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Enacting and Re-Enacting the Constitution of Development

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Abstract: Many companies find it difficult to enable radical innovation within the organization and its structure. This problem is described by many and tried solved by proposing of new development tools and processes or applying a different organizational structure and culture. This paper presents a case study that will show how there in a development company exist a constitution of development. This constitution of development is perceived as a set of development rules and guidelines that are implicitly enacted by the employees and frame for certain development opportunities. Through the case study we will present different strategies for re-enactment of the constitution of development that frame for alternative development spaces with perceived different rules, and therefor make space for development of a more radical nature.

Keywords: Front End of Innovation; radical innovation; constitution of development; enactment strategies; development space; early development; enabling innovation; case study.

1 Introduction

Front End of innovation [FEI] is described in many different ways, and is practiced in different companies in various ways facing various problems and possibilities. Different strategies are applied when handling innovation in general in a mature development organization. Mature organizations often apply a detailed structure for carrying out innovation and development. In many cases however the organizational structures hinders the exact opportunity for innovation that it ought to cater for, and the developers are implicitly and explicitly seized to follow certain rules and practices that are embedded in a company's best practice for development. How to enable FEI is therefore a much needed area to investigate further as the potential are essential for many development companies. We present a case study, where it is clear that the structures and the development practice embedded in the company needs to be understood in regard of one another to understand how to enable front end of innovation. The focus in this paper is not

on why certain management and development tools are successful or not, nor is it an evaluation of organizational philosophies, but rather an attempt to understand how FEI exist and are enabled in a specific context and how it points to a different approach for enabling FEI in the future. The case study e.g. describes how organizational structures, development tools and mindsets are enacted daily into what we propose to be a constitution of development that informs the development possibilities. We will through a case study show how a mature development company daily enacts this constitution of development into catering for certain types of innovation possibilities and also how a re-enactment of the perceived constitution of development enables new possibilities for FEI within the same organisation. We wish to further elaborate on the possibilities for enactment as described by Weick (1988) as enabling innovation within a mature development company by exploring different enactment strategies of an established best practice for development. Furthermore we introduce re-enactment as a mean for understanding the new possibilities for enabling FEI. Re-enactment is understood as an intentionally re-interpretation of possibilities in regard of actively pursuing new development opportunities. We briefly draw up the basis for perceived constitution of development as described by Brønnum and Clausen (2013, 2015) and what type of development it facilitates, additionally we give examples of re-enactments of the constitution of development to show how it provides alternative development spaces where alternative strategies for development is possible.

2 Theoretical Framework

There are many different understandings of FEI and the problematics of working with it in mature development companies. The design engineering community focuses on the content in a concept and what type of knowledge that should be regarded (Hansen and Andreassen, 2005) as well as the work process and tools to accomplish this (Koen, 2004). However these concepts does not take into account the dynamic context for which concept development are performed in, thereby not focusing on the how the actual concept development are carried out, but rather on how it ought to be carried out, without regarding the context.

March (1991) describes innovation as being exploration and exploitation. The difficult aspects for the company are to balance between the two, and facilitate and organize development to cater for both types. The distinction of innovation in this type of description is from a practical viewpoint lacking an understanding of how it is implemented and enacted. Innovation and development will in its nature not be a static process, and the understanding of exploration innovation does not take into account the organization which it is placed in. In many cases mature development companies are aligned with executing development of the character exploitation, which leads to difficulties of facilitating the explorative development such as described by March.

