress on the domain of organizational research. This is also important in light of the increasing diffusion of new tools and technologies for innovation such as online communities or crowdsourcing platforms.

## **Conceptual Background**

In this section, we first draw on insights from the behavioral theory of the firm to discuss potential mechanisms underpinning managers' IMS adoption decisions. We then outline a number of design issues discussed by innovation literature and their relevance in relation to IMS. We particularly zoom in on the aspects of incentive mechanisms, participation architecture and evaluation mechanisms. It is important to highlight that, because we applied an explorative approach and then consulted relevant literature to investigate our research question, the theoretical framework underlying the paper emerged in part from the study itself.

### **A Behavioral Theory Perspective on IMS Emergence**

The behavioral theory of the firm focuses on organizational problems (or slack) as the main drivers for organizational search and behavior, based on a perceived gap (favorable or unfavorable) between actual performance and certain aspiration levels (Cyert and March 1963, Greve 2003). Aspiration levels can be regarded as “the smallest outcome that would be deemed satisfactory by the decision maker” (Schneider 1992, p. 1053). In particular, negative performance feedback is expected to trigger a problem-driven process, where managers aim to introduce new practices as a way to reduce the perceived gap (Salge et al. 2015). Problemistic search is “search that is stimulated by a problem...and is directed toward finding a solution to

that problem” (Cyert and March 1963, p. 121). This process may be driven by a comparison of managers’ aspiration levels with the performance of their organization or that of other organizations in the industry (i.e. social comparison). The latter may especially be the case of highly competitive industries, where firms tend to benchmark their innovative performance against the performance of similar competitors (Argote and Greve 2007, Chen and Miller 2007). However, recent studies emphasize the importance of extending the behavioral theory of the firm by considering other potential mechanisms driving organizational choices and actions and, thus, of developing a more holistic picture (Gavetti et al. 2012). For instance, in a study of market expansion, Barreto (2012) highlights that the prospect of opportunities – a forward-looking approach - may also trigger organizational search and action. In this case, organizational search and decision-making processes are driven by the purpose of identifying opportunities on which to capitalize rather than of solving problems (Gavetti and Levinthal 2000, Barreto 2012). Moreover, it is claimed that solutions available in the external environment, emerging from contacts with consultants or earlier adopters of such solutions, may also have an influence on these processes (Greve 2003). However, the fact that many studies adopting a behavioral theory perspective have focused on a problem-driven approach leaves room for further investigations of other potential mechanisms underpinning managers’ decision-making. Accordingly, we focus on the increasing use of IMS for innovation in large organizations as a lens to generate more insights into the why and how driving managers’ search and decision-making processes in relation to their adoption, development and implementation. As previously mentioned, this is also important considering that innovation management studies rarely address managers’ decision-making when it comes to innovation.

Furthermore, recent advances in the behavioral theory of the firm emphasize the importance of integrating managers' representations or 'interpretative schemes' into behavioral studies to better explain decision-making processes (Argote and Greve 2007, Gavetti et al. 2012, Maggitti et al. 2013). Such mental schemes underlie managers' thought processes and constitute "the most fundamental lenses through which managers view their world" (Gavetti and Rivkin 2007, p. 428), hence affecting their choices and actions. However, this construct has often been neglected by previous studies in strategy search and making, but it is of central importance to understand how managers behave (Gavetti and Rivkin 2007). For instance, Gavetti and Rivkin (2007) show that different types of organizational search strategies and actions are guided by the different representations of their decision makers. In relation to our study, it is argued that managers may face ambiguities in understanding IMS, given the informational uncertainties associated with their value, the implications they may have for their organizations and how to respond to their increasing adoption by other organizations. These schemes may then be important to guide managers' actions and help them cope with the complexity and ambiguity associated with IMS (Gavetti and Rivkin 2007). By integrating the role of managers' interpretations, it may be possible to generate insights into the why and how driving managers' decisions to develop and implement IMS in different ways. Hence, as we will show in the following sections, the theoretical framework emerging from this study addresses our research question by shedding more light on two key aspects: (1) triggering mechanisms driving managers' decision to adopt and implement IMS, and (2) managers' interpretations of the IMS adoption decision situation. Moreover, we link these aspects to the extent and content of managers' development and implementation efforts to show how they lead to different patterns

and outcomes. In order to do so, we especially focus on three key design dimensions discussed by current innovation studies which are relevant for our discussion.

### **Designing IMS**

When designing and developing a new system for innovation, managers are confronted with a different set of strategic choices and alternatives. A key consideration refers to the design of the system's participation architecture – i.e. the online organizational structure to foster the participation of individual contributors (West and O'Mahony 2008). For instance, a main issue relates to whether participation should be fostered through a structured, problem-solving approach (top-down) or an unstructured idea generation approach (bottom-up). On the one hand, by broadcasting innovation challenges to widely distributed employees, a top-down approach enables to generate solutions to specific problems or organizational issues (Birkinshaw et al. 2011). On the other hand, the bottom-up driven approach plays a crucial role as it allows employees to contribute with unsolicited ideas which may lead to valuable innovations (Bjork et al. 2010). Less clear is, however, how managers think about designing the participation architecture for IMS. Moreover, a key challenge faced by organizations is how to handle the large amount of inputs generated and, thus, how to move valuable ideas further for implementation (Poetz and Schreier 2012). Such challenge may be related to the definition of proper mechanisms ensuring the evaluation, selection and maturation of the ideas generated (van den Ende et al. 2014). However, little is known about how managers, a priori to implementation and design, think about setting up the selection process and related criteria for decision-making. Finally, ensuring a high level of employee participation and involvement may represent a crucial issue for innovation. Studies on external actors' motivations for engaging in innovation claim that firm recognition (Jeppesen and Frederiksen 2006) and learning experience (Lakhani and von

Hippel 2003) influence their participation. Other studies highlight the importance of monetary rewards (Jeppesen and Lakhani 2010), non-monetary rewards (Piller and Walcher 2006) or a combination of the two to encourage the participation of individuals (Poetz and Schreier 2012). However, it is not clear how these various rewards may affect employee participation and engagement in innovation (van den Ende et al. 2014). This calls for a better understanding of the type of incentive mechanisms considered by managers when designing IMS. Overall, including these design mechanisms in our discussion is important because managers' motivations and interpretations toward the adoption of IMS may have an influence on how they are developed and implemented.

