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# Opening the "Black Box" of Innovation

## *The Use of Cultural Analysis in Measuring Innovation Capability*

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**Abstract**

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Innovation is a dynamic process that has been extensively studied by researchers across different fields: a variety of frameworks and mental models have been produced as a result of efforts to measure and manage innovations. However, despite its obvious importance to the success of an innovation process, the "culture" of innovation remains an uninvestigated "black box". Our thesis examines the complex phenomenon of innovation culture to identify criteria that define and make it possible to measure and assess it, and thus an organization's capability to innovate. In order to do so, a qualitative cultural analytical perspective is used - a novel approach within the academia as well as the corporate world.

Our study is grounded in social-anthropological theories and its empirical context is business innovation, more specifically, the successful development of ProViva. Firstly, we investigate the characteristics of the culture of innovation in which ProViva was developed, and demonstrate how essential it was in determining the organization's capability to innovate. Secondly, we critically reflect upon cultural analysis as a tool to understand innovation culture in general. Based on our study of the ProViva case, we have constructed a model that we call *the Innovation Wheel*, which can be used as a tool to "audit" an organization's *Innovation Culture*, that is, an instrument used to measure an organization's capability and potential to innovate in terms of its organizational culture. We present an overview of how the model was developed and apply it to various businesses in Sweden to demonstrate how the *Wheel* can be used to outline different innovation-culture profiles. To clarify the contribution of the *Innovation Wheel* compared to other models not taking culture into consideration, it is contrasted to *the Diamond Model* offered by Tidd, Bessant, and Pavitt (2005).

Finally, we conclude - using the Wheel as a diagnostic tool which makes this clearly visible - that innovation most often seems to take place at the interface between different businesses, areas or departments where cultures differ and common understanding is hard to reach. Intermediaries thus become key persons facilitating interactions between various fields and their cultures, and as a consequence, identifiable as (cultural) keys in innovation processes.

**Keywords:** innovation, innovation cultures, innovation culture audit, innovation capability, innovation model, innovation wheel, applied cultural analysis, ethnography, ANT, habitus, reward system

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Dovilė Gedvilaitė & Cezara-Andreea Pădurariu

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## Abbreviations

The HMT - the Healthy Marketing Team

SFIN - Skåne Food Innovation Network

MACA - Masters in Applied Cultural Analysis

ANT - Actor Network Theory

## 1. Introduction

*"What we've done to encourage innovation is make it ordinary."*

- Craig Wynett (Harvard Business Review, 2002, p. 40)

The quotation above belongs to Craig Wynett, the *Procter & Gamble Co's* Chief Innovation Officer; when asked "What's the one thing you've done that most inspired innovation in your organization?"(Harvard Business Review, 2002, p.39). What is fascinating about this quote is that it not only stresses the relevance of a widely spread innovation phenomenon, but also denotes one of the toughest challenges, faced by many today's executives: How can we make employees think creatively and boost a company's innovation potential? However, if we take a closer look at the Wynett's expressed thought, we can almost grasp the essence of an innovation management: instead of putting emphasis on the personal power of general managers, the simple use of "we" works as a sign of a strong joint thinking, whereas "innovation" is the main objective and a common purpose, shared among "we" and perceived as an "ordinary" practice within the organization. To make an innovation ordinary, instead of presenting it as something exceptional, is to make it a part of everyday organizational life. Thus, it becomes a norm and a self-evident matter of a corporate culture, an unquestionable subject engraved in the mindsets of employees and executives. And yet, one may ask how can we make innovation ordinary? This paper speaks of an innovation in a corporate environment and sustains that innovation is accomplished through a better understanding of the innovation culture acting as a supporting force of the innovation process. In other words, this thesis considers the innovation culture as a phenomenon associated with the relationship between the organizational context and the innovation practice.

The necessity and value of the innovation is undeniable: according to the European-Creativity Index, which also includes the Index of Innovation, there is a clear connection between investment in creativity and technological expansion, economic growth and social development (Bobirca &Draghici, 2011). Therefore, as organizations operate within and across cultures, the necessity for innovation becomes more obvious. Moreover, the fact that innovation becomes a means for survival and growth (Cho & Pucik, 2005) in a rapidly changing market brings a competitive advantage in the global rivalry, offers new ways for maintaining existing and established markets, and also opens up new ones (Tidd, Bessant & Pavitt, 2005). An organization's capability to innovate determines its position on a vast and

constantly changing market, which makes innovative products a real "holy grail" of today's corporate world (Szymanski et al. 2007).

However, despite the significance and benefits of the innovation, there is a tendency for it to fail reaching its maximization such as, the so-called Swedish paradox whereby: the government and most of the companies largely invest in Research and Development (R&D), and yet only few innovations are ultimately realized (Ejermo & Kander, 2005). However, even though most organizations underpin the importance of innovation itself, much more remains to be understood on the notion of the "innovation culture", as a certain organizational climate, taking into consideration its benevolence to the innovation processes. According to Jucevičius (2008), the system of innovation functions only if it is embedded within a specific cultural context, which possesses a unique set of cultural norms and values, as well as a variety of patterns of behavior. One of the definitions of "culture" refers to "the established ways of doing things over here" (Jucevičius, 2007, p. 237), while the "innovation culture" requires a constant questioning of "of its own fundamental values, beliefs and patterns of behavior" (Jucevičius, 2007, p. 237). Thus, culture is considered to be a factor distinguishing good innovators from bad (Stock & Six, 2011). However, the culture, where innovation is built into the organization, is a highly complex and an intangible phenomenon, which is often overlooked by executives and scholars as a secondary factor of the innovation's implementation. Often the managers think of culture as a difficult to manage phenomenon which lacks a clear concept and investigation of how culture comes into play and how different cultural elements contribute to the innovation (Stock & Six, 2013). Therefore, there is a tendency to leave the cultural factors "wild", unstructured and unmanaged. It is easier indeed to approach the innovation environment's distinctiveness in structural and institutional terms rather than focus on its association with cultural variables (Jucevičius, 2007). Nevertheless, the organization's members have a tendency to create and receive meanings that are shared and embodied in forms that facilitate or obstruct its activities (McCarthy, 2013). Therefore, a corporate culture plays a particularly influential role in the innovation process; it demands profound innovation studies and needs to be incorporated in the innovation management process.

Nevertheless, innovation rarely takes place within sealed rooms, beneath standardized structures and tightly controlled conditions. On the contrary, innovation can be seen as a systematic undertaking, consisting of several stages, built on many different layers of knowledge (Schumpeter, 1934). Hence, innovation is a very complex process, involving multiple actors from different cultures and spanning across various distinctive settings

(sectors, firms, networks, markets) (Hoholm, 2009). It is no longer perceived as an isolated act, but rather as an open process increasingly undertaken through collaboration between internal and external actors (Chesbrough, 2005); this may take the form of alliances, joint ventures and other "contracted", or less formalized interactions and relationships between organizations (Huggins, Johnston & Stride, 2012). *The Oxford Handbook of Innovation* also emphasizes on the concept of "innovators' networks" as a significant contribution to the overall organization's innovation capability due to their attribute to open up novel sources of ideas, to enable fast access to resources and enhance the process of knowledge transfer (Powell & Grodal, 2005).

Innovation frequently occurs on the border-zone of different actors, however this 'in-between-ness' not only opens up new types of co-operation and creates possibilities for new business opportunities, but also brings communication-related and organizational problems, that might lead to the de-stabilization (Hoholm, 2009). Furthermore, sinceinnovation often takes place within different networks, cultural barriers may be the key triggering factor for collaborative interference among multiple institutions and also the reason why some innovations fail to be fully developed (Rivera-Vasquez, Ortiz-Fournier& Flores, 2009).Nevertheless, despite the uncertainty that surrounds the innovation phenomenon (Lane, 2011), considering its vast importance for a business and societal development, one of the main roles for any organization is to manage and organize the innovation process. In addition to this, cultural gaps that appear between different innovation phases are to be addressed in the interest of all parties concerned so that innovation would be accelerated.

Considering the significance of cultural issues for the successful innovation process, we sustain that the applied cultural analysis should be able to provide the answers for rather complex questions (O'Dell, 2011) regarding the organizational innovation context, taking a strategic role as an intermediary between economic, social and cultural dimensions towards a broader understanding of the "innovation culture". The master programme in *Applied Cultural Analysis* (MACA) at the Department of Art and Cultural Sciences at Lund University, Sweden is accordingly designed to train students from the humanist and social sciences fields into the applied research world of corporations and public institutions (Löfgren, 2012). Thus, this thesis is an outcome of an applied project, which this paper's authors were designated to work on, during their internship period, at a business consultancy firm.

### 1.1. Background and the Aim of the Study

*"Culture eats strategy for breakfast…"*

- Peter Drucker

This thesis is based on the empirical research project carried out from January 2013, to December 2013. The environment, that provided the authors with a framework to study the innovation phenomenon, is constituted of a small consultancy firm –the HMT[i], based in London; it consists of consultants specialized in branding and marketing. The company was founded in 2008 and it may be considered a really "international" firm, due to the diversity of its employees, coming from a variety of backgrounds and nationalities, and also to the fact that the HMT operates in more than forty different countries across the globe. The organization works with clients from the food sector and its founder is considered to be an expert within the field of nutritional food and branding (Bjerndell & Severin, 2013). The main company's consultancy area is a strategic direction and brand positioning within the health sector. Hence, the consultancy firm is expected to develop models able to help companies framing their international business problems and developing innovation strategies which will ensure the success of a brand in a highly competitive market place.

As MACA students, all the three of us became acquainted with the HMT's work in January 2013, when starting our work as cultural analysts and outside consultants of the firm, during the following MACA courses: *Strategies for Cultural Analysis and Fieldwork* and *Project Management*. Since the objective of the programme is the applied cultural analysis, we were assigned to work in collaboration with a client and deal with complex and concrete problems. Accordingly, at the beginning of the 2013 spring semester, we attended a conference meeting, whereby different clients, interested in applied forms of cultural analysis, presented their interests and problems. A crucial element of this work was the endeavor to help clients understand that the answers to their problems could be found in culture (O'Dell, 2011). We then embarked on the task to work on these problems throughout the whole spring semester. Following this work, two of the authors of this paper continued the project work for this study in the form of an internship during the 2013 fall term.

In the course of our work with the HMT we were involved in the "Digest Innovation" (DI), which is a joint project with SFIN[ii], an open innovation arena that aims to develop Skåne and Sweden into a European food center. "Digest Innovation" is an ongoing project, designed to improve the dialogue between Academia and the applied research in the business field, as well as the partnership between different actors involved in the innovation process.

As a result of his vast experience of working with successful companies as a brand and trend consultant, the founder of the HMT noticed that there is no shortage of good ideas in food businesses, yet just a few of them seize the opportunity to deliver new products and services. Hence, the project started with the goal of bridging consumers and science, marketing and product development, but soon a phenomenon came across, that encompass the lack of understanding between people that triggers the innovation process. Herewith, the consultants had observed that large corporations tend to be less innovative than the small ones, which usually tend to be more dynamic and flexible. Therefore, large organizations try to incorporate minor, and yet innovative and potential brands in order to boost innovation within the large structures. However, when two different companies merge, very often their organizational structures clash: the bigger ones usually diminish the smaller, and a new innovative environment becomes bounded by the older system, which again leads to the limping process of innovation.

The HMT made an assumption that innovation is largely linked with a specific organizational context and that cultural differences might be an effective obstacle for many companies less successful in innovation fostering. In fact, the quotation belonging to P. Drucker, mentioned at the beginning of this section may be considered a suitable headline for the overall “Digest Innovation”, as it points out the impossibility of experiencing the real impact of an innovation strategy if there is no change and adaptation in the company’s culture. Thus, the quote represents the scope and the relevance of the project, as well as a source of inspiration for the project name: if the culture eats strategy for breakfast, then how shall a company be able to digest an innovation? Accordingly, the HMT sought to initiate new methods in understanding communication and organization and wanted to create a tool that would help companies improve their capability for innovation, both within themselves, and between different innovation environments.

An essential part of the study during the 2013 spring term was to investigate which are the factors that support, or prevent innovative culture to emerge in an organization and which are the problems that one has to be aware of, when two different organizations (cultures) try to cooperate. After conducting a case study of the ProViva, as a successful example of an innovation process of several decennia, a model for the Innovation Culture Audit was created. This model called the *Innovation Wheel* covers the factors that might have an influence on the innovation culture and presents different innovation culture profiles. In order to help companies manage the innovation and enhance their organization’s capability to innovate with regard to its own culture, it was important to make the *Innovation Wheel* an applicable

model. Thus, creating a toolkit for an innovation capability management became a fundamental aim of the internship project within the HMT and we consolidated the *Innovation Wheel* with a further analysis of other case studies.

**The aim** of the thesis is twofold:

1. The first objective is the investigation of the innovation culture's particularities, as an essential factor determining the organization's ability to innovate. This particular task is closely related with the assignment given to us by the client the HMT in order to develop a model that might work as a tool for the innovation culture audit. Therefore, it was conducted a case study of the ProViva's innovation culture, whose findings were opened for discussion and supported by the following case studies. Therefore this paper provides an analysis of the ProViva innovation culture, supported by smaller secondary cases; it also examines the process how the findings from the case studies were used in the development of the *Innovation Wheel* model. By doing so, we wish to explore the factors determining the innovation culture and to provide an overview of the model's functionality that could work as a framework for the practitioners to examine the organization's culture and boost their innovation capability. We seek to link the innovation's performance with cultural and institutional variables and bridge the different innovation cultures that could provide along the way better innovation fluidity. Finally, this thesis attempts to provide conceptualized dimensions of the innovation culture for the innovation capability assessment and contribute to a broader understanding of the "innovation culture".

2. Second, we aim to investigate and critically reflect upon the potential of cultural analysis as a tool for the innovation management by examining the process of developing a model the *Innovation Wheel* as a tool for the innovation culture audit and management. The study is based on a retrospective and reflective analysis, as well as on the discussing of the process of the cultural analytical work within "Digest Innovation" project. We question the applied methods and decisions made during the fieldwork, examine the basis, content and applicability of the model the *Innovation Wheel* and finally investigate its novelty by conducting a comparative analysis of the *Innovation Wheel* model as a result of cultural analysis and another recognized *Diamond model* proposed by three authors Tidd, Bessant and Pavitt in their book "Managing Innovation" (2005).

With this paper we want to show the cultural analysis' potential in the corporate environment, as a significant and solid approach for the innovation studies by assessing

methodological strategies and theoretical foundation in building a tool that might be used in the innovation practice.

The duality of the thesis reflects our aspiration to bridge the innovation practices and the cultural research in order to be able to create a new product that might be used by the client and other innovation oriented organizations; and also to bring up a new perspective and a deeper understanding of the innovation culture. We firmly believe that *Opening "The Black Box" of Innovation* may open up new angles in the use of ethnography and cultural analysis, in the corporate environment and the field of innovation.

## 1.2. Previous Research

In this chapter we provide a research overview in the innovation field, as well as a review of studies relevant for our thesis. Our focus lies in topical works that approach innovation as a process, examine ways to measure innovation and explore innovation culture. The chapter is closed with the problematization of the innovation culture assessment.

### *What do we call innovation?*

Since innovation is a relevant problem to sustain organizations' competitiveness, the ranks of those interested in innovation are complemented with both academics and practitioners, in the attempt to establish the best definition of this phenomenal and constantly debated concept on the market. Many scholars (Shumpeter, 1930; Druker 1954; Howard &Sheth, 1969; Simmonds, 1986; Damanpour, 1991; The European Comission Green, 1999; Boer & During, 2001) addressed the importance of defining the concept of innovation as, according to Popa, Preda and Boldea (n.d.), the way a company defines innovation determines the degree and the nature of the innovation in a particular organization. Considering the expressed importance of the innovation definition, in the table below we shall introduce several descriptions proposed by various authors, who approach this phenomenon from different angles.

| Author | Definition |
|---|---|
| Joseph Schumpeter (1930) | Introducing a new product or modification brought to an existing product;<br>A new process of innovation in an industry; |

| | |
|---|---|
| | The discovery of a new market;<br>Developing new sources of supply with raw materials;<br>Other changes in the organization. |
| Peter Druker (1954) | One of the two basic functions of an organization. |
| Howard and Sheth (1969) | Any new element brought to the buyer, whether or not new to the organization. |
| Mohr (1969) | The degree to which specific new changes are implemented in an organization. |
| Damanpour and Evan (1984) | Broad utility concept defined in various ways to reflect a specific requirement and characteristic of a particular study. |
| Kenneth Simmonds (1986) | Innovations are new ideas that consist of: new products and services, new use of existing products, new markets for existing products, or new marketing methods. |
| Kenneth Simmonds (1986) | Basic creative process. |
| Damanpour (1991) | Development and adoption of new ideas by a firm. |
| Davenport (1991) | Complete a task development in a radically new way. |
| Evans (1991) | The ability to discover new relationships, of seeing things from new perspectives and to form new combinations from existing concepts. |
| Slevin (1991), Lumpkin and Dess (1996), Knox (2002) | Innovation can be defined as a process that provides added value and a degree of novelty to the organization, suppliers and customers, developing new procedures, solutions, products and services and new ways of marketing. |
| Business Council Australia (1993) | Adoption of new or significantly improved elements to create added value to the organization, directly or indirectly for its customers. |
| Henderson and Lentz (1995) | Implementation of innovative ideas. |
| Nohria and Gulati (1996) | Any policy, structure, method, process, product, or market opportunity that the manager of a working business unit should perceive as new. |
| Rogers (1998) | Involves both knowledge creation and diffusion of existing knowledge. |
| The European Commission Green (1999) | Successful production, assimilation and exploitation of novelty in the economic or social environment. |
| Boer and During (2001) | Creating a new association (combination) product-market-technology-organization. |

Table 1: *Defining innovation.* By: Popa, Preda&Boldea (n.d.)

In a certain moment, when "innovation" seems to be on everyone's lips (O'Dell, 2011), it is not surprising that it has been considered as an overused concept (Nair, 2012). Instead of using the word "innovation" to convey the monumental change executed by the organization, companies are quick to apply this word for a rather ordinary progress, claims Kwoth (2012). Due to the complexity of the notion, the number and diversity of innovation definitions is countless.

Related to the definitions above that mainly view innovation as a process, or as a new product implementation, Stephenson (2011) in her article "The True Meaning of Innovation" refers to the "Institute for Competitiveness and Prosperity" and states that the term "innovation" has recently become a synonym for an "invention", when the latter concept is just a part of the innovation process. Considering Stephenson's argument and regarding this thesis' goal as well as our empirical material, from the proposed definitions (Table 1), we would go for the approach that treats innovation as a process, involving a new product, or service development (or significantly improved elements) in association with a technology, market and organization. Furthermore, we look at the innovation process internally, as integral from the organization's culture, examining the ways in which innovation operates across different stages of its process, how it interacts with other organizations and its customers. In other words, we approach ***innovation as a process taking place within a specific organizational culture***.

***Innovation as a Process***

Many studies (Capon et al., 1992; Fritz, 1989; Kraft, 1989; Wolfe, 1994; Jakubavičius et al., 2003, Mintzer, 2004; Rose, 2004; Tidd, Bessant and Pavitt, 2005; Račkauskaitė, 2006; Jucevičius, 2008) from different disciplines such as economics, business anthropology, psychology, management and social sciences have been conducted to define the characteristics that have an impact on the innovation process, yet researchers usually focus on a single dimension of the innovation, for instance, technological aspects (Ettlie,2000), organization (Damanpour, 1991) or the market-oriented issues (Hargadon & Suton, 2000) that makes it difficult to consolidate the view of the innovation process (Bernstein & Singh, 2006). Meanwhile, the cultural analysis works as a neutral intermediary that enables it to provide a multilateral and cross-disciplinary approach, covering different perceptions of the innovation which shift from one process' stage to another. Understanding the relationship between the organization and the innovation, as well as the changing mechanisms that work while moving across the different stages of the process enables the assessment of the general capability to

carry the innovation process across the different cultures involved in the innovation implementation.