Dougherty (2001, 2008) describes a more cross functional problematization of handling FEI in a mature development company than the previous discussed perspectives. She acknowledges that innovation is difficult to handle in a company context, and that the solution is not merely applying and incorporating new tools, but rather changing how development is organized and how problems is framed and understood. Dougherty (2001) describes a new perspective within organizational theory regarding how to comply with the innovation challenges that have been discovered in the recent years when studying innovation in mature development organizations that goes beyond focusing on structures as enablers for innovation. Dougherty (2001) is critical of the type of organisation described as “each Department executes its own tasks in accordance with its own standards” and “... where people imagine their role and their unit obligations apart from

those of others in the organization”. She explains how different approaches to innovation can be captured in different images and organization archetypes to enhance focus on various best practices when facilitating FEI. One image that she enhances is the organisation where focus is on organizing development based on experts’ domains and their handling of innovation problems in fragments and not as a joint problem. This leads her to propose that the focus changes from being on the organizational structures to understanding development as a practice and community seeking the same common goal for innovation. Dougherty (2008) proposes of a cross functional reorganisation of the organizational structures, thereby changing the focus within a development project to focus commonly on the end problem and providing knowledge towards this goal, rather than focusing on speciality domain tasks without an understanding of the end product. She argues that changing how innovation is orchestrated from being divided into expert domains to a cross functional perspective will induce a different drive in the developers allowing them to work more innovative. She argues that such enabling structures in a mature development organization will further the innovation possibilities.

Previous research has mostly focused on the tools and processes for innovation, the content in development or the (re)organization for innovation within the company. This paper will contribute to the discussion by introducing a case study conducted in a company that has organized its development too some regard as asked for by Dougherty, but will point to problems that still exist when enabling innovation. We will therefor concentrate on demonstrating how an innovation initiative is orchestrated and how different enactment strategies enable innovation. It adds to the understanding and discussion of enabling innovation by changing focus from organizational problems to enactment opportunities.

3 Methodology

The empirical data presented in this paper is a result of an in depth case study at the Danish based company Foss. The field study was anchored and facilitated through the section Concept development (CD) which is one of two sections in the division Business Innovation (BI) that holds the official mandate for facilitating FEI development. (See figure 1) The field study was carried out as a qualitative research study and draws upon ethnographical methods such as interviews with open-ended questions and observational studies as a mean for understanding the implicit dynamics and latent knowledge. The first author spend 2 days a week over a period of 6 months in the company, conducting interviews, observational studies and participating in project activities and daily routines. A primary project was appointed by the head of CD to be the focal point for the research, and thereby how to understand FEI at Foss. The nature of this project will be described later. A total of 19 formalized interviews were carried out.

Informants	# informants	# interviews
Executive management	1	1
Vice Presidents	2	2
Section Leaders	4	5
Project Managers	1	1
Concept/product Developers	7	8
Business Developers	2	2

Tabel 1: informants

Informants were selected on the basis of their participation in the appointed project or their role in the organisation. Initial findings were discussed informally with key informants on a daily basis, and the results are documented in field notes and the scoping

of a workshop. All interviews had duration of approximately 60 minutes, and were later fully transcribed. During the transcription initial themes were discovered by the first author and discussed with the second author of this paper. An affinity analysis was conducted on the basis of the transcriptions and further themes were discovered, two main themes will be presented in this paper; constitution of development and enactment. A workshop based on LEGO SeriousPlay described by Møller and Tollestrup (2012) was conducted with informants that had shown a special interest in working specific with understanding the possibilities for working with FEI development, as there was a common understanding that the existing possibilities were confined to a certain type of FEI. This format for the workshop was chosen to allow for new reflections and nuances to be made explicitly available amongst the participants. During the interviews and the observations it was clear that there existed many perceptions of what was at stake when talking about enabling FEI and also what future visions for the possibilities should entail. The format allowed for several stories to be told, all contributing to creating an understanding of FEI in the company that showed some of the disagreements explicitly among the present actors. Initial findings have been tried and discussed with informants who have accepted or rejected part conclusions.

4 Case Study

We will in this paragraph briefly account for what FEI is at Foss, and where in the organization it takes place. We will on the basis of the company understanding and framing of FEI describe a case study that shows how FEI is enacted to cater for an organization dictated type of development and then re-enacted to creating an alternative development space for a more radical type of innovation such as described by Leifer (2000).