## **Method & Data**

Our study is exploratory and employs a multiple case study research design (Eisenhardt 1989) due to the limits of extant research. Our focus is on theory elaboration (Lee et al. 1999) as we aim to further develop theoretical links not fully addressed by current research. We attempt to “simplify, reconnect, and redirect theory” (Lee et al. 1999, p. 166) to explain the strategic process through which managers in large organizations develop and implement IMS. Building on that, our study directs attention to how the design and implementation process unfolds over time and, thus, “provides explanations in terms of the sequence of events leading to an outcome” (Langley 1999, p. 692). Finally, examining processes across different cases enables to more deeply investigate theoretical ideas (Langley 2013).

### **Research Setting and Case Studies**

We employed a two-step strategy for the selection of our cases. First, we identified ‘typical cases’ (Miles and Huberman 1994) by selecting large organizations which recently had worked with IMS. We chose large organizations because IMS seek to access and exploit the diversity of

their widely distributed employees, by spanning various internal boundaries in the search for ideas. Second, we employed a theoretical sampling approach to select cases which were relevant for our research aim (Eisenhardt 1989). Hence, we selected five organizations constituting ‘polar types’ (Eisenhardt 1989), as they reported contrast (relatively successful and unsuccessful) experiences with the implementation of their IMS. We provided variation in two ways: first, we chose organizations from different industries – thereby offering eclectic settings for studying IMS. Second, we considered cases representing various organizational settings and with different learning loops. In addition, we included the cases of two Danish IM system providers in the analysis to gain additional insights into the set-up process (Langley 1999, Van de Ven 2007). These insights were used to further confirm and augment our findings from the multiple data sources. This especially allowed us to explore how the providers concretely developed and implemented their systems in the client organizations.

### **Data Collection**

We collected our data from a variety of sources – including semi-structured interviews, archival documents and non-participant observations. The use of multiple data sources enabled to triangulate our findings and increase construct validity (Yin 2009). Our data set was created between February 2013 and September 2013.

**Semi-structured interviews.** We conducted semi-structured interviews with a range of key informants directly involved in the development and implementation of IMS in each case organization. We recruited respondents by using a ‘snowballing technique’ (Lincoln and Guba 1985), in which we relied on our initial contacts to identify additional employees who were knowledgeable about IMS and, thus, could offer additional insights on the topic. Each interview was structured to facilitate within-case as well as subsequent cross-case analyses (Miles and

Huberman 1994). Our interview guide included questions developed from our wide initial theoretical framework. We first asked interviewees general questions to understand the organizational context and the role of idea management in their organization. We proceeded with more focused questions with the aim of exploring managers' motivations, expectations, considerations and assumptions related to the emergence, design and implementation of their IMS. Two researchers were present at the interviews in order to minimize the single interviewer bias (Bailar et al. 1977). After each interview the researchers had a brief meeting to discuss interesting emerging insights. The interviews lasted between 30 and 75 minutes, were digitally recorded and subsequently transcribed to ensure reliability (Eisenhardt 1989). Overall, we conducted 23 interviews across the seven organizations, together with several informal conversations with some of the same interviewees. It is important to highlight that we are aware that our data collection may raise the issue of retrospective bias in relation to our interview material, as most data on both decision-making during and after the system development and implementation were collected retroactively from our key informants. However, our decision to collect multiple data sources and to employ multiple researchers during data collection and analysis also aimed at potentially addressing this issue.

**Archival documents.** We collected different types of internal documents for each case firm – including presentations, fliers and any other relevant material. These documents provided background information about the specific expectations and strategies for IMS as well as disclosed important insights into the main challenges that managers faced during the process. For instance, in one of the organizations we collected slides presentations, which included a timeline of the main events related to their IMS. The presentation contained information about the purpose of developing the system, its performance after the implementation and the main

challenges faced during the process. In addition, it provided valuable insights into managers' strategic thinking about how to change and optimize the system. Archival documents thus enabled to augment the findings from the interviews and control for retrospective bias (Ozcan and Eisenhardt 2009).

**Non-participant observations.** We gathered useful information through informal, non-participant observations during visits to each organization. For instance, one organization invited us to participate in a three-day workshop on idea management. This workshop focused on developing new business opportunities and aimed at engaging employees from different functions and geographic areas in innovation activities. Also, we organized a one-day workshop at our university on how to best design, develop and implement IMS in large organizations. Representatives from large Nordic organizations as well as some of our key informants had the opportunity to interact and exchange their practice-based knowledge on the topic. During the workshop, we had informal discussions with participants and we developed additional insights. Moreover, we presented our preliminary analyses to some of the key informants and, thus, had the opportunity to collect their insights on them as well as to generate further interpretations. We took detailed notes of our observations and we used them to augment our findings from the other data sources.