Thomas Hoholm's (2009) doctoral dissertation "The Contrary Forces of Innovation", an ethnographic case study of the innovation processes in the food industry, is a great contribution to a more profound understanding of the industrial innovation process. The study explores the process of innovation from idea to commercialization, between biomarine and agricultural industries and provides rich descriptions of this complex phenomenon. The author uses an actor-network theory to "follow the actors" and to examine the interactions between them towards innovation realization. In the Hoholm's study (2009), innovation is presented as a process crossing multiple boundaries and as a network of the interconnected processes which encompasses multiple actor-networks. The uncertainty of the innovation also increases with the complexity: actor-networks are recruited and committed to things they are unfamiliar with. These processes of knowledge exploration across different actors tend to multiply the object and thus may cause the obstructions of the innovation development.

Finally, Hoholm (2009) argues that innovators are lacking of concern to connect and translate knowledge between different settings and this, once again confirms the problem of our study - the existing cultural barriers between different stages of the innovation process, carried out across diverse cultural contexts.

***Innovation Measurement***

The Gamal's (2011) article "How to Measure Organization Innovativeness?" provides an overview of the innovation measurement frameworks and the innovation audit/management tools. The document seeks to cover various innovation measurement concepts and techniques which view innovation from different perspectives. The author provides this definition of the innovation: "the introduction of a new product, service, or process through a certain business model into the marketplace, either by utilization or by commercialization" (Gamal, 2011, p. 7), and also adds that innovation is a complex and multidimensional activity which is no longer understood as a linear process, and thus, cannot be measured with a single indicator (Gamal, 2011).

Gamal (2011) classifies research in measurement of the innovation into two streams: (1) measuring innovation through innovation inputs, for instance, addressing R&D intensity, and (2) through innovation outputs like patents and patent-related index. However, the linkage between these measures and the organization's capability to innovate still remains vague and

unclear. Furthermore, the study provides an overview (Table 2) how the perception of innovation has changed within years.

| First Generation Input Indicators (1950s-60s) | Second Generation Output Indicators (1970s-80s) | Third Generation Innovation Indicators (1990s) | Fourth Generations Process Indicators (2000s plus emerging focus) |
|---|---|---|---|
| R&D expenditures<br>S&T personnel<br>Capital<br>Tech intensity | Patents<br>Publications<br>Products<br>Quality change | Innovation surveys<br>Indexing<br>Benchmarking innovation capacity | Knowledge<br>Intangibles<br>Networks<br>Demand<br>Clusters<br>Management techniques<br>Risk/return<br>System dynamics |

Table 2: *Evolution of Innovation Metrics by Generation*. By: Center of Accelerating Innovation, George Washington University (2006) in the Gamal's (2011)text

The above table covers four generations of innovation indicators that are now more oriented towards the knowledge, networks and clusters, the intangibles, demand and management techniques, as well as risk and system dynamics as well as more complicated and abstruse to be measured. From this table we may see that innovation indicators such as knowledge, intangibles became more complex, which accordingly are in need for a rather qualitative assessment. However, the field is lacking more exhaustive studies of these innovation indicators and we assume it as an open niche for the ethnography to enter, as a valid approach in a "multi-sited research" (Welz, 2009). Furthermore, ethnography is a valuable approach in studying networks and clusters of innovation, as well as aiming to grasp the intangibles of the everyday culture of innovation.

As mentioned above, Gamal (2011) provides a review of several frameworks in order to measure innovation: *Innovation Funnel, Innovation Value Chain – IVC* recommended by Hansen and Birkinshaw (2007), *Oslo Manual Innovation Measurement Framework* created by OECD and the European Commission (Eurostat) (2005). Among all, the *Diamond model* proposed by Tidd, Bessant, and Pavitt (TBP) in their book "Managing Innovation" (2005) is introduced and that is our choice for a further examination in this paper. The choice of this particular *Diamond model* is determined by its similarity to the model produced by the authors of this thesis, which enables actual possibilities for the comparison. In the "Significance" chapter of this thesis we compare TBP's model with the *Innovation*

*Wheel*produced with the help of cultural analysis, to collate different approaches of the innovation measurement.

***Innovation Culture***

The notion of "innovation culture" has been extensively discussed by Jucevičius (2007) in his article "Culture vs. Cultures of Innovation: Conceptual Framework and Parameters for Assessment". The paper analyses and presents innovation as a very complex and, at times, contradictory concept, which is both a routine-based and a change-oriented process. The author relies on Heidenreich's (2001) proposed definition of innovation as a "relatively stable mode of reflection, behavior and social organization, directed towards „modernization " and „development", based on shared values" (Jucevičius, 2007, p. 236). Furthermore, Jucevičius points out that innovation culture has both universal and unique traits, specific to a certain climate as innovation possesses organization-specific characteristics, which encompass a unique set of values, norms and patterns of behaviors that determine the taking place within a specific cultural context of innovation.

In this paper, there are indicated four general characteristics of innovation culture: (1) *high tolerance of risk, complexity and change*, (2) *flexibility and mobility, enabled through flat organizational structures*, (3*) organization's inside and outside trust-based cooperative relations*, (4) *creativity and learning both on individual and collective levels*. Based on these parameters, it was assessed and presented the innovation culture of 68 organizations. The findings revealed that the innovation faces difficulties on the level of implementation, due to the mental inertia and the bureaucratic instruments. The study provides a general overview of innovation culture and raises the importance of the anthropological approach towards a better understanding of the issue. Furthermore, in the other article "Social Dimensions of Technology Innovation" Jucevičius (2008) acknowledges that there is a certain mismatch between the level of values and attitudes, the level of practices between innovation cultures which, according to the author, could be an interesting field for a further research, that has not been studied enough since then and that requires a more qualitative research, which this thesis aims to provide.

***Why measure innovation culture?***

In this chapter "Previous Research" we have introduced studies that claim for innovation measurement. Meanwhile, this section aims to provide a rationale for our fieldwork and final product – an *Innovation Culture Audit* tool – for a client, the HMT. If, as

it has been shown above, the innovation is a process taking place within a specific organizational culture, is there any demand for an innovation culture assessment as well?

To begin with, tight relations between the new knowledge production, as a competitive advantage and profitability raised a universal interest in the innovation among the academics and business professionals. Studies have shown that competitive rivalry fosters companies to invest in the innovation and change, the very existence of the firm being threatened in the case of this idea's rejection (Tidd, 2006). Thus, the organization's capability for sustainable innovation becomes a critical element of a short-term competitive advantage and an indispensable condition for a long-term viability in turbulent times and environments (Mazzarol, Durden & Thyil, 2007). Following the argumentation of Gamal (2011), the sustainable growth of the organization requires a sustainable innovation that demands for continual acceleration. However, the success of the innovation depends only on the technical resources such as people, equipment and knowledge; not of a less importance is the capability to mobilize the available resources and manage the use of them towards the successful innovation (Tidd, 2007). In the meantime the decision making along the process of innovation requires credible, timely and relevant measurements (Gamal, 2011). Therefore, a model, combining the elements of innovation measurement, is a useful tool in framing the issues that need to be managed and guided along the process of innovation. A model for innovation measurement could provide more formalization and discipline (Mazzarol, Durden & Thyil, 2007); it may also help defining innovation strategies, which are the inherent qualities in the innovation management efficacy.

However, measuring innovation within the organization is a challenge as innovation itself is a difficult term to define. The complexity and uncertainty as the characteristics of the innovation, emphasized among scholars studying innovation phenomena sow the seed of doubt: is it possible at all to measure and manage innovation, this enormously complicated process often surrounded by suspense (Tidd, Bessant & Pavitt, 2005)? Nevertheless, one thing is clear, innovation is no longer understood as a novel product or an one-off act, but rather as a process, that needs to be managed and constantly reviewed; and this approach has been adopted by recent researchers (Tidd, Bessant & Pavitt, 2005; Hansen & Birkinshaw, 2007; Shaughnessy, 2014 *et cetera*.) in their attempt to find a measuring and monitoring innovation method.

Smith (2005) in the *Oxford Handbook of Innovation* also addresses the relevance of the innovation measurements, but underlines the fact that the innovation is a multidimensional novelty, difficult to grasp and measure in terms of learning and knowledge. The author brings

up the question of the real meaning of measuring a qualitatively diverse phenomenon. Herewith Smith (2005) stresses the importance of choosing the right measurement techniques and specifies that a survey instrument might be not the appropriate research tool to explore this complexity. There is a long standing tension between quantitative and qualitative methods; however the statistical methods that have a great advantage of generality lack the depth, while, for instance, a case study might provide richness, but at the cost of generalizations (Smith, 2005). Taking into consideration this qualitative approach of innovation, we study it using ethnographic methods, such as interviews, observations, focus groups, netnography, *et cetera* that in tandem with cultural theories may provide new and in-depth insights of the innovation culture phenomenon.

Yet, regarding the measurements of the innovation culture, the situation is even more complicated as the culture is uniquely a human product that "develops slowly within firms, is tacit and not easily defined" (Tellis, Prabhu & Chandy, 2009, p. 7). Therefore, Jucevičius raised the question of whether the innovation culture may be defined by the universal traits and characteristics, or if it a contextual-specific phenomenon that covers a unique set of values, norms and practices (Jucevičius, 2008). In other words, the question is if there are any cultural similarities among innovative organizations and whether one can find a model with universal measurements, applicable in any kind of innovation oriented organization, in order to assess its innovation culture. Drawing on the Jucevičius (2008) findings, as well as on the empirical material gathered for this thesis, despite the original set of cultural values and norms, we may say that there are certain qualities, patterns of behavior that innovative organizations come to share; these allow different possibilities for the innovation culture measurement. Even though the culture is a more elusive factor than, for instance, labour, or capital – as important drivers of innovation (Tellis, Prabhu & Chandy, 2009) –yet the internal culture is the most important contributor to the innovation performance and success (Yu, 2007). Therefore it is necessary to assess the cultural factors, as long as the measurement provides a picture of the needs to be fostered in order to maintain the culture of the relentless innovation (Tellis, Prabhu & Chandy, 2009). In relation to this, Gamal (2011, p.5) identifies a list of numerous reasons given for measuring the innovation:

- Assist companies in understanding their current innovation practices/capabilities, and clarify where the organization needs to focus in order to maximize innovation success;
- Help in tailoring programs to address areas of weakness in order to enhance the organizations' innovation process capabilities;

- Assist in promoting innovation;
- Help identifying the strength areas, in order to capitalize them, and identify opportunities for increasing the innovation;
- Help identifying and controlling the barriers stifling the creativity and the innovation;
- Help developing an "Innovativeness Index", in order to compare innovation capability with other companies in a sector;
- Spread the awareness of the innovation concept importance and foster the innovation culture in the organization.

Thus, due to the importance of measurement for the innovation management we want to develop a new method that takes into account the measurement of innovation culture.

### 1.3. Position in the field

Given the key role in economic and social change, an interest in innovation has been spread across different disciplines. The effort to measure and manage innovation, by identifying the necessary criteria for the innovation to occur, might be seen in a variety of innovation frameworks and mental models. However, in spite of its obvious importance, the innovation culture is touched upon in just a few cases and in a rather vague way and therefore it does remain more as a "black box" [iii] rather than a clear framework for a possible assessment. Despite the fact that innovation has a cross-disciplinary orientation (Fagerberg, 2005), its culture, apart from few authors, has got little attention among innovation researchers. Furthermore, the culture in the field of innovation, much to our surprise, did not receive enough attention among ethnographers, or culture analysts, who are considered to be specialists in culture. Consequently this thesis aims to fill this gap.

For this reason, our interest lies in the innovation culture as an insufficiently studied subject, yet of a great importance for the success of the innovation. We look at it as a social and cultural phenomenon, where culture "is not primarily 'inside' of people's heads, but somewhere "between" the heads of a group of people, where the symbols and the meanings are publicly expressed – in work group interactions, in board meetings, but also in material objects" (Alvesson, 2002, p.4). In addition, talking about the organizational culture, "it is a lot about the symbolism – of rituals, myths, stories and legends – of people, and about the interpretation of ideas, events, as well as experiences that are influenced and shaped by the groups within they live" (Alvesson, 2002, p.4).Thus, culture is that unconscious part of the

organization's "mindset" that leads the footsteps and shapes the behavior of the innovation actors along the process. And, according to social and cultural anthropologist Geertz (1993, p.17), "behavior must be attended to, and with some exactness, because it is through the flow of behavior – or, more precisely, social action – that cultural forms find articulation". That draws our attention to the interactions between the innovation actors (as an essential part to make the innovation flow), constituted by the cultural features of different innovation contexts.

Accordingly, this thesis places itself within the field of applied cultural analysis, characterized by defining culture as an "informal logic of actual life" (Geertz, 1993, p.17), as the main object of the study, in order to provide a picture of the innovation culture and explain its logic and its different forms. The thesis also appeals to the field of the innovation management with a cultural analytical approach, as it provides a model for the innovation culture audit.

### 1.4. The Structure of the Thesis

The thesis starts with a methodological framework, where the empirical material gathered during the "Digest Innovation" project is presented, and methodological considerations are provided. This part assesses the importance and the value of the ethnographic methods as an essential part of cultural analysis.

Afterwards it follows a discussion on the theoretical foundations, includingthe social and cultural theories. First of all, we look at the innovation as a social phenomenon; from Bourdieu's perspective, a phenomenon of social life as a game, as well as the use of the concept of habitus as a product of history which generates both individual and collective practices. Secondly, an overview and the relevance of Mauss' theory of the gift as a rewarding system and reward as a reciprocated action are presented. Thirdly, the actor-network theory proposed by Latour is introduced, as a relative approach to study the innovation by looking at the interactions, considering the mediators' importance and bringing in the materiality.

The paper moves on with the analysis part which provides data analysis and covers a critical assessment of the process, by developing a model for the*Innovation Culture Audit*. The chapter starts with the examination of the ProViva case as a success story and shows different ways in which the material gathered during the fieldwork was used and analysed. Furthermore, the discussion rises on the essence of the *Innovation Wheel* model followed by the next chapter that talks about the functions and the applicability of the model.

The analysis part is supported by the following chapter that aims to evaluate the potential and significance of cultural analysis to the “Digest Innovation” project and also to provide a better understanding of the innovation culture, which is crucial in order to boost innovation within a food industry. This section provides a comparative discussion of a model the *Innovation Wheel* created by the authors and another *Diamond Model* developed by Tidd, Bessant and Pavitt (2005), examining the pros and cons of the tools. Afterwards, the authors deal with the potential and limitations of the *Innovation Wheel* and also evaluate its contribution to the innovation studies and the knowledge of the innovation culture.

The paper is concluded with concluding remarks, reviewing the main findings and contribution to the field.

# 2. Methodology

This chapter describes the rationale of choosing ethnography as the investigation method of the innovation processes and cultures, underlining the phases of the empirical data gathering throughout the execution of various selected ethnographic methods. In this section there are presented the methods used in order to gather the empirical material, as well as the reasons that motivated those particular choices.

## 2.1. Research Background and Empirical Material

### *Investigating practices of innovation*

The empirical material for writing this thesis was gathered during the spring semester 2013when the MACA team started collaborating with the HMT. Initially the team consisted of three students Dovilė Gedvilaitė, Cezara-Andreea Pădurariu and Martin Hellryd. All the three of us had seen the potential in the project proposed by HMT, but at the same time, we were suspicious about the traveling issue that working on the "Digest Innovation" would imply. Knowing that the HMT headquarters were based in London and that they engage clients from all over the world in their projects, we, as students thought that this work would involve costs that we cannot afford to cover. Moreover a tight schedule including courses, seminars and hundreds of pages of academic literature to study would have not permitted us to be as flexible as we had wished. However, the research continued during our internship period: 15 July – 15 December at the same company. Yet one of team members decided to leave the project and the research was continued by the authors of this thesis.

Our task was closely connected to the problem of an increased market fragmentation, especially within the food industry – major companies encountering many difficulties in following the rapid market changes. At the same time, while conducting the interviews for the case study we found out about the existence of the cultural barriers between science/research institutions, entrepreneurs and more established companies, entities which fail to communicate the knowledge from one another. So, we have been working on the development of the *Innovation Culture Management* toolkit that could be applied in different business settings in order to bridge cultural barriers and accelerate the innovation process, in various business environments.

The HMT in collaboration with SFIN and the team of cultural analysts from Lund University, consisted of the authors of this thesis, have developed a complex project, in different stages into the realm of health and nutrition industry. The project is named "Digest Innovation" and its first stage consists of the undergone by us the *Innovation Culture Audit*. The "Digest Innovation" project's aim is to stimulate companies in finding solutions for the new business models and more effective innovation and also to provide an analytical tool for an efficient innovation culture audit.

Our role as ethnographers and researchers in this case was to observe, understand and digest behaviours and practices of the business actors, on their everyday stage, as well as to find the key aspects that would drive or kill theinnovation. Every day practices, as Michel de Certeau (1984) mentions, in "The Practice of Everyday Life" depend on a vast ensemble, difficult to delimit, which we may provisionally designate as an ensemble of procedures. As cultural analysts we looked at these procedures, at different sorts of mechanisms and business techniques in order to trace innovation business evolution or disruptions.

***"Digest Innovation" – a three phase project***

To begin with, in order to understand the problem we were assigned to solve and to get familiarized with our client's way of working, company's mission and goals, we started with a netnographic approach. Practically, we had to begin with defining our project task. In order to start this process, firstly we identified the stakeholders and took some thinking of what the best methods would be to get a deeper understanding of the task we were assigned; but foremost the information that we thought was of interest to frame the problem and, at the same time, identify the areas that could affect the innovation within an organization. It is of outmost importance to mention that the "Digest Innovation" is a long term project, still ongoing, so that, this paper focuses on its first year: how did we enter the project by doing a historical analysis of a successful innovation business and how based on that case study, have we built a model to be used for the *Innovation Culture Audit*.

**The first phase** of the "Digest Innovation" project was to conduct a case study of a successful example of several decades' innovation process: the ProViva. We carried out interviews with stakeholders that had been engaged in an innovative process within the healthy food and beverage business. From these interviews we committed in-depth analysis, tracing patterns and mapping key words, processes that led to the construction of a model for the *Innovation Culture Audit*. This model called *the Innovation Wheel* determines theimportant aspects ofthesuccessful innovation environment and works as a tool that helps

identifying a company's cultural profile, working as a "health check" of a current innovation environment.

**In the second phase** of the "Digest Innovation" project, we carried more interviews with acknowledged innovators within the food industry, in order to confirm our previous findings and refine our model. Finally, we delivered our project presentation to our client and had a fruitful discussion together with some of the representative stakeholders involved in the "Digest Innovation" project; they emphasized on the way in which our model may be used further in order to design a capability index that could be used to measure how innovative a company is and also which are the areas that need to be improved, in order to increase the flow of innovation between different departments.

During **the third** and the last **phase** of the project we continued working with the development of the *Innovation Capability Management* toolkit that was supposed to consist of the *Innovation Culture Audit* model – the *Innovation Wheel*, a questionnaire with a numeric grading scale that would provide a spider web diagram and the *Innovation Capability Index* to measure the capability to innovate. While working on this task we were constantly assisted by an expert group consisted from business practitioners and academics with experience in the innovation subject. They provided us with feedback and useful insights on how to make this model a practical and also an easy to implement one within the organization.

Finally, in order to test and refine the *Innovation Wheel*, we conducted more case studies with companies dealing with innovation issues such as *Bioett*, which business idea was to monitor the temperature for refrigerated goods–like food and medicine–during transport, in order to ensure that quality products are delivered, *Pampett* (a humidity sensor, used to improve elderly–care by avoiding older people being awakened unnecessarily), *Oatly* (an alternative drink/a liquid food, made of oats for people who have lactose intolerance), *Aventure* (a corporate business with a network of qualified world's leading research institutes in the field of functional food and biotechnologies, conducting clinical studies and developing both nutritious and commercially successful products) and finally *Berries by Astrid*, which business idea was to sell to people a healthy smoothie made of the best ingredients without any additives.