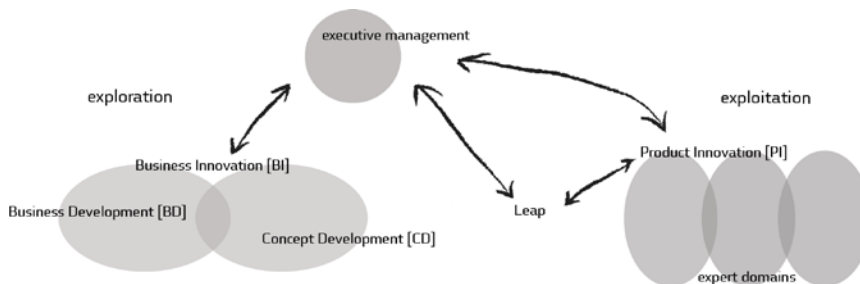


Figure 1: “development organization”

Figure 1 shows how Foss has organized for different types of development and is different from the organization described by Dougherty (2001) as being divided accordance with domains and not the type of innovation. There is an explicit different focus in PI where the developers' focus on the execution of the project and the innovation is on a component and system level. The establishment of BI was a result of an acknowledgment that an initiative for bringing forth the conceptual ideas was needed and that there was and should be a great difference between conceptual and product development. The COO describes the organization philosophy as:

“When you are in a development function, then you will get a task to perform; here is a specification for this and this and this. It is like going

to school, there you will get an assignment. But that is not like the concept developer, they will get a problem definition, the customer wants this and the ability to measure this, okay what do we do? Everything is up for grasps, so mentally you have to be able to work with very open ended questions.”

The work in CD is revolved around a holistic definition of concepts. This is something that management has worked explicitly with. One manger of CD explains the section task as: “being holistic thinking”, this is a contrast to the mindset that exist in PI as a result of a lean process of the development and is characterized by focusing on effectiveness and execution of expert domain tasks within a project. Foss is market leading on a niche market and knows the customers and the market needs rather well. The company is characterized as being a family owned tradition bound company a little to the conservative side. Developers seem to have adopted this premise in the daily enactment of the development opportunities. One developer describes the innovation possibilities in the company as:

”It is probably the management of BI who decides what a good idea is, they evaluate based on what they think will fit into what we already have and the customers we already know. That is important. And it can favorably be based on technology already developed.”

The development possibilities and therefor FEL is based on many elements; explicit and implicit and is illustrated as the constitution of development in figure 2.

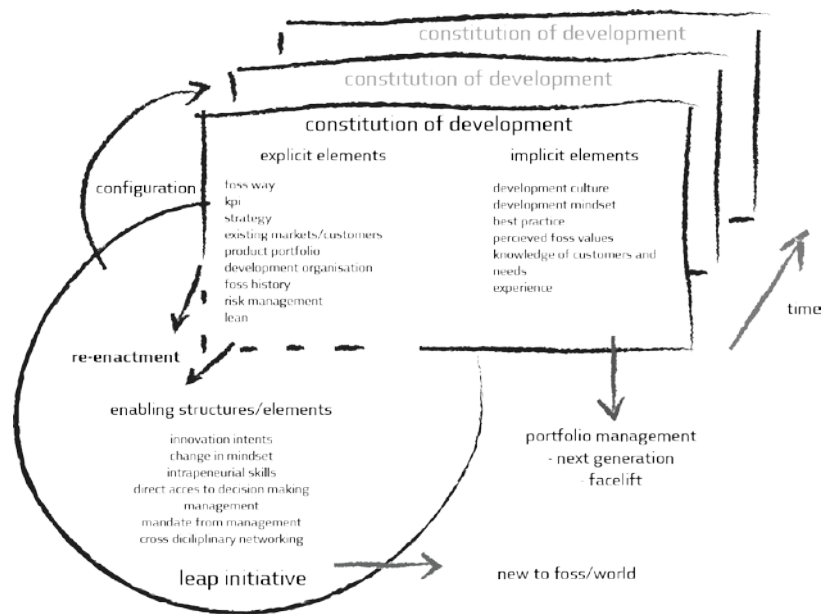


Figure 2: Constitution of development and enactment possibilities.