### **Data Analysis**

Our data analysis proceeded in three stages and was iterative. In the first stage, we performed within-case analyses with the aim of developing a deep understanding of each organization in relation to the design and implementation process of IMS. In addition, we followed up with e-mails and calls to gather missing details. We created timelines to describe the key events, activities and considerations related to each phase of the process for each organization. These

timeline enabled to develop a better understanding of the sequence of events characterizing the IMS development and implementation processes. We conducted two rounds of coding supported by the NVIVO software. Reading through the interview transcripts, we identified relevant first-order concepts. Some of the first-order concepts were established a priori, based on the framework we developed for our interview guide, while other concepts emerged from the analysis of the interview transcripts. We continuously compared these concepts across interviews and secondary data until no additional information emerged. In the second stage, we grouped the first-order concepts into second-order dimensions which represented a more general theme or related to existing theoretical categories (Van Maanen 1979). In the third stage, by using the cross-case analysis techniques suggested by Eisenhardt (1989) and Miles and Huberman (1994), we compared the second-order dimensions across the various cases and interviews. We searched for similar themes and we grouped them into aggregate dimensions (as presented in the following section), which constituted the basis for developing our conceptual model. In addition, a third coder was involved in the data analysis process in order to assess the reliability of the generated dimensions and thus ensure trustworthiness (Gioia et al. 2010). The third author provided an outsider's viewpoint "by playing the 'devil's advocate' and offering alternative explanations for developing findings" (Gioia et al. 2010, p.10). We discussed emerging findings and how they related to the identified dimensions until we reached consensus.

## **Analysis & Findings**

### **Mechanisms Driving Managers' IMS Adoption Decision**

We identified three main mechanisms underpinning managers' decision to adopt IMS: problem-stimulated, opportunity-driven and legitimacy-seeking. We found these mechanisms to be triggered by both internal and external factors and to be influenced by how managers conceived

the adoption decision situation in the first place. We summarize these mechanisms and their key characteristics in Table 1.

----- Insert Table 1 here -----

**Problem-stimulated.** We found that managers in organization A were induced to set up an IMS due to intense competitive pressures in the industry,

*“We are in a market that is under heavy competition; the auditing market is a very competitive area. So today it's simply not possible to run an auditing company and make a profit by auditing alone; we have to generate a profit else-wise.”(Chief reviser, organization A)*

A key problem identified by managers was related to the innovative performance of the organization, which was considered as not satisfactory compared to the other players in the market. This highlighted the necessity to identify new ways of increasing performance to avoid being in a situation of competitive disadvantage due to a lack of focus on innovation.

*“The number one problem is that the market is going down, customers will stop, and prices are going down. We have to cut spending, cut down projects etc...if we don't want to just have our revenues going down, we have to be innovative.” (Chief reviser, organization A)*

In this respect, IMS was identified as a solution to such problem due to the potential of involving employees in the generation of new ideas and solutions which could lead to valuable innovations and thus increase innovative performance.

*“If we start here, by creating a lot of ideas, we would need a tool to handle them. So, we decided that our project should in fact start with a form of an idea box, but on the internet.” (Chief reviser, organization A)*

Hence, managers viewed IMS adoption as a necessary tool due to the perceived threat of incurring in economics losses if they did not invest resources in innovation.

**Opportunity-driven.** We found that managers in organizations D and E were triggered by internally-propelled movements for cultural change in their decisions to employ an IMS. The system responded to their need of increasing collaboration and knowledge sharing among widely

distributed employees. In particular, the main purpose was to drive an internal cultural change to build a culture of collaboration and an innovation mind-set across the whole organization,

*“How can we collaborate, communicate and innovate with external partners, fans and customers if we’re not even doing it internally? We’re a company that has grown very fast in the last few years, we have a lot of new employees, but we also have a lot of people that have been here for 20 plus years... we really needed to create or stimulate a cultural change internally first.” (Senior manager open innovation, organization E)*

For instance, organization E has developed and launched numerous open innovation initiatives over the years to engage users and customers in innovation. Managers in the open innovation department saw the opportunity of further strengthening their open innovation strategy by involving all employees in innovation and by integrating both internal and external actors in future innovation efforts through the use of a single platform. This required as a first step the implementation of an ideation system to drive an internal cultural change in this direction, driven by the goal of achieving future gains. Similarly, managers in organization D viewed IMS as a valuable tool to drive a cultural change, foster a collaborative behavior and involve shop-floor employees in innovation,

*“You have to make a qualified guess even though you cannot touch it and you haven’t even been in this situation, but you can project that it was a good time to buy a house in this area because you know it’s going to boom. You know, it’s these choices that we make in life – it’s the same in the company, we jump at the opportunity. If you can see something, if you can foresee it, because not all of us have that vision, then you take the risk” (Program manager, organization D).*

**Legitimacy-seeking.** We observed that managers in organizations B and C were induced to set up an IMS as a response to external pressures coming from competitors, customers and suppliers as well as from external providers prompting their adoption. For instance, managers reported that interactions with local Danish providers, who presented them with current trends on the adoption of IMS and their implementation benefits, contributed to their decision to adopt an IMS. We found that in organizations B and C managers’ adoption decision mainly stem from the necessity

to signal a view of the organization as innovative both to the external environment and internally to employees. The increasing number of organizations employing IMS induced them to adopt one as well to avoid being perceived as less innovative or responsive (Teo et al. 2003). As reported by an idea manager, *“It's something we need to have because everybody else has it”*. In this case, managers were more concerned about the negative consequences of not adopting IMS in the eyes of internal and external actors. This is also exemplified by the following quote by a project manager, *“Do you dare to say that in ‘Organization C’ we don't have idea management?”*.