## 2.2. The Choice of Methods

***Where we started – a netnographic approach***

Before actually exploring the field, we have got acquainted with the HMT, firstly by conducting a netnographic research, a method that adapts the traditional ethnographic methodology to the online environment (Rokka, 2010). This type of research implies a creative, multi-modal and multi-sited approach and, in our case, consisted predominantly of textual and visual analyses, and as well of a deeper insight into the HMT's "blogosphere" activity. The research possibilities, using online methods highlight the way in which traditional research methods can be transformed and adapted to a virtual context (Hookway, 2008) that brings the flexibility of studying a globalized and always in move community.

While exploring the HMT website and realizing how spread on the entire globe the collaboration of this consultancy firm is with different partners such as: Nestle, Coca-Cola, Danone, GSK, IBM, Carlsberg, Unilever, Otto, Findus – brands that can be found in over 40 countries, on continents such as Europe, America, Africa and Asia – it is obvious that on-line ethnography, as a theoretical-methodological framework represents a tool that allows the flexibility necessary in conducting a research on a space that is affected by "cultural globalization as transcultural and translocal" (Rokka, 2010, p. 384).

Furthermore, another online tool that we found very useful for our ethnographic research was the HMT's blog on which we were able to find news about their latest events, keep track of their projects; on the other hand, by having access to all this information we were able to participate at SFIN (*Skåne Food Innovation Network*) Communication *Network: Brands for the Future* which took place on the 1st of March in Malmo. Meeting where the president of the HMT and two members of his team talked about "How to build brands for the future and engage the future consumer within food, health and lifestyle?" Keeping in mind the fact that blogs represent "a new medium for facilitating knowledge production within education and business sector" (Hookway, 2008, p. 94), we took advantage of this research opportunity to gather some useful insights in the undergoing projects of the HMT and use that information to prepare for the future face-to-face interviews that we conducted afterwards, in order to get some "individual authenticity" (Hookway, 2008, p. 98) that virtual methods of research fail to provide.

***Case study – examining a successful example***

Since our cultural analysts task in the project was to define significant factors for a successful innovation flow, with the purpose of bridging the gap of the cultural differences between the companies and the different departments within the company and build a model for *Innovation Culture Audit*, we realized that we cannot build a model without knowing its structure (as later we liked to say: "We don't need to invent the wheel, but to understand the spokes that make the wheel of innovation spin").

Consequently, we started our fieldwork with a historical analysis of the ProViva project, which became one of the functional foods examples (Lagnevik, 2003), a case study as a successful innovation story in order to be able to investigate, define and explain the "best practice" in accelerating innovation. The choice of this method was grounded in our will to determine the key factors that were a reason for a smooth innovation process and which could work as a basis for our primary task - the innovation culture model.

Our informants provided us plenty of useful data which through an analysis was built into interesting findings that formed clusters and we were able to "go beyond the textual representation" (O'Dell& Willim, 2011, p. 35) and provide more tangible results –a model for the *Innovation Culture Audit*, which we called the *Innovation Wheel* (in this wheel different innovation factors represent spokes within the wheel of innovation) – for our business oriented client.

So, our case study was both exploratory and explanatory, since it clarified the concept and the process of the innovation, all along with working an example of successful innovation culture within a food industry and as a tool for further stages of the "Digest Innovation" project (Hult, 2008). The roots of our project final results lie in this particular analysis, because the ProViva case study later worked as a hidden algorithm for the whole *Innovation Wheel* (a model for the *Innovation Culture Audit*), since the key spokes of the *Innovation Wheel* are based on the analysis of our data, collected during the interviews in this stage of the project.

***Semi-structured interviews***

In order to identify the key factors of this successful story we have conducted four semi-structured interviews with some of the most important persons involved in the ProViva project. The interviews were "formally bracketed, and set off in time and space as something different from usual social interaction between ethnographer and informant, in contrast to the unstructured interviews, often seen as "just happening" (Davies, 2008, p. 94). First of all,

while this project was undergone, we talked to the CEO of Skånemejerier[iv], the head of the information and the communication department – she had a crucial role in conducting a PR strategy to handle the government's rigid rules and regulations regarding the medical claims of the product and nevertheless, we had a final group interview with two experts: one from the field of marketing and development and the other one from the field of science and research.

Our first round of interviews might be summed up in two individual semi-structured interviews, one interview group and one focus group. In contrast with unstructured interviews, the semi-structured ones are prepared in advance, so we entered the field with a set of questions that worked as a supporting tool during the interviews. It was important to define aspects we thought of interest to discuss to make a conversation more specific and not superficial as well as put our informants on "the right track", still leaving enough room for unexpected topics and free discussion in order to gain a more personal perspective of the whole case story.

From these interviews we committed some analysis that gave some interesting findings. The findings formed clusters - clusters that we have built into an innovation wheel, where the different clusters represent spokes within the innovation wheel. Moreover, in order to confirm our previous findings and refine the developed model, we carried out three more interviews with acknowledged innovators, within the food industry.

Keeping in mind the task given by our client, that of identifying those factors that boost innovation, after interviewing the key people involved in the ProViva case, our team came out with a model disguised under the form of a metaphor: "If innovation is a wheel, then which are the spokes that make the wheel spin?" After each interview we spent a couple of hours on the analysis on the information gathered and we identified clusters of factors that repeated in each interview. Finally we have found a pattern that could have been used for our further research. Considering the statement that "ethnography can look beyond the metaphors and can make the difference between depth and superficiality" (Graffman & Börjesson, 2011, p. 98) we realized that it is very important not to get stuck in the metaphor and still be opened enough to develop, or even change this model.

Using the data collected in our interviews, we had to "generate the meaning", to make a difference between the "spoken word" and what we really considered to be useful data (Nairn, Munro and Smith, 2005, p. 222), the semi-structured interviews being a great opportunity to make us reflect on what happened during this project and which where the main factors that transformed it into a successful story. For instance, all our interviewees insisted on a "why not attitude" closely linked to phrases such as "to do mentality" or "keep on being stubborn". A

relevant quote by Interviewee 1 that reflects the same attitude is "we don't debate, we just do it".

***Observations: following practices – an ethnography of the invisible***

Conducting the ethnography of something unseen, ungraspable, the ethnography of the atmosphere of a space may be a great challenge but it might be done only if we narrow it down and focus on the specific items. More than that, the cultural analysis promises something different, a new angle, and another perspective, "making the invisible, visible or the inconspicuous, important" (Ehn & Löfgren, 2009, p. 36). For instance, after a brainstorming meeting we decided that it would be useful to consider into our cultural analysis ethnography of the sign and the symbols, ethnography of the people that make ideas flow inside a company by paying attention to the smallest details such as artifacts, objects, or rituals and routines. We did this in order to trace the key points that make the synapses between different gaps and that lead to a successful project.

In order to "understand the invisible resources" of everyday practices, "sophisticated methodologies and innovative, performative and reflexive methods are needed" (Pink, 2011, p. 118). This approach represents a very good starting point in conducting a qualitative analysis into a business space.

Trans-locating these ideas into practice, we were supposed to follow the material culture, looking around for signs and symbols. It could have been a whiteboard, a coffee machine, a motivation scale system or anything else that makes ideas flow inside a company. We had to look at the interaction between people and the physical environment they were working in making decisions, in order to understand how "people make spaces into place" (Gaffin, 1996, p. 76) by the use of the material culture.

The main hinder we met while studying the innovation practices, was our lack of access into the actual innovation process, by observing the material culture at the place of the action, but we rather talked about it with our interviewees. All these observation details, described by our informants, as they perceived them while working on the projects that we had researched, might be described as a kind of secondary observation, an observation made through intermediaries, our respondents.

***Focus group – stepping away and getting closer to the problem***

Since our client the HMT and their "Digest Innovation" project is closely associated with innovation within the field of business and marketing, we decided to enrich our study by

using the focus group method as a mean to understand the innovation culture, as well as the factors that kill or boost innovation processes. In fact, the "focus groups" is one of the main approaches, currently used in the qualitative marketing research and it presents various advantages such as having the possibility to gather "a large volume of data in a relatively short period of time" (Fallon 2002, p.196). With regard to the nature of this study, the focus group method was also considered as a useful tool to step away from the ProViva case and gain more additional insights from people who deal with the innovation in the business fields, other than the food industry.

The conducted discussion was within a mini focus group, as it consisted only of four members, while usually such kind of interview is composed from six to twelve participants. As Fallon points out, it might be difficult to organize and to predict the exact number of the group members, as the people often drop out for a multitude of reasons (Fallon, 2002, p.198). Therefore, because of prudential considerations, we allowed the non-appearance of some individuals by inviting more people to the meeting and wherefore, even though few of them were absent, at the end we still had had a sufficient number of participants to carry out the discussion.

In addition, in organizing a focus group we cared more about our respondents' characteristics, rather than the amount of participants. So, all interviewees were well selected and met the necessary criteria in order to be a part of a fruitful discussion. Since "ethnography includes an awareness of detail and the heterogeneity and plurality of the field", as well as "it allows room for contradiction and alternative stories, voices, narratives and experiences" (Lennartsson, 2011, p.109), we have invited for discussions three men and one woman; that, in order to make it more heterogeneous, expecting to hear diverse opinions regarding the same object.

Despite this factor, the homogeneity of a background and the experience was an important factor for us in formulating a group in order to facilitate a clear focus and ensure that each member has something to say, that each of them is able to share and explore his own experiences and feel comfortable to willingly disclose his opinions (Fallon, 2002, p.198); and most important, that each member of the group could deliver valuable results and secure a proper discussion. Therefore, all focus group members were of similar age, they worked in the same office and were from the business arena, working with a project management, marketing research and management, branding and business development as well as doing consultancy job. In one way or another, all of them have been dealing with the innovation in their work

spaces, so it was interesting to hear their perspective on the innovation problems and success factors.

Moreover, in our case, a small, but carefully chosen number of participants turned out to be an advantage, since all the members have had enough room to talk, to fully express and explain their ideas and opinions. For instance, one member gave us an interesting idea of seeing the innovation process by drawing a stairs on a whiteboard (see Figure 1), explaining each step and various obstacles between them, providing examples from his personal experience and, in this way, engaging a dispute within the rest of the group. So, while he was drawing, other informants were making comments on the picture and this turned out into a very interesting and strong discussion, providing us a new discourse on the innovation.

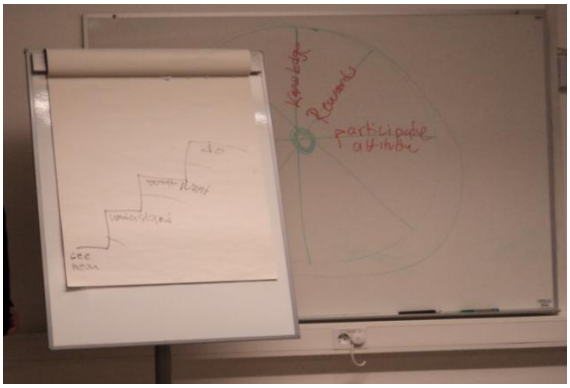


Figure 1: *Innovation step by step* (A photograph from the focus group)

As Fallon claims, the focus groups tend to yield less information than one-to-one interviews, with the same number of informants (Fallon 2002, p. 196), yet mini focus group secured us from superficial discussion with a large number of participants and, providing in the same time, the interaction between the group members around one topic.

So, arranging a focus group with business people outside our case study was a successful (as it was proved later on) strategy to deepen the researchers' understanding of the innovation culture and gather a variety of different insights towards the same problem. For instance, for us examining the possible barriers between the different innovation cultures, the suggestion "maybe it is good to have barriers" (Focus group participant, May 2013) given by one of our focus group members was totally unexpected; it inspired to change our perception regarding the matter.

The unique thing in our choice and in the use of the ethnographic methods was the fact that we have started with a retrospective research – the Pro Viva case study – a fruit drink with a healthy bug (Lagnevik, Sjöholm, Lareke, & Östberg, 2003), following the practice of a

successful innovation project and then moving on to the next stage; and there we have investigated the ongoing innovation businesses by the means of interviews, focus groups and observation methods. This strategy gave us the opportunity to frame our model –the innovation wheel– on the basis of a successful story and afterwards, to refine it by comparing it with other innovation cases.

Our particular methods combination (netnography, case study: a historical analysis of the ProViva case, semi-structured interviews, observations, focus group) was chosen in order to enable us build a model to conduct the *Innovation Culture Audit.* First of all, we have thought that the analysis of a case study would be essential in depicting the key factors of an innovation success project. Then, the other methods used, such as netnography, semi-structured interviews, observations, focus group and mapping represented the perfect tools for gathering useful material in order to build the model for conducting the cultural audit. Consequently, we worked with ethnographic methods that made it possible for us to conduct a qualitative cultural analysis into the fluid ground of the innovation clusters and provided us with new insights on innovation processes from the business field.

Our work lifecycle as applied culture analysts can be visualized by using a model presented by the consultancy company "ReD Associates" (see the Figure 2) which is specialized in combining ethnographic methods, with business practices. We have used this model, because it presents all the way of innovation approach and allows us seeing, where dothe culture analysts (the social science from the model presented in the below image) play a significant role in the new idea contemplation.

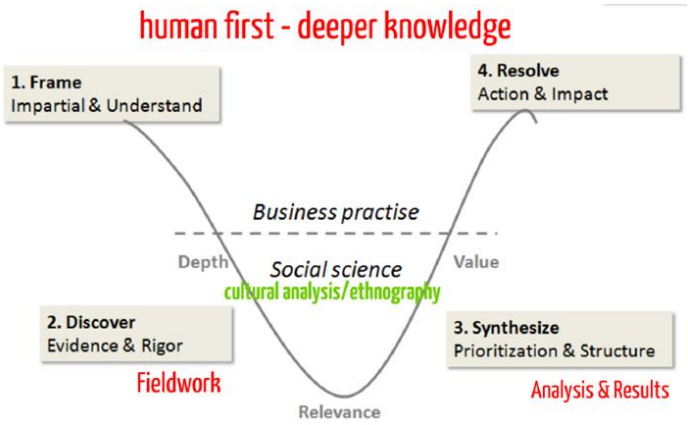



Figure 2: *Our approach and project process going from the business to the social practice* (Adopted from ReD Associates)

Our project design consisted of these major stages: identifying, organizing, systematizing and analyzing the matters, "in order to develop a relevant solution package" (Havelund 2008, p. 29). So, in order to solve the problems from the business area, while conducting our research we have used an ethnographic approach and basic anthropological theories.

The figure above shows the relationship between the business and the cultural analysis field. At the first phase, as described in the previous chapters, we had to define and frame the project, to understand its raising problems and to get to know the client's culture. During the first meetings with the client, it was important to learn the client's language in order to bridge two different ethno-talk and business-talk languages in both words and action (Hult, 2008); that could ensure the client about our skills and allow us to work out fruitful business ethnography.

The next step was doing the actual cultural analysis and going into the field. Our focus was the deeper knowledge, so we put the emphasis on the human approach. In this sense we first started to collect real stories, by meeting and talking to people from the innovative food business companies. So, to gather data for our cultural analysis we used the qualitative and ethnographic methods, generally considered as our strongest asset and an integral part of the scientific identity (Havelund, 2008).

According to our project strategy, the next step was going through data once again, synthesizing it and seeking for common themes, or threads in what is really valuable. This project phase was like a check point, which required us slowing down, stepping back and looking at the whole picture. We realized that the ethnography allowed us to see the problem's complexity and that was a beneficial factor – seeking for unique information and interesting solutions – and, at the same time, a challenge - to generalize and simplify the results and create meaningful deliverables that would matter to the client, since, it is not a secret, the industry requires fast, useful and focused results (Syllow, 2008). So, before we have stepped from the culture science stages (Fieldwork and data analysis) and brought the final results to the client, presenting a nice story was definitely not enough; we needed to bring useful and concrete recommendations in the business practice knowledge (Petersen & Damsholt, 2008).

### 2.3. Limitations

The main drawbacks we encountered while conducting the research arethe language barriers and the lack of the actual observation of innovation process. All the interviews were conducted with Swedish speaking persons that could express themselves in English. However, there have been moments when our informants would have felt more comfortable speaking their native language. Having a Swedish speaking member in our team, for the first part of the project was a great help that is familiarly introducing the interviewee into the field.

The second limitation is related to the fact that our study was based on a historical analysis, so there was no possibility to conduct the observation of the field in which the innovation process was happening. The research was based on the information gathered by the MACA team from interviewing the persons involved in transforming ProViva into a successful business. Consequently the only possible observations were those made at the very place of the interviews. Not being able to observe the material culture within the environment where innovation was done represented a real drawback in conducting our study. However, based on the stories told by our informants we were able to reconstruct these spaces that represented a prolific environment for the innovation within ProViva.

### 2.4. Reflexivity

The decision of writing this paper in team came naturally and the research afterwards was made in the same manner. Firstly, we were rather doubting whether this partnership would work in terms of writing coordination, or time adjustments, but after conducting an interview with one of the HMT's employers – in order to gather more information on the company's organization culture – we understood that the saying "together we can do more" (managing partner for the HMT, 2013) might as well be applied in our case.

The communication within the team and outside, with the client was a fluid one, an informal and open to questions and feedback one. However, we noticed that face-to-face communication is much more productive and reliant than the virtual one. Situations occurred when we were supposed to solve a task via e-mail and the result was not as satisfactory as when we worked together, by meeting at different places.

Another thing to keep in mind is done by the barriers that tend to form between the client's business perspective and the cultural analysts' ethnographic approach. Even though there is a clear distinction between the two different worlds, that of ethnographers and that of

business sector people, we as applied culture analysts, sought for a working strategy that could satisfy our curiosity– often one of the motivating forces in cultural analysis (Sylow 2008, p.14) – and in the same time would bring a real value for the client.

### 2.5. Ethical Considerations

Concerning the ethics of the qualitative methods used in order to conduct the research, the MACA team had paid attention to meet rigorous rules. Asking for recording permission when starting the interview or the focus group and receiving interviewees' acceptance for revealing their identity were issues discussed within the team. The anonymity becomes one of the respondents' major concern in terms of data disclosure, but the confidentiality aspect "overlaps considerations of privacy and assurances of anonymity" (Davies, 2008, p.51) the way in which the data is used being a main ethical issue for the researcher. First, it is a matter of having the respondent's acceptance for using the data, as well as for the degree in which the information can be revealed. After discussing with our supervisor we decided that the interviewees' identity should be kept anonymous, keeping however the real names of the companies and the institutions involved in the research.

Regarding the ownership of the model developed in order to measure companies' innovation capabilities, we are aware of the fact that the company – for which a person works as a consultant –owns the right over the product that the intern creates. However there were discussions on both sides: the client and the MACA team on agreeing over a right of franchise.

## 3. Theoretical framework

The departure point in shaping the theoretical framework for the study is one looking at the innovation not only as a business necessity but also as a social phenomenon. In this part of the paper, the need of synchronization, structure and habitus within the innovation processes is going to be presented, using Bourdieu's theory of how people come to be and act as they are, and see the world in the particular way they do (Bourdieu, 1977). Things unconsciously direct our footsteps and they are the landscape of our imagination as well as the cultural

environment to which we adapt. Bourdieu called this underlying unconscious order our habitus. The whole system of things with their internal order makes us the people we are.

Another thing to be considered is the reward system as a key factor in the innovation process, in relation to Marcel Mauss theory on the three obligations: giving, receiving and repaying (Mauss, 1990). Finally, the focus will change from the action of reciprocation described by Mauss, to the relationship between the actors, rather than the actors themselves, by using Bruno Latour's Actor Network Theory (Latour, 2005).

### 3.1. Innovation within structure and habitus

Pierre Bourdieu was not only one of the most eminent sociologists of the final quarter of the twentieth century, but also probably one of the most controversial. His growing impact within sociology consists of a change in contrast with the traditional French sociological field. He greatly emphases on avoiding purely theoretical work and focuses on building up concepts and methods through empirical studies (Silva & Warde, 2010).

Bourdieu's metaphor of social life as a game is useful in order to look at innovation as a social phenomenon. However, it is important to be aware of what the metaphor implies and when it is the appropriate time to stop using it. Bourdieu's understanding by "game" was not only "entertainment", but more the act of getting involved in the play, respecting the rules and having an intuition on the game's flow. As in the business innovation, the plan of a game is a strategic point, very well organized while, in order to be part of a game it is necessary to have a social sense, a constant awareness of the position of the other team members – a sense of how to behave differently, rather than the mere rules knowledge– "a sense of the game" (Calhown, 2003).