We refer to this understanding of development opportunities as the *constitution of development*; constitution refers to the concept of social constitution presented by Kamp (2000) and acts as a perceived set of rules for development amongst developers

(Brønnum and Clausen (2013, 2015). We will however not in this paper go into detail with this concept, as we have chosen to focus on enactment, which we will show have great influence on the development opportunities. The constitution exist on the basis of many elements as presented in figure 2, some elements weigh in more than others. It is important to emphasize that the constitution is enacted to represent the rules for development and is interpreted by each individual and it will therefor vary depending on which viewpoint the constitution is investigated from. E.g. the understanding of customer needs varies from developer to developer and best practice for development changes based on the projects that you previous have been assigned to. The development model (Foss Way) is a static element in the constitution of development, but then again each developer chooses how it influences the development activities on a daily basis by enacting it in a certain way. Its mere presence in the company makes it influential as you have to relate to it one way or the other. A concept developer describes it:

“well yes, what is Foss way! haha, as you probably already know I am not the biggest fan of boxes and that it has to be in a certain way and you have to use this template. I think it is killing the creativity, so I am certainly not a supporter. I cannot remember when I last looked at it, that I have to admit. I might use some of it, I probably do. I am not saying that you cannot work with it, you have to have some rules, but I think it is developed to those who wants to control how we perform.(...)”

And a project manager explains the role of Foss way to him:

“It’s a necessity as it gives access to resources and visibility to management. To me a process is a communication tool that is what it primarily is. When I say that I have passed G1 then Torben (CEO) knows what I’m doing. Then I don’t have to say anything else basically, and that is the visibility it provides. So it provides validity to the work we are doing.”

These interpretations give an insight into the different ways the development model is being enacted.

The organization in the constitution is interesting to study in relation to understand what FEI is at Foss; the development activities in BI hold the mandate and responsibility for FEI and to feed in next-generation projects for PI to execute. In short the development activities are structured as presented in figure 3.

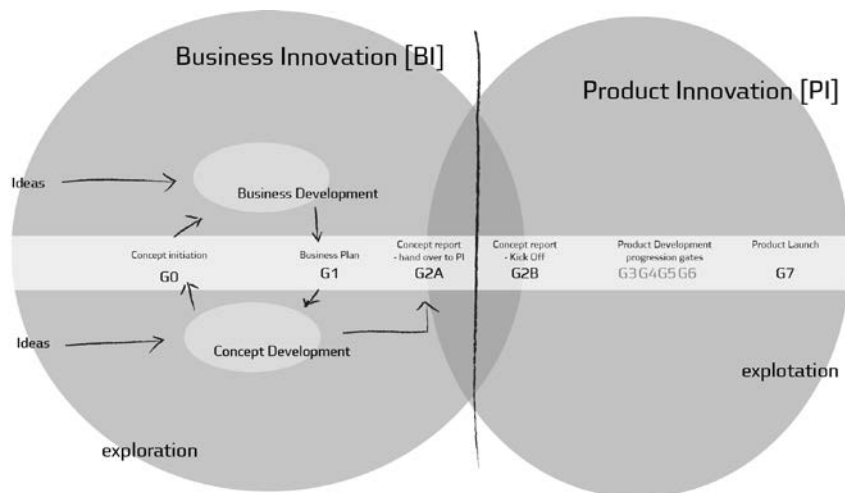


Figure 3: Development gates, focus and activities

An idea is presumed to arise anywhere in the organization, but formally it goes through BD who is responsible for G0-G1. The main focus at this stage of the development is to make sure that there is a feasible business case, and that the scope and potential fits into the strategy. When passing G1, the project is owned by CD who works conceptually with refining and developing the potential of the product idea. The main focus in G1-G2 is to take out risk in the concept and minimize problems when entering PI. The gates consist of checklists for progressing in the project and a review board that based on overall strategy, business case and potential allows projects to pass gates. However an important factor at G2 is the executive management review of the idea. This is not formalized, and it is not explicitly known to developers what it takes to pass this evaluation. This leads the experienced developers to draw on previous experiences. CD was at the time of the field study evaluated as a division based on a set amount of G2 passings, in other words KPIs and bonuses were related to reaching a number of hand overs to PI. We have now drawn up some essentials elements that are enacted into the constitution of development.