Together with external pressures, organizations B and C were also influenced by internal drivers in their adoption decision, where other organizational members prompted the necessity to have a system to handle employees' ideas and thus involve employees in innovation. In this case, managers' aim was to get legitimacy for themselves and the innovation initiative from other organizational members and thus obtain the right legitimate status,

*“They like to think that we have a nice IMS that you can put in a box and that you can measure and something is being done about it... You need to report this for your shareholders so that they say, oh, the future of this company is secure because we have a formal way of dealing with ideas and managing ideas coming into a system and then progressing through a system.” (Innovation Director, organization B)*

Hence, these managers approached the IMS adoption decision with a focus on preventing social legitimacy losses, rather than because of a real adoption need. IMS adoption then constituted “the most easily available solution to the problem posed by that threat” (George et al. 2006, p. 355). Our analysis suggests that these managers viewed IMS adoption in less positive terms, as exemplified by the following quote,

*“My end goal is putting products on shelf, and that's what I focus on. An IMS does not help me put products on shelf. There are other ways to help me put products on shelf. Therefore, I'm a bit critical about these systems.” (Innovation Director, organization B)*

Overall, our findings suggest important differences across the selected organizations with regard to managers' interpretations and drivers behind the adoption of IMS. We observed that these aspects led to different patterns of IMS development and implementation and outcomes arrived at. More precisely, we identified two different evolving trajectories. We label the first trajectory 'Legitimacy-seeking', where managers considered the search for legitimacy, both externally and internally, as most crucial compared to other drivers (organizations B and C). We label the second trajectory 'Goal-orientation', where managers were primarily driven by a specific purpose – i.e. by the opportunity to implement an internal cultural change (organizations D and E) or by the need to increase innovative performance (organization A). In Table 2 we distinguish between the identified trajectories to explain how IMS unfolded in the different organizations, highlighting the different mechanisms as well as aspects that managers considered most crucial to attend to during each phase.

---- Insert Table 2 here ----

### **Designing and Developing the System Configuration**

We noticed that managers differed in their strategic thinking about the design and development of their IMS, especially with regard to incentive mechanisms, participation architecture and evaluation mechanisms. We describe the strategic thinking occurring in this phase by distinguishing between the two identified trajectories.

**Legitimacy-seeking managers minimize the planning process.** We discovered that the development process was mainly characterized by two key considerations: focus on rapid implementation and conformity to accepted ways of developing IMS. Managers approached IMS without gaining sufficient knowledge and understanding about these systems, being driven by demonstrating short-term results. In fact, the main concern was to have the system implemented

and operationalized in the shortest possible time in order to achieve legitimacy for the system and the initiative, hence fulfilling its signaling function. As reported by an Innovation Director,

*“We opened the system in three months...we started having the conversation in June; we continued working over the summer and by September, October we opened the system. So that's July, August, September, October, less than four months, including one month of summer holiday. And that's the way I like to work; I like to get things done.”*

As a consequence, managers did not focus on exploring a wide range of alternatives and relied on ‘universal templates’ (Swanson and Ramiller 1997) for designing the system which were especially suggested by the system provider. Besides, managers mainly viewed IMS in terms of its technical characteristics while discarding considerations related to its integration with the existing organizational context to ensure its sustainability. On the one hand, this was reflected in the way managers selected an external system provider. This selection was based on the provider’s technical functionalities – which were considered more important than the provision of complementary services – and was the result of a ‘rushed’ evaluation process. On the other hand, it was reflected in the limited efforts and attention allocated to the design of the system. For instance, managers considered aspects related to employee participation and engagement only to a limited extent. In fact, they neither focused on building a proper incentive structure nor devoted enough effort to properly consider the impact of certain types of incentives. For instance, they decided to build their incentive structure only around monetary rewards as a way to drive employees’ behavior as they believed that these rewards were highly visible and valued by employees. This was considered the most obvious choice for them, based either on the provider’s advice or on what seemed a familiar approach. This, however, often ended up creating a floating incentive system, leading to undesired consequences in the subsequent phases. This is exemplified by the following quote,

*“The way we said that you would be evaluated on the monthly prize was for the most, highest number of contributions. So now you think; if you incentivize people with volume, then you get volume.” (Innovation Director, organization B)*

In the same line, managers decided to develop the participation architecture around the collection of unsolicited ideas. However, this decision was not coupled with the design of proper evaluation mechanisms to handle them. As the main focus was on gaining legitimacy, the creation of a process for managing ideas was not regarded as the most important aspect in managers’ strategic thinking. The system was then designed as an ‘idea box’, which sufficed managers’ signaling function, while creating challenges in the subsequent phases. In particular, because managers did not consider the consequences of implementing an unsolicited approach, they underestimated or even neglected the amount of resources needed to handle submitted ideas, affecting employee engagement. Finally, we observed that the limited extent of efforts displayed by managers was also influenced by the non-participative behavior of top management in these phases, leading to the assignment of limited resources for the development and implementation of the system. Overall, we observed that this phase was characterized by less-than-exhaustive search for more effective ways to develop the processes needed to sustain IMS. The development of focal heuristics such as ‘getting things done’ guided managers’ search efforts in these phases.

**Goal-oriented managers focus on strategic fit.** Managers in organizations A, D and E displayed a different approach to the design and development of their IMS. They considered it crucial to focus on linking the system to current innovation processes to ensure its sustainability. For instance, managers in organization E went through a careful evaluation process to select the right provider that could support the organization in driving the desired cultural change,

*“The requirements were for somebody that understands from a 360 [degrees], from a holistic perspective, what it takes to create a cultural change both inside an organization and the way that your customers and your users perceive you as an organization. That’s the reason why we decided to go with the partner that we went with.”(Senior manager open innovation, organization E)*

We observed that these managers tended to search more broadly to identify innovative ways of designing the system. This entailed exploration of practices adopted by external innovation communities or social media platforms, thereby searching in more distant terrains. For instance,