In our case study this "sense of the game" might be identified with the mediator's position or role, that needs to find the common language and bridge the gap between the different interfaces; this theory may also be applied to any other member involved in the innovation business, because a project success involves the understanding of the relationships and each other practices, the relating, counting and trust, in order to reach a consensus. To stimulate innovation, one has to be engaged in the game, has to know the people involved in it and the playing rules one needs to know its structure and be engaged in the same kind of practices as the other participants.

In the "Outline of a Theory of Practice" (1977, p.62) Bourdieu detailed the concept of habitus as being "the source of a series of moves which are objectively organized as strategies

without being the product of a genuine strategic intention", in other words it is a product of history which generates individual and collective practices. These objective structures that Bourdieu refers to are the material and cultural conditions in which a human being is born (Fuchs-Heinritz & König, 2005).

"The structures constitutive of a particular type of environment" states Bourdieu, "produce the habitus, systems of durable dispositions, structured structures predisposed to function as structuring structures" (Bourdieu, 1977, p. 53). These inherent dispositions such as feelings, the way of things, or taste, shape the individuals' way of living, their practices, their behaviour. In an organizational environment the habitus is produced by the organization's structure by generating a common behaviour, a synchronic attitude which proliferates the communication flow and boosts innovation.

It is interesting to observe that these social structures do not determine the individual action; on the contrary, habitus is a flexible, open-ended structuring system that enables the social actors to have various creative strategies and cope with the unforeseen social structures (Elliot, 2010). Inside the company or the organization's structure the habitus invests the employees with a practical sense which empowers them to adapt to the most unexpected situations. The habitus unconsciously guides the individual's practices (Bourdieu, 1977).

In the business innovation environment, the habitus is an internalized necessity that gives to the actors involved in the process a semi-automatic grasp of what is happening inside the structure and generates meaningful practices such as the coordination of the ideas, still leaving place for originality and inspiration. How does this happen? Due to the fact that the practices are not locked in a fixed structure, but shaped by requisites, space, condition and atmosphere.

### 3.2. The gift as a rewarding system

Considering an innovation process, looking at new organizational forms, new methods and knowledge is not enough; also the marketing and the social interactions must be taken into account (Gergils, 2005). The first question to ask on the interaction matter is: to what system does this interaction belong? In this section, the interaction between the act of giving and receiving as main counterparts of a reciprocity system it is going to be explored; this has been extensively studied by Marcel Mauss, a French sociologist and anthropologist (1872-1950) whose analysis particularly lied in investigating the relation between forms of exchange and social structure (Mauss, 1990). In a corporate environment, rewards systems take

different kinds of shape for different programmes set up by a company to motivate its employees. They play a key factor within innovation processes due to the fact that functioning systems of reciprocity between the actors involved in these processes have a major role in boosting innovation and encouraging creativity.

In his most famous book – „The Gift", Mauss demonstrates the existence within the most varied forms of exchange and services of a single power included in three different, but interlinking obligations which reconnected the gift's arrival point with the counter-gift and their original departure point (Godelier, 1996). According to Mauss, the institution of "total services" does not only carry with it the obligation to reciprocate received objects, but it also implies two other obligations of equal importance: on the one hand, the obligation to give presents and, on the other, the obligation to receive them. In all these actions, there is a succession of rights and duties: to offer and to accept. All these interactions express one social system including everything from food, objects, service, people; it is a system of "passing on", for balancing accounts: "everything passes to and from, as if there were a constant exchange of a spiritual matter, including things and men" (Mauss, 1990, p.18).

In his book - "The Gift", Mauss points out on how the individuals offer their services on the account of that they are being paid back. This gift exchange theory is not connected to individual and groups as much as to the objects themselves (Mauss, 1990). The material and moral life exemplified in the gift exchange functions in the manner of necessity. The obligation is expressed in myth and imagery, symbolically and collectively. It takes the form of interest in the object exchanged and the objects are never totally separated from the person that exchanges them. These exchanged objects establish a communion and an almost indissoluble alliance (McGee & Warms, 2003). Things are being seen as an extension of the persons and the people are being identified with the things they possessed and exchanged. In an organization's environment this reciprocated exchange of objects act as an allegory for the rewarding system. The employees offer their services in exchange for the remuneration, or other forms of rewards provided by the company management. There is a constant exchange between those who lead and those who work for them.

According to Mauss, "exchanges and contracts take place in the form of presents; in theory these are voluntary, in reality they are given and reciprocated obligatorily" (Mauss, 1950, p. 3). The gift cycle can be looked upon as a total social phenomenon that comprises all the associations – symbolic, interpersonal and economic that we need for the comparison with the market economy. For instance, in a business project such as the ProViva case study, the rewards seen as a reciprocated exchange of objects, there were not only economic – by

bringing high profits to the company – but also rewarding from a symbolic point of view, by creating an innovation that matters for the Swedish society and by establishing the brands' image on a competitive market.

In the primitive societies, the exchange was not motivated by economic reasons; it was simply driven by rules of reciprocity, on which the society' solidarity depended (McGee & Warms, 2003). The object which, in our findings, is not related to money – as a financial reward – but more to the fulfilment that you have reached your goal and were able to see your innovation idea succeeding. For instance, there were situations among the conducted interviews when the innovation business idea did not bring any profits for the company, but the same technology was used in different projects so that the investment could be recovered. Or, in other cases the fulfilment was accomplished not by the economic reward, but by the benefits that some innovations were able to bring to the Swedish society.

Inside an organization, the rewards systems are seen as a control tool that measures the employees' productivity, but also their relationships with other employees or managers (Samuelsson, 2008). These rewards may be of a material form, or monetary rewards taking the form of loans, incentives; they may also symbolical/non-financial rewards in the form of team – building activities, or educational programs that would bring a psychological benefit. In the ProViva case, one of the most rewarding tool that brought the highest benefits were represented by the knowledge exchange between different categories of actors involved in the generation of the innovative idea and its actual implementation: scientists, entrepreneurs and managers.

In Mauss terms, the lasting influence of the exchanged objects represents a direct expression of the manner in which sub-groups are continually entangled with and feel themselves in debt to each other (McGee & Warms, 2003). In rewards systems this reciprocated interaction is dematerialized in patterns of behaviour that represent different levels of motivation: recognition, achievement, responsibility, work intensity/performance, promotion and personal growth. On the other hand, from the part that is ensuring the reward it must be accomplished some "hygiene factors" such as: working conditions, job security, pay and other monetary factors. The lack of these factors will lead to dissatisfaction and no motivation amongst employees (Herzberg, 2003).

### 3.3. The importance of interactions and mediators within the process of innovation

Since our research aims to examine the process of innovation in terms of culture, our focus lies in the particular environment where innovative ideas are generated and developed. However, the innovation arena is very dynamic and it is formed by the interaction and the engagement of various actors, not only on individual but also on the organizational basis. In order to study theinnovation process, it is important to assess the complexity of the context, including the actors connected to it that are engaged by the means of networks, as well as the relations between them that involve economic, political, scientific, historical and cultural issues and produce specific conditions creating a certain climate for theinnovation to happen (Daroit & Nascimento, 2009).

Our cultural analysis on innovation will invoke Bruno Latour’s Actor-Network Theory (ANT), characterized as social study of science and technology that provides an approach, often used for theinnovation studies (Miettinen, 1999). ANT is relevant as it construes a relationship between different agents and their agencies that can be both human and non-human (Latour, 2009). As Harty (2008) points out, ANT provides a view which considers the way people, ideas and things come together within networks, the ways in which they are held in place, disassociated or reconstituted. Hence, it is not a static concept, but a relational and process perspective (Hoholm, 2009) which rather emphasizes the constant transformations and reconfigurations of theactors, theartifacts and thepractices occurring through the interaction (Harty, 2008). In other words, it is an approach to uncover the “world building activities” (Latour, 1999, p. 15), which unravels social and material relations that people tend to take for granted.

Meanwhile, according to Hult (2008), theethnographic approach, a main perspective in cultural analysis, is precisely about “delivering insights on the “infra-ordinary” part of our lives that is so routine as to be almost invisible, like infrared light”. Therefore, we believe that ethnographic approach in tandem with the ANT is an appropriate way to analyze theinnovation as a very multi-sited and multi-cultural process. Furthermore, it enables us to study the emergence and the problems related to the developing and stabilizing novelty process (Hoholm, 2009), while studying the relations and connections between all kinds of materials. Within a use of ANT, our aim is to grasp the intangibles and the links between thedifferent innovation cultures, or various actor-networks as a way to understand thevarious innovation cultures which through the interactions enable theflow of theinnovation process.

Again, theinnovation is a very complex process, which includes many actors from different cultures, which, as Hoholm's (2009) research proved, happens between sectors, in particular, within different knowledge areas, organizations and networks. Therefore this in-between-ness is of a great importance to us, as it creates thefundamental innovation opportunities, opening up new combinations and having an influence on the ambiguity, de-stabilization and complexity problems. In this case, ANT is a relevant approach for our innovation cultural analysis, as it seeks to describe and understand theincrease, thecontinuity and thefall of thesocial networks that are relational and heterogeneous; that means that they are constructed from both humans and material objects, artifacts like things, technology, texts or even symbols as actors, that are ever a part of thesocial interactions and mediators of knowledge (Hoholm, 2009).

According to the *Oxford Handbook of Innovation*, a central challenge for thenetworks of innovators (or agents included in the innovation process) is the development of the capacity to enhance the information flow among thecurrent participants and, at the same time, the openness to new entrants, which means constant cohesion within the network and outside sources of new ideas; and that is a real obstacle for many organizations (Powel & Grodal, 2006). As mentioned above, most of the time theinnovation occurs at the interfaces between different businesses, wherefore, due to thedifferent cultures, many misunderstandings do occur. In order to surmount these difficulties that diminish the innovation's flow the role of mediators is an essential part to look at:

> "**Mediators transform, translate, distort**, and modify the meaning or the elements they are supposed to carry. No matter how complicated an intermediary is, it may, for all practical purposes, count for just one – or even for nothing at all because it can be easily forgotten. No matter how apparently simple a mediator may look, it may become complex; it may lead in multiple direction which will modify all the contradictory accounts attributed to its role. A properly functioning computer could be taken as a good case of a complicated intermediary while a banal conversation may become a terribly complex chain of mediators where passions, opinions and attitudes bifurcate at every turn." (Latour, 2005, p. 39)

The approach that ANT, also often called a "sociology of translation", suggests is to look at the reality as a relational and multiple one, where the different roles and identities are constructed within different sets of relations, based on different strategies for communication, activity and interaction; therefore we face the importance of mediators that might renegotiate

positions, rules and expectations from one network to another (as a truth, important in one network, might be irrelevant in another) (Hoholm, 2009). An appropriate term to describe this process of explaining knowledge transfer and innovation, according to Latour, is "translation". However, "the transfer or diffusion of knowledge is never just that, knowledge is never just 'flowing' or 'diffusing' through the system" (Hoholm, 2009, p.19), it is decided by the individual actor to pass it further or no. In other words, things as claims, orders, artifacts, goods are in the hands of people, who act in many different ways and who can modify, add, deflect or betray everything that spreads in time and space (Latour, 1988). Thus the translator of facts and technologies – a spokesperson – is described as a "skillful in the art of managing variable and unexpected social forces" (Callon, 1986, p.7), who builds technological artifacts in theway scientific facts are constructed, since, according to Latour (1987), the problem of the builder of the "fact" is the same as the problem of the builder of "objects": "How to convince theothers, how to control their behavior, how to gather enough resources in one place, how to have the claim or the object to spread out in time and space" (Miettinen, 1999, p.172).

Accordingly, the analysis of the translation is of a great importance in order to be able to understand the constitution and functioning of the networks itself (Daroit & Nascimento, 2009), because it characterizes the relationship, thenegotiations and theacts within the network. Therefore the role of a spokesman, who enrolls different actors into a network, is essential for the movement of innovation process (Miettinen, 1999). This building of the network association is constructed between human and non-human actors, or elements, where a common language may be mediated with mediators help. Moreover, "strength and success lies in the ability to bind together forces, to make them compatible and equivalent" (Callon & Latour 1981, p. 292), which means that the more actors are mobilized the stronger and more durable the network is (Miettinen, 1999). This approach makes us aware of the interaction between the human and non-human and the environment in which they are set, it looks at the materials around them as potential mediators for boosting thecreativity and theinnovation: "the machines by which they are surrounded are cultural objects worthy of their attention and respect" (Latour, 1996, p. 8). Material objects are a setting, they make us aware of what is appropriate and what is not appropriate and they work most effectively when we actually don't look at them, we just accept them. Wherefore, it is significant for us – culture analysts – to consider the importance of the materiality in the study of innovation, as a possibly very influential part that has agency in a fluid process of innovation.

In relation to ANT and the significance of materiality, Sayes (2014) considers non-humans in four different senses: as a condition for the possibility of thehuman society, as mediators, as members of moral and political associations and as gatherings of actors of different temporal and spatial orders. In addition, Sayes (2014) discusses the significant distinction of perceiving non-humans as intermediaries and mediators: it is not enough to conceive non-human as a neutral place holder and *merely* an intermediary as just a sum of its constitutive parts and relations, which does what anything in its place would do, because if we look at the non-human as a mediator, we may find out that it adds something to the interaction and association chain. Even more, non-humans like anything else that is placed in the midst of two actors, are considered as constantly modifying the relations between different actors (Sayes, 2014).

Finally, it is important to mention that our approach towards ANT is primarily methodological, because, as Latour (2005, p. 220-221) explains, it is a "theory that is more abstract than any other and that retains less explanatory power as well; it is an empty grid that does not synthesize" that does not have a general theory of agency, which means it cannot determine the nature of the agency of non-humans, nor the extension of their acts. Thus, thetheory provides a methodological sensibility, meaning the uncertainty theagency's nature, and places a strong emphasis on the appropriate empirical material to define the position and the conception of nonhumans (Sayes, 2014). However, knowing that non-humans will never have an inertia by itself (Latour, 1996), unless an actor is never isolated (Latour, 1988), our aim by applying ANT to our empirical material is to define the position and agency of non-humans and mediators in the innovation process.

## 4. The Development of Innovation Culture Audit Model

This chapter describes how–by means of examining a successful innovation project: the ProViva case – we were able to build a measuring innovation model: the *Innovation Wheel*. Moreover, we will go into detail and present the stages of building this model, its structure and nevertheless the functions and applicability of the innovation audit tool.

### 4.1. The ProViva Case - Examining a Successful Example

Examining the ProViva case, our wish was to provide a real story, which would grasp the intangibles such as values, symbols, cultural interaction between people, 'soul' of the

organization, to avoid the "common trap" (Havelund, 2008, p. 33) and to not get drown into business knowledge and business way of thinking. As cultural analysts we see the alternatives and distinguish them while the business actors may see the alternatives only when there is time for reflection, free of acting, of observing, thing which happens quite rarely in the business field which is characterized by a speedy pace (Ehn & Löfgren, 2009). In other words, as Graffman indicates, we sought for some new and interesting aspects that could be brought into an overall project (Graffman & Börjesson, 2011).

The aim of the fieldwork and analysis was to deliver a model which could be effectively useful and would be actually able to provide help and hopefully change things in a company within food industry. With this holistic perception and approach of "we need to know why – if we want to change things" (Syllow, 2008, p. 14) the analysis stage was meant to provide an answer to the question "why?" which could be a windows opener for the actual opportunity to start changes. Consequently, the first key questions to ask were: Why does the innovation become a success? Or, the opposite – why does the innovation flow process die? By asking these questions, it is of outmost importance to define what does a successful innovation mean; we plan to answer this question by analysing the ProViva case – how a did a healthy drink - by the help of one of the biggest Swedish dairy company: Skånemejerier– become a high demand on the market product.

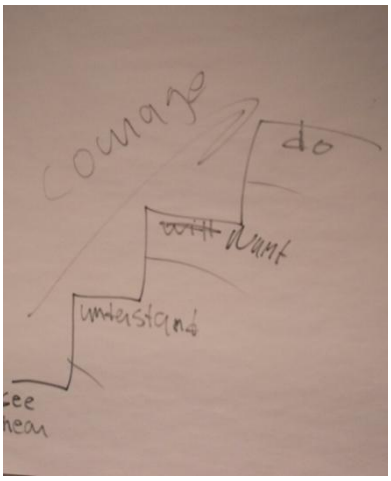

Figure 3: *ProViva - a 4 stage innovation success story.* By the authors

We traced the project through all its stages (see Figure 3). Firstly, the idea was pioneered by a professor, head of theDepartment of Surgery at Lund University Hospital, a doctor who noticed that the surgical patients were in very poor health a couple of days after the operation, so their nutritional needs had to be handled in an efficient way. Together with a colleague, this doctor initiated a research project in collaboration with two professors (one

specialized in Food Technology and the other one, in Applied Microbiology) from Lund Institute of Technology. The aim was to replace the artificial nutrient substances, administered to the patients through the tube with something more natural. They came to the solution that this natural substance should be oatmeal based. As one of the interviewees stated "the innovation is represented by a product that gives the consumer a solution. We produce solution and when people see it they say: 'Hey, I needed this. I didn't know it, never seen it, but I needed it" (Interviewee 1, March 2013). So, in order to establish a natural balance in the intestine the researchers decided to create an oatmeal "soup" which would be fermented with lactobacilli (Lagnevik, Sjöholm, Lareke & Östberg, 2003). However, the oat soup initially developed by the researchers was not so popular amongst the consumers because of its plain taste, so the product needed further development which was possible by means of networks.

The idea developed in the laboratory moved further when the well-known Swedish entrepreneur Kaj Vareman, the scientists and Lund University created a spin-off company, called Probi AB, to develop and commercialize the technology. Probi AB approached the local dairy company – Skånemejerier, in order to make this project move from a laboratory phase to an industrial-scale production. By using their expertise in food and beverages, Skånemejerier developed Probi's discovery into a fruit juice drink that contained only 5% of the oat soup but enough bacteria to provide the desired health effect. Skånemejerier had an innovation – it was the first time anyone in the world had created a probiotic fruit juice and, by doing so, had created a new segment in the juice market (Lagnevik, Sjöholm, Lareke & Östberg, 2003).

The innovation was highly appreciated and led to the attention of the global probiotics leader, Danone ltd, which bought 51% stake of Skånemejerier probiotic juice brand ProViva AB. However, as we found out during one of the interviews conducted, when such a big company as Danone buys smaller companies, as in the case of ProViva, the culture crushes, the product changes, is not the same innovation: "what big rigid companies typically do when they want to innovate: they start buying stuff from smaller companies, trying to incorporate it into their organizations and the procedure, the culture don't match, they crash. And they realize…ok, if we take it in, then it's going to be killed off…" (Interviewee 1, March 2013).




Figue 4: *Innovation step by step* (A photography from the focus group)

In order to trace the key factors that led to the success of this story, we conducted four semi-structured interviews with key persons involved in this project. First of all, we talked to the manager of Skånemejerier at the time the ProViva brand was launched on the market. From him we learned that success of ProViva was based on a "playroom" consisted of a small group of people – a "small tribe" as they liked to name themselves, no more than 6 or 7 persons between which there couldn't be found any kind of hierarchy and who brought thecommitment to the project: "this is not about debating on innovation, but about doing it!" (Interviewee 1, March 2013). The atmosphere within the team was dominated by passion and motivation and even though the team knew that structure may hinder the innovation, or that a well framed strategy might inhibit thecreativity, at this stage they were aware that "innovation needs to be planned" (Interviewee 1, March 2013). Consequently, in the ProViva case, a very well planned structure within the organization, the "why not attitude" and an openness towards theopportunity culture represented the main factors that transformed the innovation into a success story.