Re-Enactment of the constitution of development

In regards of how the enactment of the constitution of development stages a certain type of space for FEI, there has arisen a different development space for FEI based on a re-enactment of the constitution of development. This re-enactment takes place parallel to the daily enactment just described, and is a reaction to the perceived understanding of confined possibilities for performing radical FEI within the current enactment of the constitution. This re-enactment is referred to as Leap and the manager explains:

“A quick evaluation shows that the revenue has gone up, but the total number of sales of new products has not, indicating that it is the revenue per sold unit that has gone up due to a lean process of the production and the development focusing on effectuating the development process toward market launch as well as working with the handling of potential risks within a project before it becomes too costly, this states that we need to think in new markets and new products if we still wish to increase our revenue.”

Furthermore the VP of PI that has funded the initiative explains the rationale for re-enacting new development possibilities:

“ (...)if something does not work, then in my universe it's not an option just to sit down and say well it was your responsibility and then I can sit back and mind my own business, I don't work that way. I do what I find best for the company, and if someone experiences this as me being in their business then... I guess it has to be like that. To me it will always be the company that is interesting and not the individual (...) fundamentally I did something because something else was not working”.

These actors disregard the organizational anchored roles and responsibility as a result of their understanding for what and how the constitution of development can be enacted. Instead they propose a re-enactment strategy of the constitution of development, it is important to notice that Leap does not disregard the constitution of development, but acknowledges it as being an important element to understand and include in the development space. We will therefore describe some of these re-enactment strategies that make an initiative like Leap possible parallel to constitutional initiatives that officially facilitate the same opportunities as Leap, but in some actors eyes have failed to do so. Historically the company has always had some kind of division that was in charge of bringing forth radical ideas; it has been in the shape of a technology lab whose responsibility was research and development of new technological possibilities. The lab was closed down as it was too difficult to implement the results in the development projects. Leap is a new initiative that claims to be working with radical innovation. Historical radical innovation initiative has shown that it cannot be too decoupled from the rest of the organization in relation to having impact in the development projects. On the other side however BI that holds the official mandate for radical innovation is too coupled to the organization and the daily enactment of the constitution of development does not make space for radical innovation.

Leap has made space for itself by re-enacting the constitution of development. By this we mean that it is able to argue for choices made in the project based in the constitution of development, but if you study the activities and the actions of Leap on a daily basis it is clear that there are new ways of applying the embedded guidelines and practices in the constitution of development present. An enactment strategy is that the Leap manager has made sure that he reports directly to the VP of PI and the COO; both of these actors are important as they, as described earlier, provide an unofficial evaluation of the projects at G2. That means that they can disregard the project not fulfilling the official requirements for passing G2. A Leap project is defined and characterized by being new to Foss, both in regard of customer base and technology. Bringing forth project ideas of this character has proven to be difficult due to focus on taking out risks and the lean process that the company has gone through, placing focus on effective execution of the portfolio strategy (next-generation projects), and working within platform technology. To make space for these development opportunities, Leap has proposed a new strategically tool referred to as innovation intents that have been adopted by management and is part of the official strategy and thereby the constitution of development. There may not be anyone else than those involved with Leap that actively enacts this strategy, but it is present and Leap can refer to it when arguing that the potential of the project fits into the overall strategy. Furthermore the technology in focus in Leap is being argued as a potential new platform technology, an argument that fit into a well-oiled lean effective company.

5 Discussion

The COO explains why an initiative like Leap emerges in an organization that has already given mandate to a division to handle this type of innovation:

“Well, if we have to make radical innovation, it will have to somehow be parallel to concept design (CD) (...) the leaps that have been developed so far have been facilitated outside CD, because when you first enter a concept design process then the contour is drawn up. (...) in one way or the other it will not become radical innovation because of the predefined contour for the project that exists in that track. Those projects that have produced something completely different have been facilitated parallel to our process. (...)”