*“We look at other examples of companies that are doing innovative things. They are usually entrepreneurs, you know, they’re entrepreneurs that are coming up with new business models that are heavily dependent on collaboration and communities and collective intelligence.”*(Senior manager open innovation, organization E)

A key concern for managers in this phase was to find ways to develop an integrated system ensuring a ‘strategic fit’ among the design dimensions, based on exploiting their complementarities. This mainly occurred in three ways. First, they decided to develop a point-based reward system and to employ the mechanisms of ‘gamification’ in the attempt to create an engaging platform (Deterding 2011). This incentive system was thought as a way to involve employees in innovation by making participation fun and by recognizing them for their contributions,

*“We all work here with the motto that participation is the new brand loyalty, so what we’re doing is creating a participation experience.”*(Senior manager open innovation, organization E)

They also focused on coupling monetary rewards with the provision of recognition and feedback to further encourage and sustain employee participation. Personal and social factors were considered more important than monetary rewards (Birkinshaw et al. 2011). Second, they focused on the principles of openness, collaboration and user-friendliness while designing the participation architecture as a way to further encourage employees’ engagement,

*“We had to make it so simple that the first step didn't involve that you should spend ten minutes and write a lot. Just come up with an idea, as simple as possible.”*(Chief reviser, organization A)

Different community functionalities were introduced to foster interaction and collaboration. Building a collaborative system was especially important for organizations D and E to foster an

innovative and collaborative mind-set among employees. In addition, managers decided to combine top-down and bottom-up approaches from the beginning of the project. The intention was to encourage employees to freely contribute unsolicited ideas and be involved in innovation, while at the same time exploit their knowledge to solve specific issues deemed as relevant by the organization. Finally, managers spent a considerable amount of time and resources setting up proper evaluation mechanisms through the establishment of multiple filtering stages to handle ideas generated with both approaches. The primary strategic considerations during this phase related to: (1) the selection of experts responsible for the evaluation; (2) the definition of specific evaluation criteria; and (3) the definition of a process for transferring selected ideas into formal innovation projects.

### **Implementing and Assimilating the System**

It is claimed that, when introducing a new practice in an organization (in this case an IMS), managers' sense-giving efforts play a key role in creating awareness among employees about the new initiative and its content (Canato et al. 2013). We observed differences in the way managers approached the implementation phase of their IMS, especially in relation to how extensively they implemented it, the amount of training provided to employees and the level of focus on linking it to existing practices and processes.

**Legitimacy-seeking leads to a symbolic and less extensive IMS implementation.** In this case managers conducted a 'rushed implementation' of their IMS. This was reflected in their decision to neglect the creation of a formal implementation plan, hence rushing the system deployment and limiting the amount of testing.

*"It was just: let's go and do it. We'll launch on this date and we'll launch whatever we have, we'll try to make it the best before this date...I think this is also why it wasn't thought through that well."*(Commercial Innovation Manager, organization B)

This, however, resulted in an implementation strategy which did not focus on creating awareness about the system across the organization, thus affecting its subsequent adoption by employees. In fact, managers did not focus on preparing activities to educate and train employees. This was also due to the assumption that, because of the potential benefits for employees of using the system and its ease-of-use, it would have been easily accepted by them. This assumption was also influenced by the external provider's view of the system as a simple tool to use. Moreover, the implementation of the system was characterized by a low degree of extensiveness (Canato et al. 2013) and thus occurred in more localized ways in a specific unit or department. Consequently, our informants reported that the system encountered resistance and skepticism from employees as they perceived this initiative to not be consistent with existing organizational structures and practices for innovation,

*“When we researched and interviewed people about how they felt about the system, they felt cheated, that they would send something into a black hole and nothing ever happened”.* (Idea manager, organization C)

Hence, the IMS initiative was only formally implemented by managers but not actually used to support innovation. This rushed implementation created two main challenges for managers: lack of ownership of the IMS initiative and lack of clear direction. First, managers faced a situation of unclear ownership of the initiative, as no roles for the maintenance of the system were created. This prevented the system from being further improved and integrated in the organization. Second, we found that managers' search for internal and external legitimacy resulted in a lack of strategic direction and clarity about the purpose of employing such a system internally. This created a mismatch of expectations, as the nature and use of IMS differed from managers' initial expectations. This mismatch may be traced back to the different beliefs of managers and employees. For instance, while employees initially expected the system to be a tool to help them develop and move their ideas further, the fact that the system was not designed and implemented

to support such purpose determined consequences on the way employees perceived its value. One explanation may be that while managers wanted a system providing external and internal legitimacy, they translated their expectations to employees via a rational strategic, competitive-based discourse. This mainly occurred because it was not considered socially acceptable to communicate that they wanted to conform to isomorphic pressures. The mismatch created a tension between what managers actually wanted and what employees thought they wanted.

Such difficulties led managers to the decision to 1) abandon the project (organization B); or (2) change the initial strategy by trying to develop a new system more integrated with existing processes and structures (organization C).

**The problem-driven approach leads to an incomplete IMS implementation.** Although managers in organization A went through an extensive planning and carefully prepared a detailed implementation plan of the system, they faced challenges in implementing it due to lack of resources and management support for the initiative.

*“We had a complete implementation plan, but we are in a phase right now where we have a lot of things on the strategic agenda; the management and the board, they have some very specific changes they want to have the organization implemented. So there was not really any space for us to do a proper implementation”*

While managers conceived the system as a necessary tool to increase innovative performance, the organization was characterized by a strong focus on productivity and short-term results. In particular, top management did not consider the issue emphasized by managers as urgent and thus did not support an extensive and substantial implementation of the new initiative. This prevented them from implementing the system in the intended way having instead to opt for a more rushed and incomplete implementation characterized by little promotion of the system and limited training activities to employees. As a result, the introduction of the system faced a strong cultural barrier which affected its adoption. The deployment of the system turned out to be

problematic due to the division among departments – with their own agendas and objectives – which inhibited any inter-departmental relationship. By emphasizing ‘the normal way of doing things’, such organizational context did not allow for cross-fertilization and mutual learning and, as such, did not encourage the sharing of ideas among employees from different departments. These challenges led managers to the decision to suspend the project.