If the situation described previously gave an insight on how the team functioned, the group interview conducted with two people from the Research & Development department made us aware of the technical side of the innovation and how much trust the client could have in the new product launched on the market. There were other competitors on the market that developed their own bacteria, but what ProViva had in advantage was the fruit technology, while the competitors such as Arla[v] were still based on dairy products. The R&D team that we interviewed while conducting the case study of ProViva strongly believed in the product they represented and they affirmed with passion: "We loved to fight with Arla" (R&D Interviewees, April, 2013). While defending the quality of the product to the manager that

should decide whether to invest or not in it, the R&D team took a very protective attitude. They totally believed in it. Actually they described the moment when they were preparing to approach the manager with the project as a very tense situation but full of trust: "we sat on the corridor, holding hands and telling with confidence to the manager that he should go for it, the product is a great innovation" (R&D Interviewees, April 2013).

Finally we confronted the results collected from the interviewees with the persons involved in the ProViva case with other insights gathered from a focus-group with people that developed innovative businesses. Even though the members of the group had a common background, their work experiences was quite heterogeneous – fact that provided our research with a diversity of perspectives on what innovation means and how it is perceived, depending on how big or how small a company is. Their insights on what innovation means and how it can be handled were very useful in our analysis of the empirical material previously gathered. One of the focus group participants presented how theinnovation should be approached step by step, in order to be implemented: first you need to see the opportunity, then to understand the idea, follow by "want" a strong believe, wish and guts to actually do it, the final step: "the only way of learning is by doing mistakes, one might not be afraid of mistakes" (Focus group participant, May 2013).

After presenting them the ProViva case and leading a discussion on which are the factors that boost theinnovation and which are those that might hinder it, we came out with a first draft for the tool designed to measure innovation.


Figure 5: *Presenting the ProViva Case*
(A photograph from the focus group)


Figure 6: First draft for *Innovation Wheel*
(A photograph from the focus group)

The picture from Figure 5 shows how a part of MACA team explained the ProViva case success story to a group of entrepreneurs familiarized with the innovation field, in the context

of a focus group and how the idea of a healthy drink passed through all stages, from the laboratory to a business idea put into practice by managers from Skånemejerier, Sweden's leading dairy companyand, finally how the product was bought by a big controller company: Danone. The second picture, Figure 6 shows the first draft for building the *Innovation Wheel,* it shows how different key words (guts, language, mindset, knowledge, rewards, participative attitude and enhanced chance) are representative for different clusters that eventually would build the four sectors of the wheel.

The ProViva case study represented the perfect prototype to build a model that could be used to measure innovation within different companies. The thematic analysis based on patterns found in the empirical material gathered during the fieldwork was an intensive process checked by applying the results to other case studies: Bioett which business idea was to monitor the temperature for refrigerated goods, like food and medicine during transport, in order to ensure that quality products are delivered, Pampett – a business idea developed from Bioett consisting of a humidity sensor, used to improve elderly care by avoiding older people being awakened unnecessarily, Oatly who developed an alternative drink made of oats for people who have lactose intolerance, Aventure which is a corporate business with a network of qualified world's leading research institutes in the field of functional food and biotechnologies, conducting clinical studies and developing both nutritious and commercially successful products and, finally Berries by Astrid which business idea was to sell to people a healthy smoothie made of thebest ingredients without any additives. All these short case studies that had a checking up for our data analysis results are going to be presented in the chapter Functions and Applicability of the Innovation Wheel.

What made ProViva become one of the most successful innovations, in the functional food segment, at the end of 20$^{th}$ century, was represented not only by the unique solution to create a tasty oat based drink with fruity flavors for the patients that suffered surgical interventions, product that became very popular for a much extended market than the initial target group, but also the close cooperation between the doctors that have seen the problem amongst their patients, the entrepreneurs that have seen the potential that the idea developed in the laboratory could bring as an expanded business and nevertheless the managers that transformed the initial product which was considered rather a plain and tasteless "oat soup" into an attractive, fruity flavored oat drink, that could prevent the digestive problems of its consumers. ProViva became one of the most successful innovations in juice drinks: "With annual retail sales of more than $50 million a year, and still growing at around 8% per annum, ProViva is one of the most successful innovations of the last 20 years," according to the food

and beverage industry expert Julian Mellentin, theauthor of "Probiotic Juice: Five Key Strategy Lessons from Europe and the US (Nutraceuticals[vi] World, 2010).

The ProViva case study has been presented in a condensed way. There are naturally a lot of aspects that could have been developed and the account does not give full credit to the complexities of the case, as seen in our interviews and field notes. But we have chosen to focus on the general issues about the mediation between different actants, in order to build a foundation for the discussion on how we went from the case study to building a tool for innovation, based on thecultural analysis.

### 4.2. Wrapping it Up: Why Innovation Wheel?

We have started the previous section " The ProViva Case – Examining a Successful Example" with Sylow's approach of "knowing why", whereas the next step of thecultural analysis in theapplied project is transforming unique observations and stories into generalized conclusions (Sylow, 2008). Respectively this section examines the process of developing a model the *Innovation Wheel*, as a final outcome of theinnovation culture research conducted by culture analysts. Since theapplied cultural analysis has an expositive approach to describe and understand cultural phenomena, but also another, broader objective, which is prescriptive, meaning the usage of gathered insights in order to deliver a conceptualized product, or to provide recommendations/solutions. There are implications for how theempirical material was used and analyzed (Petersen & Damsholt, 2008). So, while the ProViva case was rather an interpretive stage of the study trying to grasp the innovation culture, this chapter takes an explanatory position of how the empirical material gathered during the fieldwork with a help of netnography, interviews, observations and focus group from a thick ethnographic description (Geertz, 1993) was digested into generalized conclusions in a textual and visual manner.

To start with, even though our collaboration with the HMT started with a rather general client's request to identify the factors that hinder, or boost theinnovation process, soon we realized that consulting business, preferably requires simplified and tangible results and that the "Digest Innovation" project itself was designed in a way that produces an innovative commodity which could provide value for facing innovation difficulties business organizations and attract new clients in a consulting business. As Graffman and Börjesson state (2011), it is very important that thecultural analyst doing applied ethnography should be flexible and able to adjust to client's demand for commercial relevance. In addition, O'Dell

and Willim claim that "in the world beyond academy, ethnography is often spoken and written about, as if it were something akin to a secret weapon, that can give a business a tactical advantage in the market" (O'Dell & Willim, 2011, p.28). Accordingly, we had to search for different ways to communicate ethnographic methods, theoretical foundations and cultural analysis in order to demonstrate its relevance for the client's business and project development. In other words, the applicability and the question on how the results of cultural analysis are to be used by the client became a significant factor of our study, as well as a part of the analysis process, that undoubtedly affected our strategies of dealing with the empirical material.

So as to make the results of cultural analysis applicable, we had to take into consideration the "Digest Innovation" stakeholders' perspective. This kind of applied cultural analysis requires a lot of cooperation and interdisciplinary communication, which means that a cultural analyst has to "learn their language and move around in different settings as a chameleon – without giving up your individual character" (Ehn & Löfgren, 2009, p. 34). In our case, it was important to learn the client's culture in order to bridge two different ethno-talk and business-talk languages in both words and action (Hult, 2008). Yet our cooperation was based on mutual respect, acknowledging the client as the expert of his business and combining his business approach with our knowledge of ethnography (Hult, 2008). Even though not having business experience seemed to be an obstacle, at the end it turned out to be the biggest asset of our cultural analysis, as we entered the field with naïve and open gazes, without any pre-assumptions and that assured theobjectivity and thecritical eye. As one of our interviewees said, when talking about the innovative idea generation within corporate environment: "the worst people you can hire are the ones from the business area, because they know how to do it, and when you know how to do it then will be no innovation" (Interviewee 1, March 2013). Following Hult's (2008) argumentation, most businesses deliberately look at theage, thegender, the assignments and the experience, so that such matters as people, dynamics, change and culture have thetendency to be forgotten. While our ethnological capacity and neutral outsider's position allowed us to see the patterns, instead of single fragments (Hult, 2008).

However, there was a true challenge to generalize and simplify the results and at the same time, to create meaningful deliverables that would matter to the client. We found ourselves constantly maneuvering between our will to describe "it all" (O'Dell & Willim, 2011, p. 30) – as the main sign of objective ethnography was an elaborate description of even the smallest details – and thefunctional client oriented approach, in the pursuance that

theresults of thecultural analysis to be used by the client after we would have left the project. It was not enough to present a nice innovation success story, because an essential part of our work was to bring in new knowledge that could be used in business practice, with concrete recommendations (Petersen & Damsholt, 2008). Therefore, a big part of the analysis stage was discussing different ways of packaging our deliverables that could be adopted in practice, yet still keeping the complex approach of cultural analysis and ethnography. Consequently, holding the balance between cultural analysis and business perspective, without losing the first one, turned out to be not the easiest part of the applied cultural analysis, since it is not a secret that industry requires fast, useful and focused results (Sylow, 2008). People lack time to attempt to understand something unfamiliar, therefore an important part of theapplied research was to make the results "easy to buy" (Hult, 2008, p.48). Accordingly, the representational practice of ethnography, the quality and theways of presenting our findings became very important factors to communicate our cultural analytical skills and provide cultural insightfulness to the project.

To deal with this duality of applied research we have used the approach, proposed by O'Dell and Willim (2011), thinking of ethnography as the act of composition. Composing implies more than "writing" or providing a narrative description, it addresses how different kinds of objects (images, sounds, words…) are composed as a part of an ethnographic work. Furthermore, no matter how detailed and "thick" descriptions may be, they need to be supported with analytical depth, in order to provide them with significance, while thedepth of the field is gained through theanalytical and compositional processes that helps to frame and broaden the understanding of empirical material, in our case – the innovation culture (O'Dell &Willim, 2011). Moreover, we took into consideration Graffman's and Börjesson's (2011) guidelines for thedata analysis, based on multidisciplinary knowledge on how to record, map and structure the raw material gathered by the ethnographic research, in order to provide value and make a difference in a corporate environment. As Graffman and Börjesson (2011) suggests, it was important to filter the data through the established categories. A careful raw data categorization helps to correctly interpret the ubiquitous metaphors, to facilitate communication with the client and also enhance the understanding between thedifferent parties of an applied research (Graffman & Börjesson, 2011).

Conducting interviews with successful entrepreneurs involved in the ProViva project was only one part and perhaps, the most engaging of our ethnographic work; however, interviewing and gathering individual stories around this innovation case was not enough to provide insights about theinnovation culture. After each interview, our team spent long hours

transcribing the interviews and transferring outspoken words into text, in order to prepare them for analysis and to be able to systemize and group thedata. Furthermore, having put theinterviews on the paper allowed the differentiation between “what informants are acting and what they are saying” (Graffman & Börjesson, 2011, p.103). At this point, it was extremely useful having several people working as cultural analysts, as we could use a team as a multimodal machine, meaning that simultaneously, we were able to conduct different tasks. At the time when conducting interviews for the ProViva case, our group consisted from 3 members and we attended in all the interviews together. While one of us took therole of the main interviewer guiding the conversation, theothers were following the interview and reflected upon the relevance of responses provided by informants, asked questions - if necessary, in order to get more accurate and extensive answers to grasp the essence of the ProViva innovation culture and its peculiarities. All theinterviews were recorded, to assure thepossibility to come back to the data when needed, as well as to ensure better smoothness of the conversation and have enough time for observations and note making for theinsights that couldn’t be recorded. Furthermore, most of the informants were interviewed separately, in order to see theindividual perspectives around one subject, yet the interview conducted with two men involved in the ProViva business at the same time revealed additional insights, that testified the immediate interaction between them and let us feel the team spirit and close partnership of ProViva co-workers.

After the first round of interviews was finished and the transcriptions were ready for further analysis, we realized that the material we already had covered a lot of useful and provocative data, which needed to be digested and organized. So we started with a thematic analysis of the collected empirical material, in order to get to the heart of the matter of ProViva. First of all, we looked for the negative and the positive attributes of theinnovation that, according to the informants, somehow boost or hinder the innovation process. Secondly, from each interview we took out the key words regarding theinnovation culture and divided them into several groups, depending on similarities and connections. So, each interviewee had got a table with the main during the interview addressed issues that allowed thepossibilities to seek for common terms. After systemizing every interview, in order to get a rather general approach and a common picture of the ProViva case, we looked at the organized data and searched for some general factors that were touched upon, by the informants’ majority, and that had something to do with theinnovation culture. So, what we did, we started gathering at the same place all the factors, we grouped them into categories and then we tried to find patterns in order to make the results presentable and easy for the client to understand. The

approach we had in mind while conducting this analysis was greatly similar with what Richard Wilk (2005) calls cultural smoothing – "a process of interpretation and representation which finds order in chaos, direction in a random walk and geometry in a messy tangle" (Wilk, 2005, p.33). In this way, piece-by-piece, the interviews with persons involved in the ProViva case revealed social and cultural patterns associated with theinnovation culture. We came up with key words such as attitude and mindset, organization, symbols, values, language and communication, difference, relations, outside environment, opportunities and product value. All the key words and phrases that speak of success factors or imply hinders of innovation process are extracted from the interviews conducted during the research of the ProViva case study and are summarized in the following Table 3.

| | | | | |
|---|---|---|---|---|
| Passion<br>Engagement<br>Fun<br>'Brutal'<br>Motivation<br>Stubborn<br>Curiosity | Zone<br>Complexity<br>Conformity – hiring & thinking<br>Comfortable | Language/attitude<br>Fear of mistakes<br>You can´t do that<br>It´s a failure<br>Being allowed to do it<br>Investment vs Cost<br>'We don't debate, we just do it'<br>Opportunity mentality<br>'Why not' attitude<br>Edison attitude<br>Keep on trying | Strangeness<br>It´s alien<br>Not invented here<br>Disruptive ideas | Organization<br>Brand value protection<br>Risk avoiding |
| Framing<br>Creating a religion<br>Fencing possibilities<br>Traditions | Fika board<br>Nilsonpiraten<br>Humour | Creating meaning<br>Presenting solution | Thinking outside the box<br>Loving paradoxes<br>Different angles | Committed management<br>Orchestra<br>Tribe within the tribe<br>Right people<br>Transparency<br>Not tied in the structure |

Table 3: *Thematic analysis for* the *ProViva case study interviews.* By the authors.

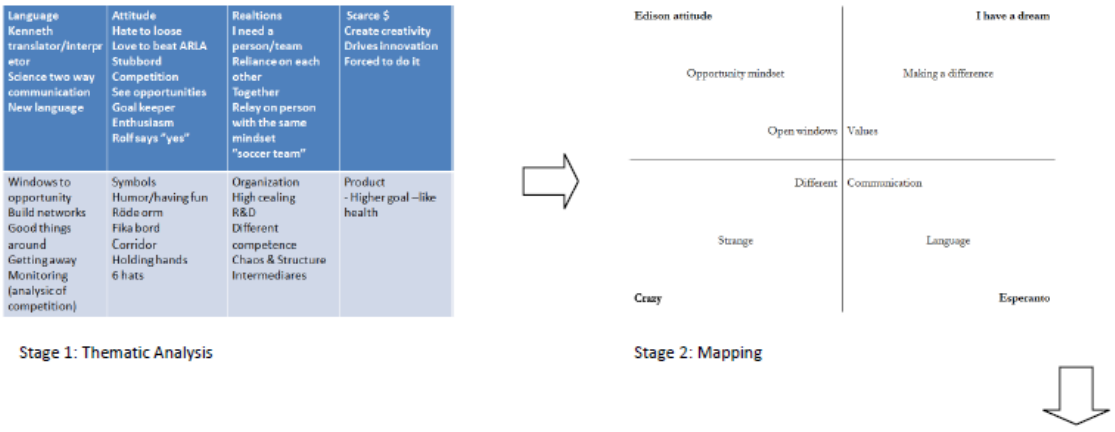
However, at this stage, conducting thethematic analysis we asked ourselves how will that make sense to the client? How are we going to communicate the importance of these patterns that affected the flow of innovation and framed theinnovation culture of ProViva? In order to reveal the interconnectedness among the key-words, another method such as mapping was used: "Mapping is always a way to structure: to cluster but also to make obvious divergences visible and hence, possible to appropriate by a following profound analysis" (Graffman & Börjesson, 2011, p.98). Consequently, "softer" key words were placed closer to the middle, and the most extreme – farthest (see Figure 7: stage 2).

Herewith, while collating the answers of the interviewees and working with mapping, we started thinking of some kind of a model which would help communicating the findings about the ProViva's innovation culture. Even though we were able to categorize, we realized that those different cultural variables are overlapping and cannot be addressed separately from each other, as they provide thecontext to each other. Therefore, we aimed for a certain framework that would allow us to see theinnovation culture as a whole, with its fickle level of openness for innovation and provide an overview on how different actors come into place.

It is difficult to name exactly the moment we came up with an idea of seeing innovation as a wheel; however, already quite in the beginning we started discussing our position in the project and our aims for during the fieldwork. Looking back retrospectively at the development of the *Innovation Wheel* as a tool for measuring the innovation culture, this model came into materiality after intense discussions and analysis within the cultural analysts' team. Before designing the final model the team considered other metaphorical approaches such as an umbrella concept which had beneath it all the four different cultures that need a strong cooperation; another possible representation of the model was a torch symbol composed by three different parts: the handle, the trigger and the flame components, representing the organization/the handle, the key-persons/the trigger and the flame/the process of innovation itself, which by one of interviewees involved in the ProViva case, was described as "a complete chaos" (Interviewee 1, March 2013). However, using them we were not able to address all the peculiarities of theinnovation culture; they seemed to be too abstract and not as functional, while a wheel approach embraces the components that clearly affect its performance. Because of its shape a wheel seemed to be an appropriate way to visualize the complexity of innovation and relationship between different spokes and various factors that play a significant role in the innovation process. It was important that the appearance of the model would reveal the innovation process, while a wheel in itself speaks of movement. In fact, the idea to explain innovation as a wheel was born from the effort to display the complexity of results, as well as more specific findings. We understood that innovation implemented by ProViva was already out there, so we did not need to invent a novelty, but to understand under what circumstances and in what cultural context this novelty was created. In other words, we did not need to invent a new wheel, but to identify the spokes that made this innovation roll. Hence, step by step, we started seeing theinnovation as a wheel, which needs to be spinning in order to go forward. To make the wheel roll, you need to have a certain level of components that create a cohesive whole that pushes theinnovation onwards. So, our mapping idea ended up in a shape of the wheel, with four major key words that we – after

extensive literature and innovation frameworks' review – considered common for every business institution: organization, knowledge (know how), market orientation and result (see Figure 7: stage 3). Finally, these key factors led to the key spokes the *Innovation Wheel*, that were supported by secondary dimensions such as creativity, result, approach, "soul" and corporate culture. Based on different patterns/similarities, these innovation factors represented by the spokes in the *Innovation Wheel* formed the four sectors of the wheel: explorer, developer, marketer and controller. Furthermore, the wheel which needs to spin in order to make the innovation flow smooth was considered to be a suitable model as it was able to cover different stages of innovation process, represent four different cultures (explorer, developer, marketer and controller) and show their inter-connection. In the context of an ethnographic work outside the academia, there is a great need to "go beyond the textual representation" (O'Dell & Willim, 2011, p. 35), so we decided to put an emphasis on the ethnographic results visualization and follow the idea of the wheel, which worked as a cultural smoothing strategy to present our findings regarding the innovation culture.

Moreover, the wheel was supported with some quotes from the conducted interviews (see Figure 7: stage 4), which confirmed and worked well with mapping ideas and provided secondary spokes (see Figure 7: stage 5) that were exactly oriented towards the innovation culture and its different aspects. So, in other words, quotes placed on the wheel defined the spokes, and thespokes represented the quotes. The following Figure 7 presents different stages which lead to the completion of the final tool to measure innovation within an organization.