With an off set in this statement and the case description we propose that it is no longer interesting to only apply new structures, define new develop new models or development tools. It is interesting and relevant to understand the perceived constitution of development and thereby the re-enactment possibilities and the different strategies for doing so. This does not exclude refining the organizational structures nor work with new development processes or tools, but it will have to be understood in the light of a constitution of development. In the next paragraph we will discuss enactment as a concept for enabling innovation in a mature development company.

The case points to a very interesting momentum to emphasis further, why is Leap not an initiative anchored in BI? The enacted development space present in BI makes it difficult to practice those agendas of leap projects. Officially it is possible and we then look to understand enactment of the perceived constitution of development again. CD who owns the G2 gate and is responsible for handing over projects to PI is measured and evaluated as a division on reaching a certain amount of G2 passings per year, a measurement that is based on a desired number of product launches. This number of G2 passings does not explicitly influence the development, but it is implicitly enacted to do so when evaluating which projects to proceed with in BI, as it is easier to pass G2 with a next generation concept, that a radical innovation concept. Furthermore BD works with a margin of error when calculating and proposing the business case to make sure that the business case is feasible in relation to the business strategy, this enactment is presented in numerous of interview and one BD developer states:

“(...) well, we do *calculate* it to death, and it has to bet his factor of 10. And if it does not have a factor of 10, then it will not be approved. And if we... we have never reached our projections, and that is because people say we just have to somehow get it to 10 “

The head of BD who is in charge of writing up the business case at G1 describes the main task of his division to be “*killing the idea if it can be killed*”. It can however be difficult to draw up a business plan for a leap like project this early.

When leap is initiated outside of BI's enactment of the constitution of development it then re-enacts a space where these premises for development do not exist to the same degree. In the case we also described the informal review performed by executive management and PI at G2, and how this was an important factor to consider when working on projects in BI. Leap has re-enacted this perceived barrier by 1) Being anchored in PI who as the receiver of the concept projects creates a pull effect in contrast to concepts being pushed to PI. 2) Establishing a direct line of communication to executive management keeping them interested in the potential of the idea despite the

risks may be high. Enactment strategies as these are obvious not something that can just be done, and one important point to be made is that leap only exists on the mandate of management. It is also important to recognize throughout the case that it is not a matter of being compliant with the constitution of development or not, it is a matter of actively re-interpret the opportunity for enactment of the constitution. We state that initiatives too decoupled from the constitution of development had difficulties in bringing value into the projects. The COO concludes when asked on this matter that:

“I have always had great reluctance to, you know, sit down a group of people and ask them to develop something radical (...)

He continuous in regard of anchoring radical innovation:

”we are opportunistic, and you cannot anchor that in the organization other than having some business unit catch the ideas when they arise”

If this is the case and radical innovation is perceived from management as something that cannot be organized within the structures, and yet the company still organizes like they do and does not actively consider the perceived constitution of development, then re-enactment possibilities become relevant to further understand and explicitly work with on a daily basis. Fair to say in this analysis is that no one questions the work being done in BI, and it may not be fair from an organizational point to officially place the responsibility of facilitating radical FEI in this division when knowing that the development space present may not enable such development. The innovation work done in BI is important as it maintains the core business of the company, but in order to increase the revenue as desired it is equally important that there somewhere in the organization is made space for development of a more radical nature.

6 Conclusion

Previous research related to the field of FEI has overall been concerned with understanding how FEI ought to be performed in relation to implementation of new tools, and processes as well, or as a change in organizational philosophies. We have presented a case study and found ground for proposing a different perspective in regards of how FEI is enabled. We claim that it is more interesting to understand the constitution of development that exists in such a mature development company. The embedded implicit and explicit elements contained in the constitution will give reason to why development is performed in a certain way restricting certain innovation opportunities. We have through the paper discussed how enactment and re-enactment are important concepts to actively apply when enabling different innovation strategies.

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