**The goal of cultural change leads to a substantial and more extensive IMS implementation.**

Managers considered it important to carefully prepare a formal implementation strategy to foster employees’ understanding about the system. The implementation of the system was, in fact, considered as the most critical phase. As IMS constituted a new practice, it was essential to educate employees on how to use it in the right way thus providing all the necessary information. For instance, managers in organization D introduced the role of coordinators, who were responsible for educating employees on how to use the system and for supporting them in taking their ideas further.

*“We created every other Wednesday coaching, training people. If you had questions or if we had questions for the submitter this was the time. We had open hours; a certain hour that we set and we wanted to hear from them” (Coordinator, organization D)*

We observed that these managers engaged in intense sense-giving efforts to convince the rest of the organization of the importance and benefits of using it. This entailed the preparation of various communication activities through both online and offline channels as well as the conduction of training initiatives to show to employees how the new system fitted with existing structures and processes. The implementation strategy was conducted more broadly, as the main intention was to address employees across the whole organization in order to foster an internal cultural change. Moreover, these managers focused on gathering resources as well as on intensifying management support by asking, for instance, top management to publicly sustain the

initiative. A key concern in this phase was to link the system to the broader organizational strategy and to show to employees how to use it in their daily activities, in this way favoring its sustenance over time.

*“If we can make this a useful tool in employees’ everyday lives, their existing processes, their existing job functions, it’s a great win-win; because we’re getting participation, we’re getting people to adopt the platform and at the same time they’re saving time, they’re actually still doing their job and they don’t perceive it as extra work, it’s just a change in the way they’re doing their jobs.”* (Senior manager open innovation, organization E)

For instance, managers considered important to introduce a more focused approach by defining organizational areas or themes - on which to focus employees’ ideation efforts - linked with the current strategy and objectives of the organization. Also, in order to ensure a strategic linkage of IMS with existing strategies and practices for innovation, managers focused on two key activities. First, they focused on creating collaborations and partnerships with other departments for fostering the use of the system. Second, they focused on developing a common language for the system to foster its acceptance across the whole organization. A partnership with corporate communication and the introduction of specific roles helped develop and communicate such a framework for innovation globally. These activities, coupled with the design of the system, contributed to boost employee participation and engagement.

## **Discussion**

We set out to explore why and how managers in large organizations set up IMS internally. We identified three main mechanisms triggering managers’ decision to adopt and implement IMS: problem-stimulated, opportunity-driven and legitimacy-seeking. As such, these findings suggest a more complex picture on IMS than what previously theorized. Moreover, we found that managers’ different interpretations and beliefs about the system partly contributed to bias the way it was constructed by them, leading to different patterns and outcomes. Finally, our analysis

suggests that certain aspects related to the organizational context may also influence IMS adoption and implementation. We thereby build on the previous section to develop and discuss a more comprehensive model of why and how managers decide to adopt, develop and implement IMS internally (Figure 1). We then discuss the implications of our study for the behavioral theory of the firm and innovation management research.

---- Insert Figure 1 here ----

### **The Role of Managers' Beliefs and Interpretations**

Our analysis shows that managers developed different understandings of the system itself, shaping their subsequent choices and actions toward it. More precisely, our findings suggest the existence of two different types of interpretative schemes underlying IMS adoption and implementation, namely: (1) IMS as an IT system; and (2) IMS as a valuable tool to achieve a goal. Such schemes guided the triggering mechanisms we previously discussed, acting as central initial conditions for IMS adoption (Gavetti and Rikvin 2007).

**IMS as an IT system.** Our findings suggest that managers viewed their IMS in a simplified way, as an IT system. They interpreted it as a quick technological solution that could easily be implemented, thus fulfilling its signaling function. Such simplified view led managers to rely on 'universal templates' embedded in the organizing vision prompted by the external environment (Swanson and Ramiller 1997). The organizing vision provides a simplified view of a new technology or innovation and general guidelines for its implementation (Swanson and Ramiller 1997). As such, "it economizes on the implementation process as basic parameters are set automatically" (Benders et al. 2006, p. 199). The external provider played a significant role in this simplification process, emphasizing a view of the system as easy to implement and utilize. Moreover, we observed that managers relied on heuristics to understand and justify their choices

(Gavetti and Rivkin 2007). For instance, to justify the system implementation managers used the argument ‘everyone has it’ or ‘we need to be more innovative’. Hence, managers justified their decision based on the activities of other firms and internal demands. Moreover, the fact of relying on the ‘organizing vision’ led managers to ignore the importance of the organizational context (Swanson and Ramiller 2004). In general, we suggest that the lack of careful consideration about the system design and implementation may be due to managers displaying a short-term orientation toward IMS. As such, managers tended to only consider the first alternative available that satisfied their criteria, leading to the risk of disregarding potentially better alternatives (March and Simon 1958). This was also due to time pressure constraints, which led managers to disregard important dimensions of the development and implementation process – deemed non-relevant or obvious - or to only superficially consider them. Consequently, this orientation prevented managers from building the organizational capability necessary to sustain such an innovation initiative in the long-term. This led to a somewhat more ‘ceremonial’ implementation of IMS – i.e. the system was formally implemented but not integrated with existing structures and processes for innovation (Meyer and Rowan 1977).