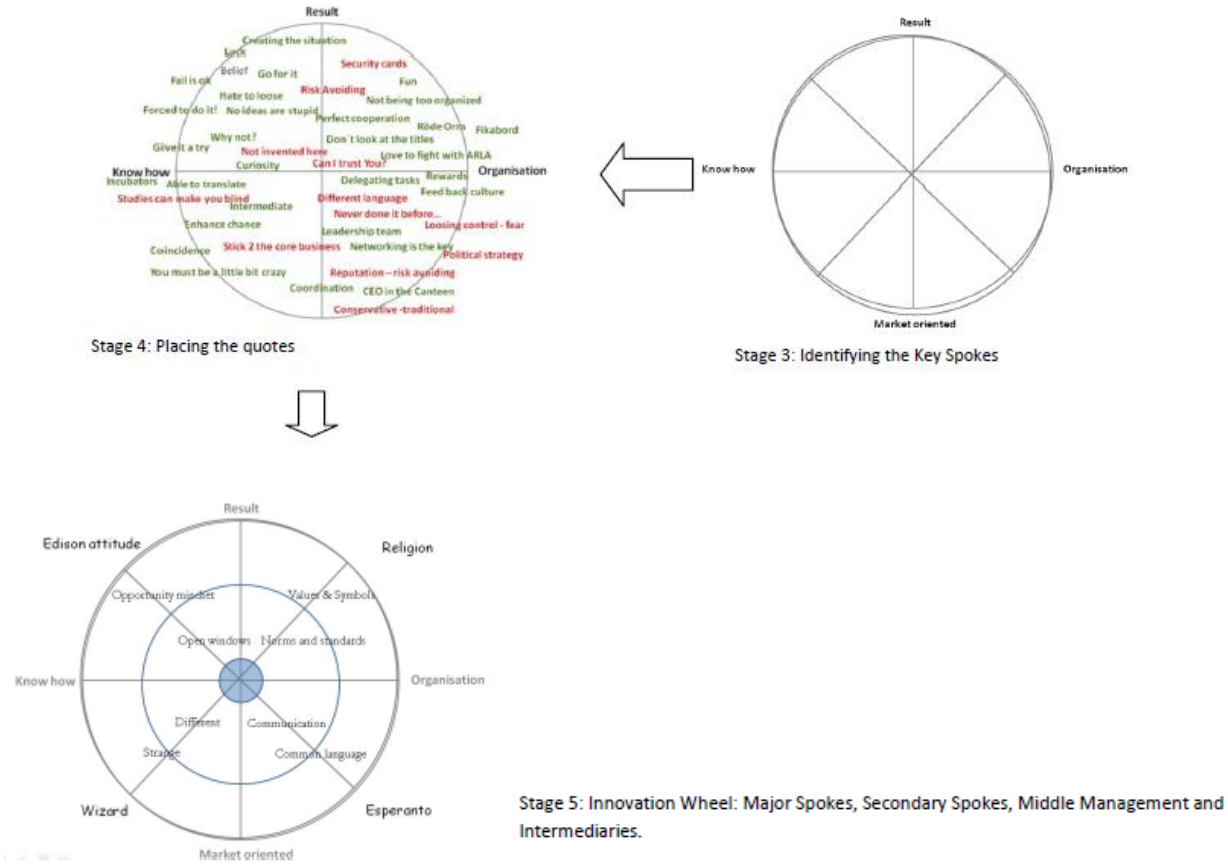



Figure 7: *The Development of the Innovation Wheel*. By the authors.

Our next step was to conduct more interviews to check and consolidate the model. At this stage we tried to investigate different innovation cultures, so as to be able to define their place on the *Innovation Wheel* and see how thedifferent organizations' wheels look like on the model. The material gathered during interviews allowed us to identify how the explorer, developer, marketer and controller type organizations are revealed on the model, what is their focus and what cultural differences between these different businesses can be seen on the*Innovation Wheel*.

The *Innovation Wheel* incorporates four sectors, named by different cultures with individual characteristics. The circular design of the model and its structure was designed in order to make it possible to measure this practical sense invested in a ritual practice, sense specific to each culture. This is what Bourdieu calls "habitus": different personalities act in a specific way, without being aware of the fact of doing so (Bourdieu, 1990). They are engaged in a social phenomenon, have a well-defined strategy and play according to the "sense of the game" (Calhoun, 2003). The team players need to act in synch, according to a previously planned strategy, in order to reach their goals.

Malinowski, a polish-born social anthropologist, educated in England, states that when the social phenomenon becomes the established, routine response for the members of the group, to their individual needs, the response becomes a social institution. Malinowski focused on the question: “What is the function of social institutions?” He describes the nature of an institution as follows: “Each institution has personnel, a charter, a set of norms or rules, activities, material apparatus (technology), and a function” (Goldschmidt, 1996, p. 510). The members of the same institution share the same script which is culture. So, culture becomes the key factor that shapes the institution. Coming back to the *Innovation Wheel*, the four different sectors are defined by a specific type of culture: the explorers, the developers, the marketers and the controllers.

In order to keep the *Innovation Wheel* spinning, we observed a great necessity of communication between the different sectors of the wheel. There is a need of culture exchange between different types of institutions. The key role for this transfer of knowledge is played by the intermediaries, which act as mediators, or translators (Latour, 2005) between different sectors of the wheel and, nevertheless the management that should have a clear vision on the status of innovation within the organization.

To sum up, the *Innovation Wheel* works as a model for the *Innovation Culture Audit toolbox* that helps companies identifying their (innovation) profile, together with a grading scale that provides the *Innovation Capability Index* and gives a picture of the company’scurrent innovation situation.By conducting an innovation culture audit acompany is able to see its place on the wheel that consequently provides an overview of what it is lacking in order to improve its innovation capability.

### 4.3. The Complexity of The Innovation Wheel: Different Sectors and Their Interaction

After discussing the model with the members of the expert group involved in "Digest Innovation" project, people with background in business innovation field, as well as people from the academia, the wheel was refined and adjusted according to the market analysis and the experience of the expert group members.

The *Innovation Wheel* consists from four major key-spokes going clockwise from left to right (knowledge, result/product, market orientation and organization) that frame 4 sectors: explorers, developers, marketers and controllers. Every sector can be shortly identified by following questions that describe the "personality" of the sector persons and show their focus: know why – the reason, know how – the process, know who – the people, the connections and finally know what – the facts. In a process of creating a successful innovation, all the four personalities and questions must work together.

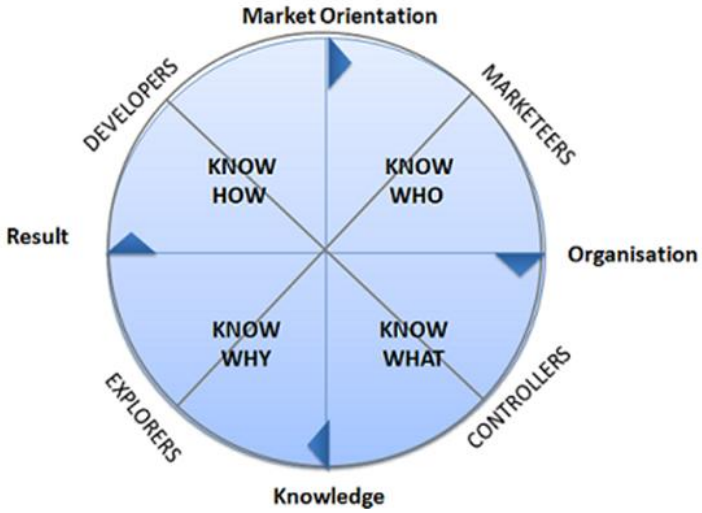



Figure 8: *The Innovation Wheeland Sectors.* By the authors

Each main spoke of *the Innovation Wheel* is defined by a series of characteristics, specific for each wheel' sector as presented above.

**Knowledge:**

- Science capability to develop a new knowledge in relation to the customer needs;
- Exploring for new possibilities to develop old, or create new products;
- Focus on science, academic research.

**Result:**

- Focus on product creation and development;
- Ability to develop an innovative product that meets the customer's needs (capability to see the potential of the product, and how different it is from other products on the market).

**Market Orientation:**

- Brand's positioning on the market;
- Capability to develop a new business;
- Capability to follow and adapt to the market changes;
- Capability to coordinate the product release in relation to the market demand.

**Organization:**

- Capability to develop the organisation;
- Organisation's flexibility (conservative-traditional or innovative);
- The structure of the organisation (hierarchical vs. democratic, leadership team, responsibility delegation, communication);
- The organisation's culture (norms and values, rewards, feedback culture, political strategy, rituals, common language).

The characteristics described above resulted as analysis from the interviews conducted with people responsible for each stage of a process: explorers, developers, marketers or controllers, stages that constituted the sectors of the Innovation Wheel, defined by specific cultures.


Figure 9: *The Innovation Wheel*: *Management & Intermediaries*. By the authors

The blue circle situated in the centre of the wheel represents the management team that needs to supervise all the departments and to have an understanding of all cultures while the next concentric circle represents the intermediaries, or the connecting people that need to transmit the information from one sector to another, in an accurate manner.

***Characteristics of the Sectors***

**Explorers:**the main focus of this sector is on producing theknowledge that would provide the developing of a new product. The intensity of theknowledge applicability rises as we move to the next main spoke: *Result* on a clockwise orientation. The radial dimension shows the approach to the new knowledge encountered between our interviewees. The quotes from the ProViva case semi-structured interviews are red marked.

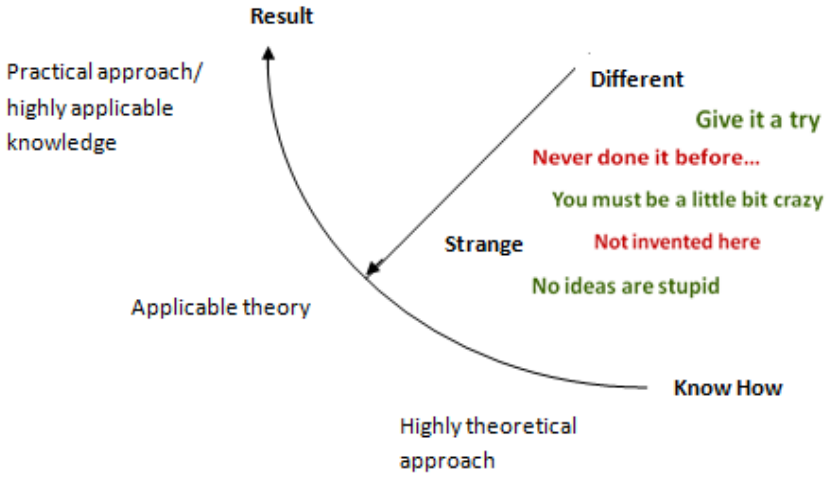



Figure 10: *The explorer sector*. By the authors.

**Developers**: for this sector we can observe a shift of focus from the science (explorers), to the business field, focus on creating a business idea. In this case, the capability is to see the potential of the product, to see how different it is from other products on the market. On the radial direction it can be noticed the attitude towards the innovative business idea.

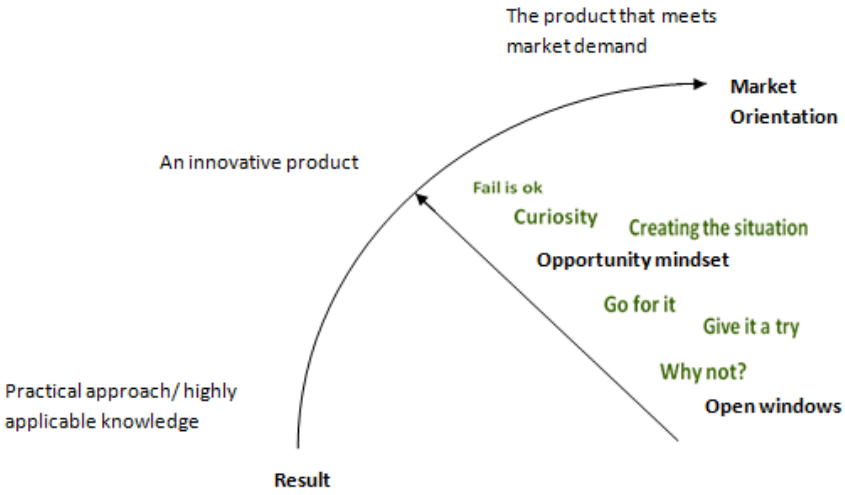



Figure 11: *The developer sector*. By the authors.

**Marketeers:** for this sector the focus is on the product's positioning on the market, branding & public relations. The main capabilities enhanced in this area are to develop a new business, to follow and adapt to the market changes and to coordinate the product release to the market demand. Marked in green on the radial orientation it can be noticed the values established by the new brand.

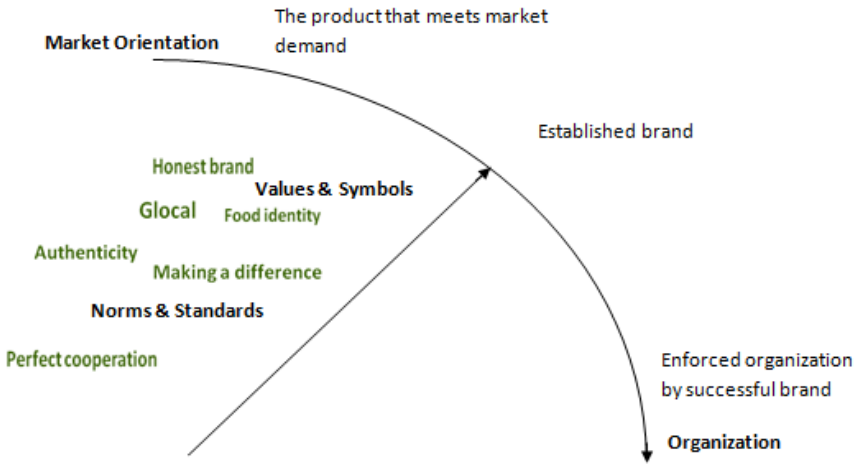



Figure 12: *The marketer sector*. By the authors.

**Controllers:** for this sector the focus is on security and brand protection, market control and expansion. The capability desired at this stage is to develop the organization's flexibility, in order to take in the change and make the *Innovation Wheel* spin again.

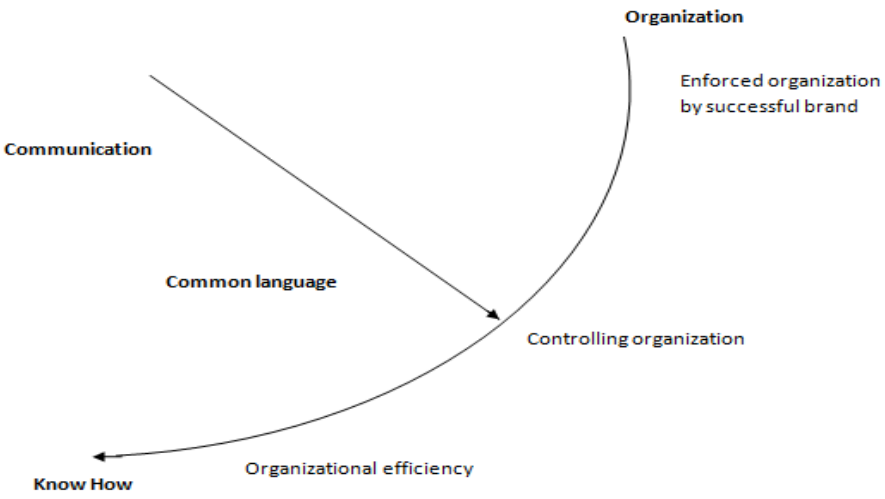



Figure 13: *The controller sector*. By the authors.

Moving from one sector to another, we can observe a tight connection between the attitude towards risk, and time. For instance, while the explorers take their time for doing the research, at this level the risk is unattended. While as we move to the next sectors we can observe a shrink on the time resource and an increase in the risk level.

Rewards within different cultures differ from one sector to another. The reward system for scholars would be to publish an article, for the developers to see a new idea materialized into a product, for marketers, the recognition of the brand, the sales and figures, while for controllers – to make things go smooth and reach financial stability. To make a process, to move from one section, to another you need motivation, interaction and fluid communication.

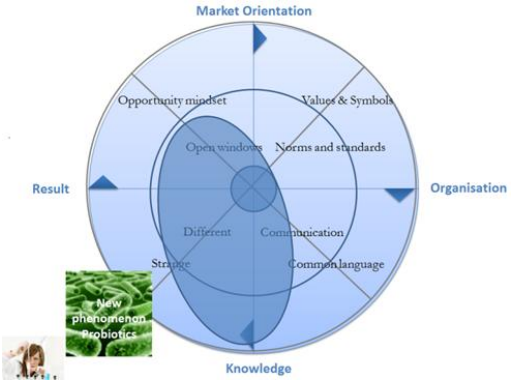
Rewards systems are working as a key factor in making the innovation happen. In order to make the *Innovation Wheel* spin again, we need to address a reciprocity functioning system characterized by the obligation to give and the obligation to receive, reciprocity extensively described by Mauss in his book "The Gift" (1990). These reciprocated actions have the mission of transferring the knowledge from one sector to another. If the controllers do not see the potential that the investment in new research would bring in to the organization, the innovation reaches a dead end. There is a necessity to reciprocate knowledge, between all the four sectors, the necessity to give and to receive information from one side to another. A failure of reciprocity would disrupt the innovation flow.

### 4.4. Functions and Applicability of the Wheel

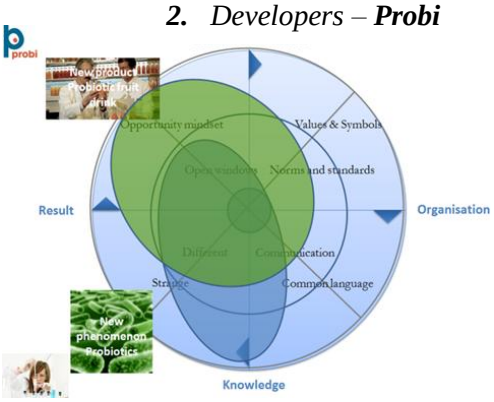
While analyzing the ProViva case, along with other case studies, we investigated those issues that support, or prevent an innovative culture to emerge in an organization, as well as the problems that one has to be aware of when two different organizations (cultures) try to cooperate. In the following figures, the reader may notice how the *Innovation Wheel* can be used as a tool to show the profile of the company that intends to assess its innovation level.

***ProViva Case Study***

1. *Explorers –* ***Probiotics***

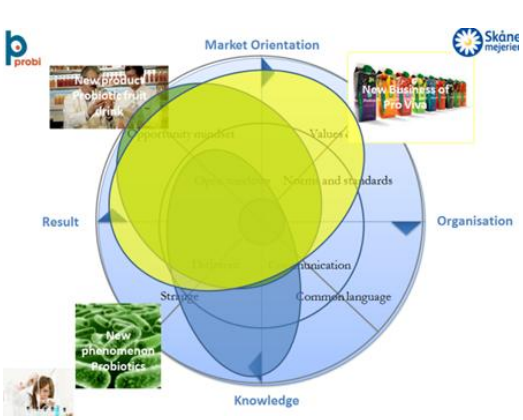



2. *Developers –* ***Probi***

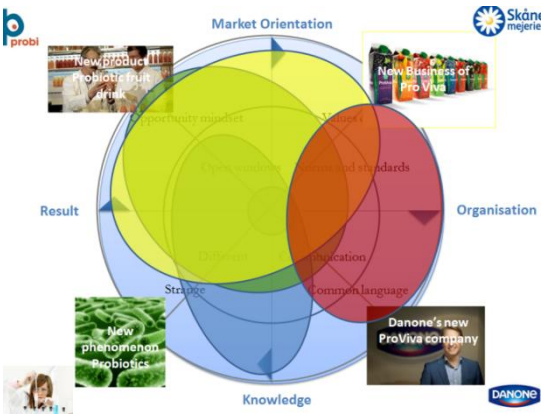



It may be noticed, for each sector how does the *Innovation Wheel* look like, according to a grading scale from 1 to 10 for each spoke. For instance, for the explorer's sector, the knowledge spoke is graded by 9, followed by creativity – 6, result – 4, opportunity mind-set – 4, norms and standards – 1, organization 1, communication 1. The same criteria apply to each sector.