**IMS as a valuable tool to achieve a goal.** Managers viewed IMS as a process of continuous shaping, learning and improvement. They developed more positive beliefs about its value to achieve the desired goal, influencing their subsequent behavior. As stated by Kostova and Roth (2002, p. 217), “these positive perceptions about the value of a practice are important because of their action-generating properties that facilitate not only the initial adoption but also its persistence over time”. We observed that managers displayed high levels of effort and persistence as well as a long-term orientation in their strategic thinking. This is claimed to be important because it may allow managers during decision-making to “more fully notice,

interpret, and make sense of new knowledge and potential opportunities” (Li et al. 2013, p. 900). By focusing on integrating technological and organizational considerations as well as on finding ways to link the system to the broader organizational strategy for innovation, this long-term orientation led managers to view IMS in more holistic manners. As such, managers’ strategic choices, in terms of which aspects to attend to and which not, were driven by context-oriented considerations (Swanson and Ramiller 2004).

### **The Role of the Organizational Context**

Our analysis suggests that a number of organizational factors also influenced how IMS unfolded in the selected organizations: IMS legitimation, availability of resources and goal hierarchies. First, top management beliefs toward the IMS initiative and participation in the strategy making played a key role, offering a signal to the rest of the organization about its strategic importance. As such, through their beliefs and participation, top management may legitimize the willingness of managers to spend time and efforts in making sense of the new initiative, exploring ways in which it can be leveraged into the innovation processes and activities (Chatterjee et al. 2002). Second, the availability of slack resources to support the IMS initiative also influenced its development and implementation, allowing for greater or lower flexibility in planning and implementing subsequent actions. For instance, legitimacy-seeking concerns influenced managers’ suboptimal resource decisions and use of available resources (Oliver 1997) which were directed to gain legitimacy rather than on sustaining the system over time. Finally, the case of organization A showed how differences in goals and interests between higher level management and the managers driving the IMS initiative contributed to increase the decoupling of adoption from implementation (Fiss and Zajac 2004).

### **Implications for Research**

This study draws on insights from the behavioral theory of the firm to explore why and how managers in large organizations choose to develop and implement IMS in different ways. By doing so, we shed more light on the actual search and decision-making processes behind IMS adoption and implementation. Our study makes several contributions to current literature on organizational decision-making and behavioral theory of the firm. First, we show the importance of considering additional mechanisms underpinning managers' decision making, as reflected in their decisions to employ IMS in their organizations. In line with the behavioral theory of the firm, we find the problem-driven approach to be an important mechanism to explain organizational action. In our study, an unsatisfactory innovative performance relative to managers' aspirations led them to identify IMS adoption as a solution to such problem. Such process was triggered by benchmarking the innovative performance of other players in the industry and thus was driven by external factors. In addition to this, we show the importance of considering opportunity-driven and legitimacy-seeking approaches to better explain managers' decision-making. As stated by Barreto (2012, p. 1020), "organizational choice is not only a problem-oriented process but also an opportunity-driven process". While it may be claimed that opportunities are as relevant as problems (Barreto 2012), little attention has been placed on exploring this process. Our findings provide more insights into this aspect in the context of IMS adoption. We show that managers' decision-making was driven by a view of IMS adoption as an opportunity to achieve future gains in innovation. Such gains were linked to the possibility of further strengthening the innovation strategy by promoting a collaborative behavior among employees and by integrating them with external users in future innovation efforts. As such, this approach was driven by a forward-looking behavior – i.e. by managers' simplifications of the discrepancy between the firm's status quo versus where it might be if pursuing the adoption of an

IMS (Barreto 2012). Hence, it is driven by the expected impact of opportunities on the focal firm (Barreto 2012). Moreover, our study shows the role of social influence on managers' decision-making. While it is recognized that pressures to appear legitimate may affect search processes (Dimaggio and Powell 1983), such institutional pressures tend to be disregarded by studies adopting a behavioral perspective on organizational search and action, as they mainly tend to focus on aspirations. Similarly, Gavetti et al. (2012, p. 24) highlight the potential of the behavioral theory of the firm to "grow by paying greater attention to the effects of the institutional environment". Thus, we provide a more holistic and detailed understanding of managerial decision-making, as advocated by recent studies (Argote and Greve 2007; Gavetti et al. 2012; Maggitti et al. 2013). Finally, we extend current research on the behavioral theory of the firm by showing the importance of incorporating managers' interpretative schemes as an important construct to better explain decision-making. Such schemes play a central role in influencing how managers think about and act toward implementing IMS into their organization. We showed how differences in managers' interpretative schemes relate to the extent and content of their development and implementation efforts, resulting in different trajectories and certain actions to assimilate these systems (or not). This is consistent with theory that suggests that differences in managers' cognitive frameworks direct patterns of attention and interpretation (Thomas et al. 2001). Such differences may also contribute to explain why we observe inter-firm variances in IMS implementation and outcomes. While recent studies emphasize the need to integrate cognitive processes in the behavioral theory of the firm, much of the existing literature tend to ignore such processes (Maggitti et al. 2013, Gavetti et al. 2012)

### **Implications for Innovation Management**

As our study is the first to adopt a behavioral perspective lens on IMS adoption decisions, it has important implications for innovation management research. Much of the IMS discourse focuses on generating innovation, arguing that organizations need to generate more and better ideas to feed into the traditional innovation process. However, we argue that the tendency of current innovation studies to focus on the benefits of implementation as well as to measure the system's success factors based on the number of innovations generated may disregard alternative explanations for why managers actually develop and implement IMS. The heterogeneity of motives we identified in our study suggests the need to broaden the innovation research agenda. We found that generating innovation seems to constitute a secondary motivation for managers. Often, their decision was triggered by the search for internal and external legitimacy, by the need to create an internal cultural change or improve innovative performance. Hence, these drivers problematize more functionalistic explanations offered by current research. We suggest that scholars need to go beyond examining performance consequences of IMS by further exploring managers' underpinning motivations and decision-making processes. Trying to assess the success of an IMS based on the innovations produced is, in fact, likely to be misleading. In our cases, these systems were not designed by managers with the primary intention to do so. While it may look like a failure on these traditional measures of success, the system may instead satisfy managers' need to signal innovativeness or to change the internal culture. In this case, it may constitute a success for the proponents. Scholars need to explore how IMS adoption decisions may enhance organizational legitimacy and other social goals such as reputation and status. When researchers examine the use of IMS across a wider array of motives, more robust conclusions about its potential can be drawn. Otherwise, our understanding of these new

technologies for innovation may remain incomplete or biased. Hence, we suggest the importance of considering alternative accounts when assessing the performance and usage of IMS.

## **Conclusion**

By adopting a process-oriented perspective, our study provides a more detailed understanding of why and how managers in large organizations set up IMS for innovation internally. Our findings also hold implications for both practitioners and system providers. Practitioners who are in their initial phases of developing a new IMS or already have implemented one may apply the proposed model as a tool to direct and improve their decision-making process. We suggest that practitioners should be aware that setting up IMS require: (1) mindful decision-making (Swanson and Ramiller 2004), thus making choices that best fit with the organizational context; and (2) a long-term perspective, thereby conceiving IMS as a continuous learning process to change and optimize it over time. Yet, system providers may consider our study as a supporting tool for understanding how to develop a customized IMS which fulfils their specific customer needs. The limitations of this study suggest opportunities for future research. First, it could be interesting to test whether our emerging conceptual model may be extended to other organizational settings. Moreover, future research may benefit from undertaking a larger-scale longitudinal study by conducting surveys to observe the development and implementation process over time. Second, the study could also be extended by investigating differences in interpretations and beliefs underlying IMS developed by other key actors, such as employees or external providers. This could lead to a better understanding of whether differences in key actors' interpretations may influence the system subsequent evolution and performance. Third, we are aware of the limitations in terms of retrospective bias on the interview material, which may shape the way interviewees presented their views on IMS. However, recurring into these biases is inevitable.

One way to circumvent this could be, for instance, to involve managers in experimental settings to test their beliefs, interpretations and arguments about how to develop and implement IMS and why. Finally, more research needs to be done on understanding the interplay between managers' interpretative schemes, institutional pressures and economic incentives in the setting up of IMS. By adopting a broader approach, our study attempted to take a step forward in this direction. In general, further understanding how IMS are implemented and employed in organizations constitutes an important area for future research. Their increasingly open and interactive nature may transform the dynamics of search within organizations, by expanding the possibilities to access the collective intelligence of distributed individuals and communities. Our study contributes by offering a more detailed understanding of this increasingly important phenomenon.

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**Table 3. Mechanisms Underpinning Managers' IMS Adoption Decision**

	<b>Legitimacy-seeking</b>	<b>Problem-stimulated</b>	<b>Opportunity-driven</b>
<b>Trigger</b>	External and Internal Pressures	External (competitive pressures)	Internal
<b>Primary motive</b>	Comply with isomorphic pressures. (Gain external legitimacy) Search for internal legitimacy. Gain consent for the new innovation initiative from employees.	Increase innovative performance	Drive a cultural change to achieve future gains in innovation
<b>Organizations</b>	B and C	A	D and E

**Table 4. IMS Trajectories**

	<b>Legitimacy-seeking trajectory</b>	<b>Goal-directed trajectory</b>
Designing and Developing the System Configuration	<p>Short-term orientation and efficiency considerations. The main belief was to have the system implemented in the shortest possible time, to signal innovativeness both internally and externally.</p> <p>Focus on the technology. Reliance on providers' advice or internal technical staff. Limited search for information and evaluation of alternatives, mainly occurring in the neighborhood of the organization. Limited efforts in the design of the system functionalities.</p>	<p>Focus on employee engagement and participation (Organizations A, D and E). View of the system in strategic and organizational terms. Focus on developing a 'strategic fit' among the design dimensions, by coupling the design of the incentives structure with participation architecture and evaluation mechanisms. High intensity of efforts and broad exploration for new alternatives.</p> <p>Focus on gathering management support and resources (Organizations D and E).</p>
Implementing the System	<p>Rush the implementation. The creation of a proper implementation strategy was neglected or only superficially considered.</p> <p>Low sense-giving efforts. Managers' assumption of the system implementation as easy led them to omit communication and training initiatives.</p> <p>Underestimation of the amount of resources needed and low efforts in gathering management support.</p>	<p>Organizations D and E: Create a proper implementation strategy. (to foster employees' understanding about the system and gain acceptance.</p> <p>Intense sense-giving efforts. Intense communication and training initiatives to foster employees' understanding.</p> <p>High extensiveness of the strategy. All employees across the organizations were addressed.</p> <p>Focus on linking the system with the firm strategy and processes for innovation. Partnerships and collaborations with different</p>

		<p>departments. Focus on developing a common language for the system.</p> <p>Intensify management support. Focus on increasing management involvement in the promotion of the system to further foster acceptance. Increase allocation of resources</p>
		<p>Organization A: Limited communication of the IMS initiative. Top management does not consider the initiative as a priority and limited resources are assigned to its implementation. Only a limited implementation is conducted.</p>
Outcome	Abandonment (organization B). Suspension of the project and idea to develop a new system (organization C)	Positive performance (organizations D and E). Low usage of the system due to cultural barriers. The project is suspended due to other priorities of top management. (organization A)

**Figure 1. A More Comprehensive Model of IMS Adoption and Implementation**