***3.*** *Marketeers –* ***ProViva/ Skånemejerier***




*4. Controllers –* ***Danone***

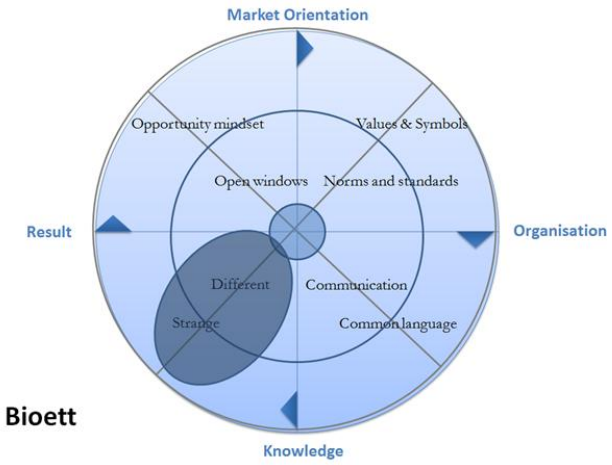


Based on the same rationale, mentioned in the above figures, we may observe the *Innovation Wheels* projected in green for the developer's sectors, in yellow for the marketeer's and in red for the controller's sector.

The roots of the project final results lie in this particular analysis, because the ProViva case study later worked as a hidden algorithm for the whole *Innovation Wheel* (a model for the *Innovation Culture Audit*), since the key spokes of the *Innovation Wheel* are based on the analysis of the data, collected during the interviews in this stage of the project.

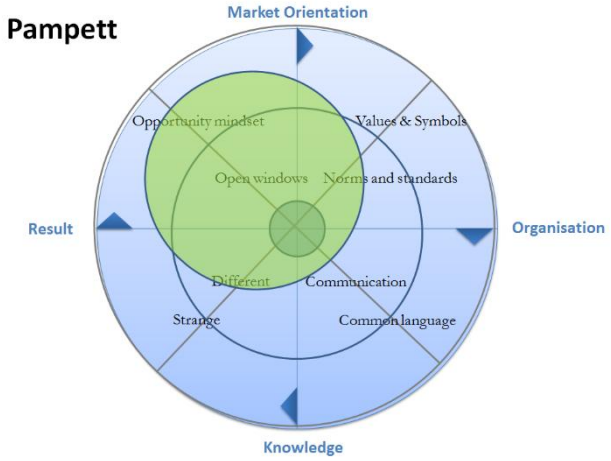
In order to test and refine the wheel, we decided to do more case studies, to see if it was possible to grasp a company's innovation profile with the wheel as a tool.

***Bioett Innovation Wheel: Explorer Profile***



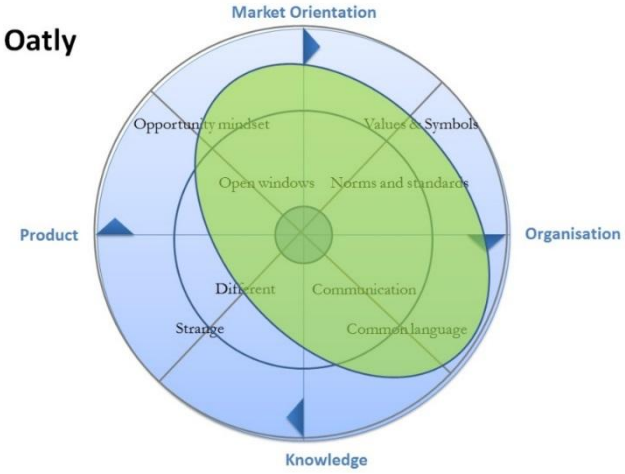

This business idea was to monitor the temperature for refrigerated goods like food and medicine during transport, in order to ensure that quality products are delivered. The business idea failed, because the clients were not interested in buying the technology, since the producer should provide it, but they did not want additional costs. In order to project the profile on the Innovation Wheel, the MACA team interviewed the person that pioneered this idea, person who confirmed that the idea remained at an explorer stage. In order to make an innovation to be successful, he stated that a project needs "20% knowledge, 60% performance and 20% luck, but most of the time everything is about luck". In his view, this concept "luck" meant to meet the right person at the right time, to be engaged in extended networks, in order to make your product visible on the market.

***Pampett Innovation Wheel Profile***




The technology for this business innovation was developed from Bioett. The Business idea was represented by developing a humidity sensor, used to improve elderly care, by avoiding older people being unnecessarily awakened. The same entrepreneur that MACA team interviewed for Bioett case study moved further the initial idea from the explorer's stage to the developer's level. This is why Pumpett profile is projected on the developer's sector of the *Innovation Wheel*.

***Oatly Innovation Wheel Profile***

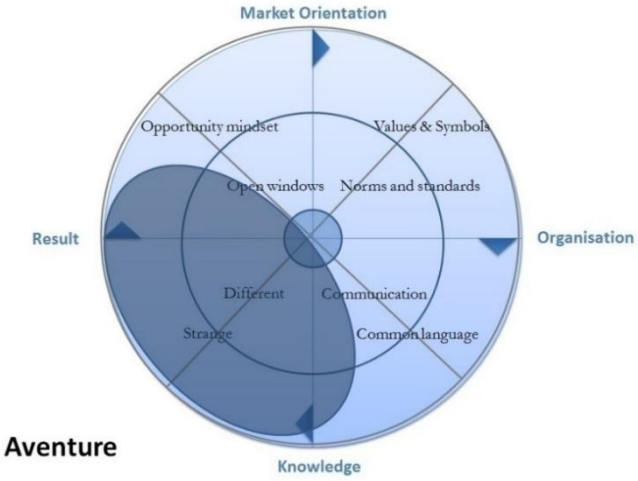



The business idea for this product was to produce an alternative drink/ a liquid food, made of oats for people who have lactose intolerance. Oatly products have been a success on the market and nowadays they are sold in 24 countries around the world.

In order to project this company's profile on the Innovation Wheel, the MACA team interviewed its founder and major owner of the company and one of the original inventors of

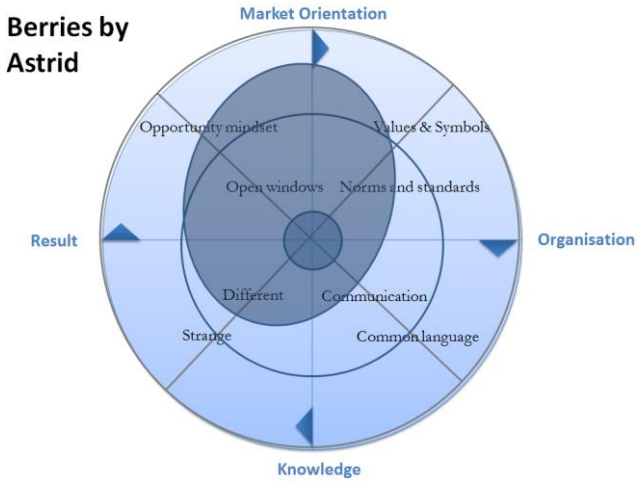
the oat milk. The main insight gained from the interview was that the company is growing and getting a rigid structure similar to the controller companies.

***Aventure Innovation Wheel Profile***




This is a corporate business that took birth out of Oatly which started to grow and become more rigid towards innovation changes. Aventure has a network of qualified world's leading research institutes in the field of functional food and biotechnologies, conducting clinical studies and developing both nutritious and commercially successful products. Due to the high intensity of research conducted within this business, its profile is projected on the explorer sector of the *Innovation Wheel*.

***Berries by Astrid Innovation Wheel: Developer Profile***




The innovation business idea was to give people a healthy smoothie made of best ingredients without any additives. The MACA team interviewed the entrepreneur of this

business by phone call. The insights gained from the interview led to the projection of the company's profile mainly on the developer's sector with an orientation to the marketeers' sector. This aspect is due to the emphasis that the interviewee put on the relationship between the company and outside actors: "if you want to succeed networking is the key!"

To a more reflective analysis, the different case studies showed the potential of using the *Innovation Wheel* in order to determine the innovation profile of various companies from food industry and not only. The HMT and SFIN collaboration is moving on by offering the wheel as a tool for both a diagnosis and a proposal for whole clusters to individual companies in order to measure and sharpen the capability for innovation throughout the innovation system (Peter Wennström, in Livsmedelsakademi Annual Report, April, 2014).

### 4.5. Final Discussion

The ProViva case study represented the main tool to show the development of an innovation process step by step, from the first stage of initiating a business idea originated in scientific research, to its development into a tangible result, a product, then its orientation to the market, its relationship with outside actors, with consumers and finally the innovative business got grounded into a structured organization. Tracing the stages that ProViva encountered during the innovation process it can easily be noticed how they correspond to the main sectors of the *Innovation Wheel*: the explorers, the developers and finally the controllers. This last stage needs a new spin of the wheel, in order to be capable of innovation, the controller companies need to spin the *Innovation Wheel* again.

As one of our interviewees stated, the typical strategy for big and rigid companies that want to innovate is to buy smaller innovative companies and try to integrate them into their culture, trying to adapt their innovative engines to the old rigid ones of the controllers. Looking retrospectively at the empirical material and the analysis provided in this chapter, it is proved that this is not the solution. Cultures collide, so there is a great need to merge them but not to crash them. How is this possible? The answer can be found in the above analysis: by means of interconnections between different cultures. Intermediaries, in Latour's terms, are represented by humans or non-humans that act as a link between two different environments. They compose networks that have been identified as vital by the interviewees of the case studies analyzed previously in order to run a successful innovation project.

As well as networks and intermediaries, social interaction as a process was addressed as a key factor in boosting innovation. The arena of innovation is a very dynamic place engaged in a social phenomenon characterized by Bourdieu as a game. This "game" metaphor illustrated how by means of rules and strategy innovation processes actually become successful. The persons engaged in the "game" adapt their moves according to the habitus of the place: "this is the way we do things here" (Interviewee 1, March 2013), this is what defines each culture depicted in the *Innovation Wheel*.

Nevertheless, another point addressed in the analysis chapter presented above is the interconnection between the rewards system and the innovation process seen as a reciprocated action: giving and receiving as an interaction that proliferates innovation. A key concept in examining this phenomenon was the "gift" enigma analyzed by the socio-anthropologist Mauss.

Finally, the position that cultural analysis takes in this innovation process development is as an intermediary between different actors such as business, science and academia. By use of theoretical traditions and strong fieldwork material the role of the cultural analyst team was to look at the cultures within the innovation process of the ProViva case and build a tool capable to measure the level of innovation for businesses characterized by different types of culture. The first trial of this model has been done on the secondary case studies presented in the subchapter *Functions and Applicability of the Innovation Wheel*. The tight cooperation between the academia and the business environment brought a solution that has high potential to be used for further research and economic gain in food industry and not only there.

## 5. A comparative discussion of Diamond Model and Innovation Wheel

Innovation process implies innovative product/service development. It is a subset system of different actors involved in innovation development life cycle. Therefore there are numerous attempts to provide frameworks for successful innovation, describing different approaches to a variety of activities that take place during the process or defining multiple innovation elements that need to be examined in order to investigate organization's capability to innovate and provide a structured approach for building an improved organizational system enabling innovation. However, there is unlikely to be 'one best' framework providing guidance in innovation management, as well as there is no "universal formula for successful innovation" (Tidd, 2001, p. 173). Different organizations belong to diverse industries, which

implement various types of innovation and have manifold sources to execute their activities, not to mention unequal market and technological opportunities. Furthermore, "organization-specific characteristics" (Tidd, 2001, p. 173) or, as we propose, different innovation cultures are clearly limiting possibilities for universal model for successful innovation. Thus, since the components of innovation are rather multidirectional, indefinite and volatile, innovation models cannot be built with mathematical or physical certainty. Nevertheless, understanding that innovation in its essence is a very uncertain process implies the necessity of constant innovation management. Despite the uncertainty that surrounds innovation, sometimes such innovation measurement frameworks also involve mathematical calculations to enable generalizations and comparisons.

Hence, in this section of the paper the comparison of two innovation audit models – the *Innovation Wheel* presented during this thesis and the other established innovation assessment tool *Diamond Model* – is carried out. The choice of the *Diamond Model* is grounded in our will to find a model similar enough to the *Innovation Wheel* that would enable the comparison. For instance, we sought for a dynamic model, which frames innovation as a complex process instead of seeing it as a linear sequence of functional activities (Tidd, 2006). Before we start the comparison it is important to point out that the paper does not aim to impugn or decry other innovation models, but to open up different angles of looking at innovation processes and bring in the ethnographic standpoint as a valuable input in innovation assessment. Furthermore, each model has its own advantages and drawbacks and a discussion of these aspects may bring the awareness of how different approaches can supplement each other and provide a more balanced comprehension of innovation process, as well as - provide possibilities for better innovation management.

To make this comparison efficient, we take advantage of characteristics to look for in an innovation model, established by Decision Innovation™ (n.d.). To examine the representativeness of innovation that chosen frameworks attempt to provide, we will consider the following attributes of innovation model:

- **Simplicity:** Is the model easy to understand and use?
- **Descriptive:** Is there sufficient detail to enable explanation, comparison, and/or imitation (use)?
- **Assessable:** Does the model enable measurement and provide a vehicle for evaluating alternatives?

- **Predictive:** When model assumptions are true, does the model provide probabilities for described outcomes?
- **Timely:** Does the model provide assessments, measurements, and insights that enable innovation opportunities in a timeframe that will lead to success?(Decision Innovation™, n.d.)

In addition to these above enumerated criteria for innovation model, Decision Innovation™ (n.d.) argues that a good model will provide information, insights and needed inspiration for internal changes before external alterations will disrupt the company. Moreover, it is crucial that a model take into consideration the organizations' environmental conditions that are ready to support the necessary changes being promoted by innovation audit. In other words, an effective model has to be able to detect organizations' ability to adopt changes, improving capability to innovate.

***Sharing similarities and differences***

Out of many innovation frameworks established on the market the chosen *Diamond Model* is proposed by Tidd, Bessant and Pavitt (TBP) in their joint book "Managing Innovation". The authors share similar background in science and innovation management: Joe Tidd is a physicist with subsequent degrees in technology policy and business administration and a professor of Technology and Innovation Management at the University of Sussex, UK, and Visiting Professor at University College London, Copenhagen Business School and the Rotterdam School of Management, while Bessant has a degree in chemical engineering and is a professor of Innovation Management at the School of Management, Cranfield University. Both professors are specialists in innovation and management research. The book "Managing Innovation" is dedicated to their co-author Pavitt, whose insights contributed to the studies of innovation processes and management (Tidd, Bessant and Pavitt, 2005). So TBP can be considered specialists of innovation. In the book mentioned previously the authors focus on technological innovation with a highly practical approach and proceed an innovation management discussion from technological, market and organizational standpoints. Meanwhile, the *Innovation Wheel* model presented by the authors of this thesis views innovation from a cultural perspective, whereby organizational culture is perceived as an all-uniting force, determining organization's capability to adopt and develop innovation.

The first model is built as a framework for innovation audit, while the second is rather innovation culture audit tool, which means that both models aim to assess and to measure.

Let us take a closer look at the constitution of innovation models. In the Figure 14 the *Diamond Model* is presented.

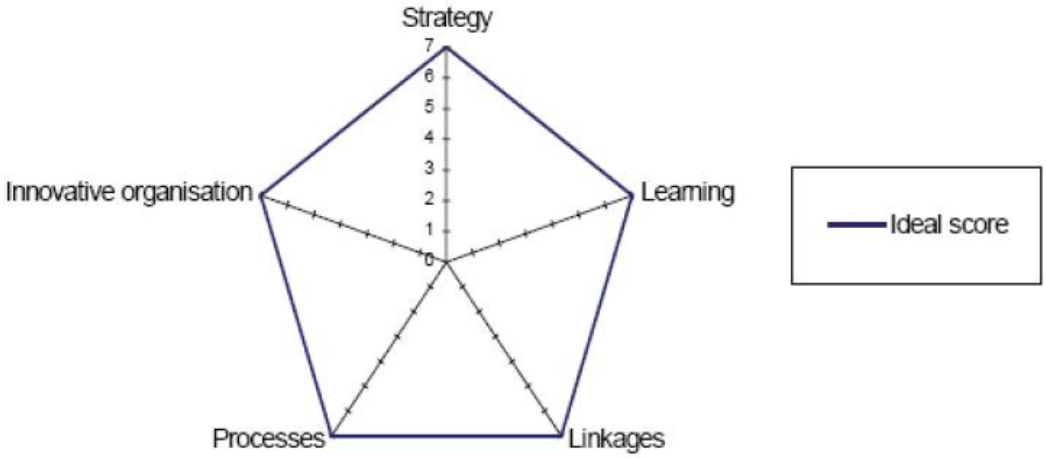



Figure 14: The *Diamond Model*. By: Tidd, Bessant, Pavitt, 2005

The above model encompasses the following five dimensions that need to be measured to plot the profile of the organization's innovation:

**Strategy:** Concerning the strategy of the organization, innovation audit tool looks at three major stages. The first is whether the organization has a strategic plan to carry out innovation and how well this strategy elaborates the management process of innovation. The second is whether innovation is appreciated by the entire organization and incorporated within the corporate strategy. The third area addresses the issues related with the mechanisms put into place by the company in order to implement the corporate strategy effectively.

**Process**: This dimension considers the robustness and flexibility of the organization's new product development (NPD) process ad whether it brings the attention of everyone involved to the customer's need (as opposed to just marketing focusing on the customer's need). This dimension looks into the organization's ability to manage its internal processes. In other words, the efficacy of the innovation coordination and control is assessed.

**Organization:** In this dimension, two major areas are examined. First of all, how the organizational structure supports the innovation, whether it encourages the process or stifles. The innovation is evaluated by looking at the top-down, bottom-up, and lateral communication, considering the efficiency and the coordination within the firm.

Second but not less important area to assess is whether the management has put in place a system that encourages employees to bring forth new ideas.

**Linkages:** In this dimension the focus is on the firm's ability to create healthy relationships with external entities such as suppliers, customers, the academe, firms from other industries, specialist individuals, as well as competitors. The important part of the "linkages" dimension is to look at the potential of these organization's links to provide new knowledge and information transfer to the firm.

**Learning:** This audit's dimension covers four major areas for measuring. First, the audit tries to gauge the organization's commitment to the training and the development of its employees. Second, the organization's ability to gather knowledge/information from its linkages is examined. Third area is how the firm is able to learn from its successes and failures. And finally, how the organization's management is able to share the learning with the entire organization (Maglana, 2007)?

Each of the above dimensions that frame a diamond shape model for innovation audit covers the important areas that need to be taken into consideration for the innovation management. In other words, these five aspects that constitute the *Diamond* represent the factors that influence the innovation success or failure.

In comparison with the *Diamond Model*, a tool for the innovation culture measurement has four key factors and four sub-factors that are built into the round shape model the *Innovation Wheel*, which is shown in the below Figure 15.

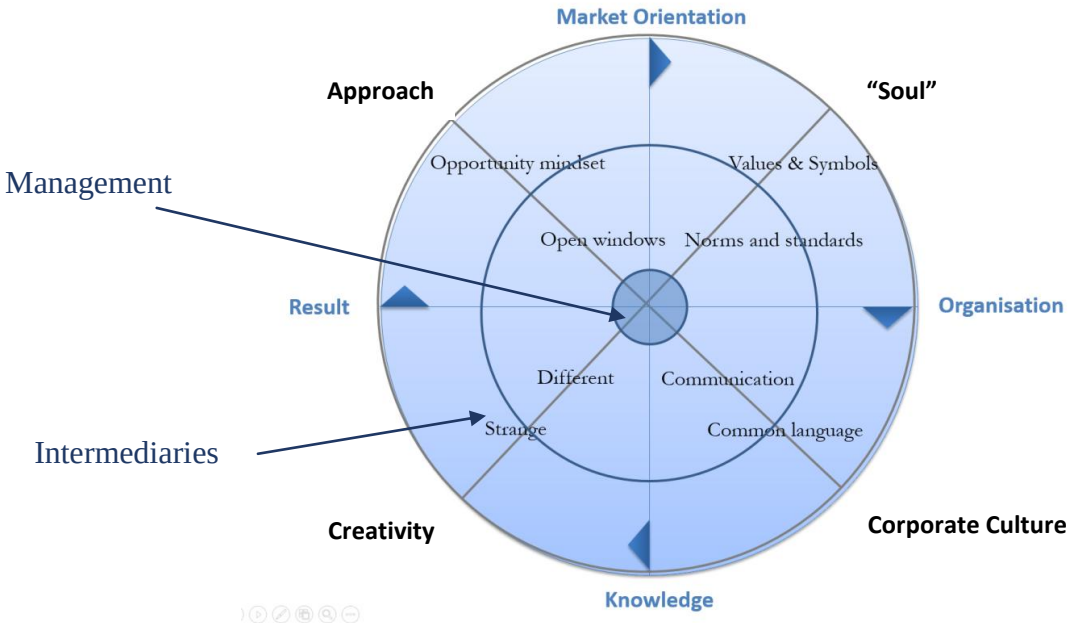



Figure 15: *The Innovation Wheel*. By the authors.

As mentioned earlier in the paper, the *Innovation Wheel* covers four major spokes as follows: Knowledge, Result, Market Orientation and Organization, that are considered as common organizational features. The *Wheel* starts and "ends" with Knowledge which, according to Gamal (20011), it is a key input and output of innovation, which means that innovation cannot be proceed without an understanding of resources, tools, technologies, materials, market and the list goes on. In other words, the innovation involves the application of different sorts of knowledge. Therefore, many innovation oriented organizations invest in research and collaboration with various outside institutions to obtain instrumental knowledge (Gamal, 2011). Regarding knowledge as the output of innovation, according to the definition proposed by Rogers, mentioned in the Table 1: *Defining innovation*, the innovation involves both knowledge creation and diffusion of the existing knowledge. So, whatever the final outcome of the innovation process may be, tangible or intangible (e.g. product and service), it reflects the organization's knowledge of its resources, technologies, market and consumer at the time (Gamal, 2011). Consequently, the secondary spoke "Creativity" works jointly with "Knowledge" to address how a newly produced knowledge differs from the previous learning: Can it be considered as new? And how different it is? Does it evoke minor changes of the product/service development? Or is it a fresh idea, which has the potential of a disruptive innovation?

According to Tidd (2007), integration of strategic learning is a crucial factor, strengthening the organization's capability to innovate. This integration can be implemented by locating R&D activities, allocating resources for innovation and technology and corporate strategy (Tidd, 2007). Hence, knowledge or else –the learning process is addressed in both *Diamond* and *Innovation Wheel* models as an essential factor defining the organization's ability to use and to bind different knowledge areas towards one goal. This goal is reflected by means of using a key word "Result" on the *Innovation Wheel*. However, even both frameworks speak of knowledge from a similar perspective, from a representative point of view, the *Innovation Wheel* visually specifies the fact that the innovation starts and is fueled with the knowledge. Herewith, the main objective of the innovation is to produce novelty, which requires new knowledge, thus the innovation process represented by means of *Innovation Wheel* model aims to be completed with a new knowledge production.

Moreover, tracing the consistency of key spokes of the *Innovation Wheel* in relation to the *Diamond Model*, the framework proposed by TBP does not reflect on the nature and the potential of the final result as the main objective of the innovation process. It is also

interesting that, even though TBP point out the importance of market for the overall success of innovation, they do not touch upon this factor in the innovation audit framework, at least not in a significant way. However, considering the way linkages and learning as measurement areas of innovation are described, we can assume that the market orientation is reflected through a profound understanding of the external entities, including learning about companies' consumers, knowing competitors, benchmarking and firm's ability to use its knowledge to response to the external changes and build healthy relationship with its consumers to gain organizational benefit. Meanwhile, the *Innovation Wheel* stresses the innovation approach whereby: new knowledge creation is used to produce a new service/ product (Result– on the *Innovation Wheel* model), which has to be adjusted to the market and customers' needs in order to be able to produce value for the innovating organization. Therefore, the model involves the demand side which works as a drive for innovation and determines the rate of investment and take-up of a new product or service (Gamal, 2011). This link between the innovation (Result- on the *Innovation Wheel* model) and the market (Market Orientation - on the *Innovation Wheel* model) is drawn with the help of another secondary spoke *Approach*, which implies organization's ability to see the potential of a new product/service in relation to the tendencies on the market.

Finally, it is not surprising that both models indicate *Organization* as an essential measurement area to look at when assessing organization's potential to innovate. Regarding the organization, TBP speaks of a shared vision, leadership and a will to innovate that is determined by management commitment. Furthermore, the *Diamond Model* aims to assess organizational structure: whether it is centralized or decentralized, meaning the involvement of all parties, or arranged by means of networks. In relation to this, in the *Innovation Wheel,* the size of the organization and its structure lies under the key word *Organization*. The model aims to assess if organizational structure is allowing and supporting innovation occurrence. It also considers the cultural variables such as rules, norms and standards, values and symbols that speak of the *Soul* of the organization and the corporate culture that is determined by communication and common language factors building employees' identification, the sense of belonging to their organization. These attributes constitute secondary spokes *Soul* and *Corporate Culture* of the *Innovation Wheel*, supporting the key spoke of *Organization*.

Speaking of the *Soul*, it can also be used to measure the organization's brand relationship to the firm's internal culture: does the culture (norms, values, symbols) of the organization is in balance with its product - brand? Coming back to the ProViva case, presented throughout this paper, the holistic approach of the innovation has been emphasized.

Therefore, the *Innovation Wheel* involves the *Soul* factor among *Market Orientation* and *Organization* as an important attribute to the success of the innovation: the organizational values mirror values of their customers and the opposite way. Furthermore, this tight relationship between the consumer and the producer is established through the development of a brand, which is a reflection of the organizational *soul*.

Moreover, it is important to underline that instead of seeing the innovation as a single event, TBP approaches it as process that needs to be managed and coordinated (Tidd, 2007). In one of Tidd's lectures (2007) based on the book "Managing Innovation", a roadmap for successful innovation process is introduced, whereby the innovation requires searching (and creation), selection, implementation, which drives at acquiring knowledge resources, executing the project and launching the innovation. The main characteristic of this approach is that it fosters constant learning and re-innovation, which means that an innovation is a never ending act of the organization. In line with this approach, TBP (2007) takes into consideration the key individuals that function within the structure and take the role of the enthusiasts, enabling figures and/or critical experts, gate keepers that are in charge of spreading innovation process along different stages of it. However, from the *Diamond model* it is difficult to see to which of the innovation's dimensions, that constitute the framework, these key persons belong to.

In relation to the approach of the innovation as a process, *Innovation Wheel* reveals the innovation implementation as a process which demands for manifold knowledge. From here derives the concept of the wheel covering different innovation cultures built on different knowledge areas and abilities (see Figure 16).

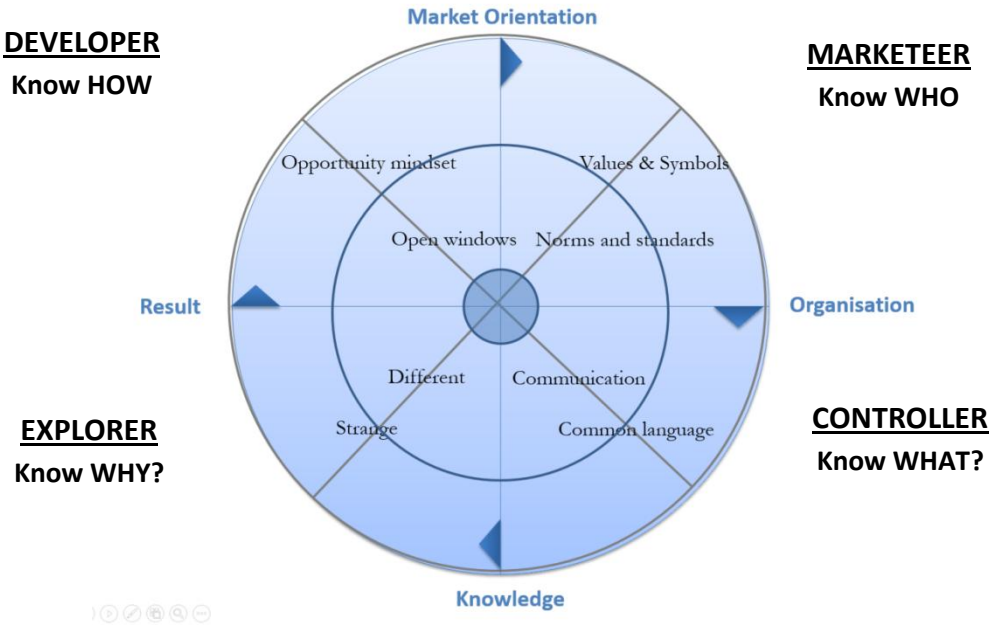



Figure 16: *The Sectors of the Wheel and Key Questions*. By the authors

So, the *Innovation Wheel* works not only as a tool that helps to assess relevant dimensions of the innovation but also as a model which is able to identify a profile of the innovation culture and its focus of a particular firm. A simplified way of how the model works can be seen in Figure17.

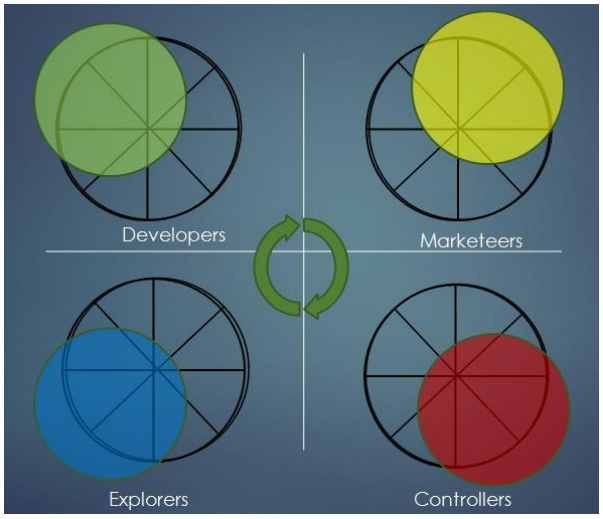



Figure 17: *Innovation Focus Depending on Innovation Culture*. By the authors

All four innovation culture profiles (explorer, developer, marketer, controller) are needed in order to make the innovation process would be successful. However, in order to make innovation flow across different innovation cultures there is a demand for interfaces and

intermediaries that could bridge the existing gaps between different cultures and make the *Innovation Wheel* spin (see Figure 5.1.4).

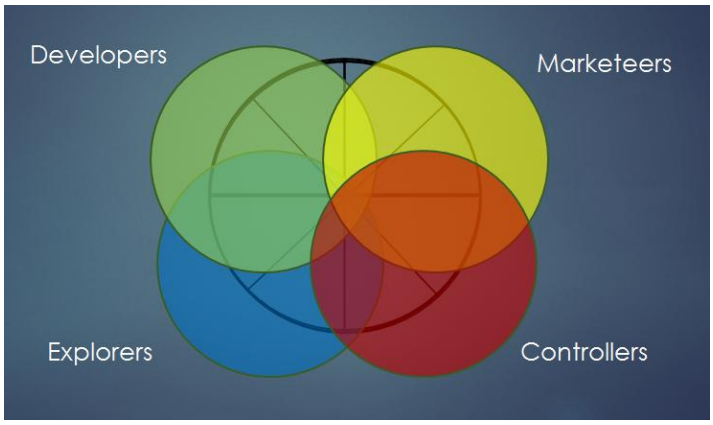



Figure 18: *The Need for Interfaces and Intermediaries.* By the authors

Hence, the *Innovation Wheel* model addresses the importance of the open innovation, consisting from different "tribes" that possess unique innovation culture and encompass different knowledge areas by means of networks. In comparison to the *Diamond Model*, the strength of the *Innovation Wheel* lies in its ability to reveal the importance of networks and how different actors come into place. Herewith, the *Innovation Wheel* speaks of the importance of key figures, also mentioned by TBP as significant contributors to innovation success, bringing and translating knowledge from one innovation culture to another in order to maketheinnovation process go forward. In the *Innovation Wheel* these key figures are addressed as spokespersons or intermediaries, crossing different cultures of the innovation (see Figure 15).

Moreover, what the new ethnographic approach brings into the model is a consideration of the materiality and artifacts that can also work as intermediaries of the innovation process. The artifacts carry out symbolic meaning and testify the organization's culture. Herewith, we argue that a profound awareness of the materiality can bring a huge improvement in the innovation management. Artifacts have the ability to embrace cultural values and norms through story-telling, rituals, events, physical constructions, and graphical representations (Stock, Six &Zacharias, 2013). Therefore, these cultural values and norms can be shaped by the means of artifacts. However, involving issues of the materiality is both the biggest asset and possibly the main aspect constructing the limitations of the model. In order to be able to assess the manifestations of the artifacts within the organization, *Innovation Wheel* demands for observation possibilities that might be time and finance consuming. However, other measurement methods may not be able to provide the needed accuracy and relevance.

Meanwhile, the *Diamond Model* works as a "simple checklist" (Tidd, Bessant, Pavitt, 2005) of factors by assigning a score to each of them to define the profile of the organization's innovation management performance. This kind of assessment provides an index for every dimension and thus provides an organization's profile of the innovation management, which is reflected on the *Diamond Model*. The figure 2 and the figure 3 below show the results of the audit for two different organizations.


Figure 19: *En example of a firm that needs to foster innovation in many dimensions*. By: Tidd, Bessant, Pavitt (2005)


Figure 20: *An example of a highly innovative firm*. By: Tidd, Bessant, Pavitt (2005)

A framework such as the *Diamond Model* designed for the innovation management audit provides an overview of what the organizations does right and wrong and helps to understand why things happens the way they do. Moreover, it works as a checklist to see if the things are done in the right way, meanwhile a benchmark allows the comparison to see if the firm is doing the same as other organizations do. This kind of model is a helpful guiding tool in the process of the continuous improvement in the innovation management and a useful learning resource to help acquiring knowledge and to inspire trying new things (Tidd, Bessant, Pavitt, 2005, p.569).

To end up with, both models possess a lot of similarities such as viewing the innovation as a process, emphasizing the importance of the knowledge and of the intermediaries. Nevertheless there are still some differences that speak of strengths and limitations of compared models that provide space for improvements in regards to the innovation auditing. Coming back to the criteria for innovation audit models established at the beginning of this chapter, the discussion can be summarized in the following way:

**Simplicity:** Both models are not difficult to read, the use of the key words provide a structured approach of the innovation. However, considering ethnographic nature of the *Innovation Wheel*, it is built in a rather minimalistic style, however metaphorical approach of the innovation as a wheel and manifold key words that constitute spokes might be confusing and requires explanation. On the other hand, the secondary spokes and the variety of key words provide a clear picture of what is beneath every dimension that is necessary for the innovation culture audit, while the *Diamond Model* portrays only five factors for assessment without providing any hint of what lies beyond every key word. It is also not clear why the innovation process is presented as a diamond.

**Assessable:** Both models are created to work as measurement tools and have a system of innovation assessment. However, their focus is rather different: the *Diamond Model* focuses on innovation audit, emphasizing the role of the innovation management and is composed to assess the management performance in regards to the innovation fulfillment, while the *Innovation Wheel* aims to assess the innovation from a cultural perspective and works as a tool for organizations' innovation culture audit, whereby the culture is a source of the most of successes and failures.

**Predictive& Timely:** With a help of presented frameworks organization is able to get its index of innovation performance which defines its capability to innovate at the time. Furthermore, the results that come up from the audit both with a help of the Diamond Model and the Innovation Wheel are presented in a visual manner, that allows possibilities to see of what a company is lacking and what are areas that need to be improved. However, since the Innovation Wheel is more specific and focused on cultural matters, it does not aim to assess, for instance, technological resources. Therefore, this way of auditing provides a broader view of a specific aspect of innovation, which means that the results of the audit are rather interconnected and provides possibilities for solutions. In other words, by improving one aspect of innovation there are bigger chances to improve the following dimensions of innovation culture to increase overall innovation capability.

Finally, coming back to Smith's concern of the right measurement methods and techniques, a use of cultural analysis due to its ability to stand between different disciplines and ways of perceiving the reality is a great theoretical and methodological instrument in bringing up the awareness of innovation culture and building a measurement tool. One might argue that innovation culture measurement itself speaks of quantitative approach, yet the model *Innovation Wheel* has its basis in qualitative methods and techniques to cover the complexity and the richness of the innovation culture. Furthermore, the applied approach of cultural analysis enables combination of qualitative research with a rather quantitative manner of presenting the complex results. The *Innovation Wheel* has its focus on characteristics that specify multiple dimensions of innovation culture necessary for innovation to appear and thus covers different innovation cultures and the interactions among them. It works as a "health check" of a current innovation culture to see the current focus and stage of innovation process as well as to find out about the strengths and specific areas that need to be improved and is a first step towards a better communication and partnership in order to bridge cultural barriers between different organizations. Measuring these factors allows organization to get an overview on what is an innovative corporate culture and what organization has to be aware of to build it. Finally, *Innovation Wheel* same as *Diamond Model* is supposed to provide an innovation capability index which determines how conducive and supportive organizational culture is to innovation.

## 6. Concluding Remarks

This study outlined innovation process as a social phenomenon by using applied cultural analysis. The accomplishment of this thesis is dual. With a help of cultural analysis and ethnographic methods we were able to examine the particularities of the ProViva innovation culture that allowed us possibilities to build a model that could works as a tool for innovation culture audit. What led ProViva to success is not only a created novelty, but rather an innovation journey that connected multiple layers of knowledge coming from diverse environments and various organizational cultures. Therefore, the paper underlines the approach of innovation as a process crossing different cultures of innovation that needs to be managed and organized rather than a one-time act.

Furthermore, the *Innovation Wheel* model has incorporated four innovation cultures: explorer, developer, marketeer and controller that are set by different characteristics

determined with regards to their approach to innovation. The study claims that innovation most of the time takes place at the interfaces between different businesses or different departments such as the depicted four innovation cultures, that at some points find it hard to have a common understanding. By means of analysis and cultural theories it was shown that the innovation flow between different departments can be interrupted so in order to keep innovation process dynamic it is necessary to put emphasis on interconnections, networks and nevertheless mediators. In this case, a network is a hybrid one, which means that these interconnections and relations between different entities can be composed not only by humans but also by material objects.

Moreover, a study provides a model the *Innovation Wheel* which works as a tool for the *Innovation Culture Audit* and helps to investigate organization’s capability to innovation. The audit framework has its focus on cultural context of innovation and assesses how organizational culture is supporting innovation. By means of the *Innovation Wheel* the organization is able to see its strengths and weaknesses with regards to its corporate culture and identify possible solutions to improve innovation performance.

Furthermore, the paper provides a supplementary approach of innovation measurement tools and identifies the lack of cultural perspective in innovation studies that has a major impact for overall success of innovation process. By comparative discussion of two innovation models the *Innovation Wheel* and another established framework *Diamond Model* we depict that organization’s capability to innovate can be measured by means of cultural variables and culture needs to be assessed in order to improve organization’s capability to innovate.

Finally, as the flow of innovation can be perceived at the confluence of the social, economic and cultural dynamics of an organization, the paper argues for cultural analytical research in innovation studies and the use of cultural analysis in the corporate environment as culture analyst can take a role of an innovative intermediary between dissimilar industries to assess and bridge different innovation cultures in pursuance of a smooth innovation flow.

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[i]More information about the HMT can be found on the company's website:http://www.thehmt.com/

[ii] More about Livsmedelakademin (the Swedish name): www.livsmedelsakademin.se

[iii]"Black box" definition: Device, process, or system, whose inputs and outputs (and the relationships between them) are known, but whose internal structure or working is (1) not well, or at all, understood. Read more: http://www.businessdictionary.com/definition/black-box.html#ixzz34k5iCs4J

[iv]Skånemejerier is Sweden's leading dairy company, with a 15 per cent market share, and the fourth largest in the Nordic region, supplying both the retail and food service industries.

[v]Arla Foods is a Swedish-Danish cooperative based in Århus, Denmark, and the largest producer of dairy products in Scandinavia.

[vi]Nutraceuticals World. Sep/Oct2010, Vol. 13 Issue 7, p22-22.1/2p