

Université de Strasbourg



Faculté des sciences
économiques et de gestion

**Albert-Ludwigs-Universität
Freiburg**



Frankreich Zentrum

Master's Thesis

Building an Innovation Culture with an Innovation Platform

First Supervisor: Prof. Dr. Emmanuel Muller

Second Supervisor: Marion Neukam

Author: Thilo Berns

*Master's Program: Internationale Wirtschaftsbeziehungen,
Management international de l'innovation*

Deadline of Submission: 26.08.2022

Abstract

English

Purpose - Innovation culture is generally considered to be conducive to a company's innovativeness. While existing research has examined Web2.0 applications for their impact on the innovation process, they have not yet been related to innovation culture. This thesis analyzes how an innovation platform can contribute to building an innovation culture in a company.

Methodology - In the course of a case study in an international mobility infrastructure company, 4 interviews were conducted with employees of the company and the innovation platform provider. In addition, the setup of the platform and quantitative data on the use of the platform during the soft launch were taken into account.

Key findings - An innovation platform can contribute to building an innovation culture in companies with regard to several factors. In light of the decentralized structure of the company at hand, internal contextual awareness and creating an open community for innovation are of particular importance for innovation culture. In addition, social media interactions are identified as a low-threshold way of enabling participation in the innovation process.

Contribution - Building on the existing literature, this work contributes to the understanding of innovation culture. In addition, this study makes a first contribution to the understanding of how Web2.0 applications, such as innovation platforms, can be used specifically in the interest of innovation culture in companies.

French

Objectif - La culture de l'innovation est généralement considérée comme propice à la capacité d'innovation d'une entreprise. Bien que les recherches existantes aient examiné les applications Web2.0 pour leur impact sur le processus d'innovation, elles n'ont pas encore été mises en relation avec la culture d'innovation. Ce mémoire analyse comment une plateforme d'innovation peut contribuer à la création d'une culture de l'innovation dans une entreprise.

Méthodologie - Dans le cadre d'une étude de cas dans une entreprise internationale d'infrastructures de mobilité, 4 interviews ont été réalisées avec des employés de l'entreprise et le prestataire de la plateforme d'innovation. En outre, la configuration de la plateforme et les données quantitatives sur l'utilisation de la plateforme pendant le « soft launch » ont été prises en compte.

Résultats clés - Une plateforme d'innovation peut contribuer à la création d'une culture de l'innovation dans les entreprises en ce qui concerne plusieurs facteurs. Compte tenu de la structure décentralisée de l'entreprise, la sensibilisation au contexte interne et la création d'une communauté ouverte pour l'innovation revêtent une importance particulière pour la culture de l'innovation. En outre, les interactions de type médias sociaux sont identifiées comme un moyen simple de permettre la participation au processus d'innovation.

Contribution – S'appuyant sur la littérature existante, ce mémoire contribue à la compréhension de la culture de l'innovation. En outre, cette recherche apporte une première contribution à la compréhension de la manière dont les applications Web2.0, telles que les plateformes d'innovation, peuvent être utilisées de manière ciblée dans l'intérêt de la culture de l'innovation dans les entreprises.

German

Absicht - Innovationskultur wird allgemein als förderlich für die Innovationsfähigkeit eines Unternehmens angesehen. Während bisherige Forschung Web2.0-Anwendungen auf ihre Auswirkungen auf den Innovationsprozess untersucht hat, wurden diese noch nicht mit Innovationskultur in Verbindung gebracht. In dieser Arbeit wird analysiert, wie eine Innovationsplattform zum Aufbau einer Innovationskultur in einem Unternehmen beitragen kann.

Methodik - Im Rahmen einer Fallstudie in einem internationalen Unternehmen für Mobilitätsinfrastruktur wurden 4 Interviews mit Mitarbeitern des Unternehmens und des Innovationsplattformanbieters durchgeführt. Darüber hinaus wurden der Aufbau der Plattform und quantitative Daten über die Nutzung der Plattform während der „Soft-Launch“ Phase berücksichtigt.

Zentrale Ergebnisse - Eine Innovationsplattform kann hinsichtlich mehrerer Faktoren zum Aufbau einer Innovationskultur in Unternehmen beitragen. Vor dem Hintergrund der dezentralen Struktur des Unternehmens sind das interne Kontextbewusstsein und die Schaffung einer offenen Community für Innovation von besonderer Bedeutung für die Innovationskultur. Darüber hinaus werden Social-Media-Interaktionen als niedrigschwelliger Weg identifiziert, um Beteiligung am Innovationsprozess zu ermöglichen.

Beitrag – Aufbauend auf der bestehenden Literatur trägt diese Arbeit zum Verständnis von Innovationskultur bei. Zudem leistet diese Arbeit einen ersten Beitrag zum Verständnis darüber, wie Web2.0 Applikationen, wie Innovationsplattformen, im Interesse von Innovationskultur in Unternehmen gezielt eingesetzt werden können.

Table of Contents

Abstract	i
Table of Contents	iii
List of Figures.....	v
List of Tables.....	v
1. Introduction.....	1
2. Literature Review	3
2.1. Innovation	3
2.2. The Innovation Process	6
2.3. Open Innovation.....	8
2.4. Innovation Platforms.....	10
3. Theoretical Background and Analytical Framework	12
3.1. The neo-institutionalist perspective on culture	12
3.2. Organizational Culture	15
3.3. Innovation Culture.....	17
3.3.1. Innovation Intention.....	20
3.3.2. Innovation Infrastructure	22
3.3.3. Innovation Influence	25
3.3.4. Innovation Implementation	27
3.4. Analytical Framework.....	29
4. Methodology	30
4.1. Research Design	30
4.2. Data Collection Methods.....	31
4.3. Data Analysis	33
5. Description of the case.....	35
5.1. Description of the company	35
5.2. Description of the innovation platform.....	37
5.2.1. Structure of the innovation platform.....	37
5.2.2. Status of the innovation platform	39
6. Findings.....	41
6.1. Communication	41
6.2. Knowledge sharing	43
6.3. Participation	46
6.4. Contextual awareness	49
6.5. Strategic orientation.....	51

7. Discussion	53
8. Conclusion	56
Bibliography.....	59
Appendix A	vi
Appendix B	xi
Declaration of Authorship	xxxii

List of Figures

Figure 1: The Stage-Gate Process.....	6
Figure 2: The open innovation model.....	9
Figure 3: Dimensions and factors of innovation culture.....	19
Figure 4: Overview of analytical approach	29
Figure 5: Workflow steps and questions on the innovation portal.....	38

List of Tables

Table 1: Definitions of innovation	5
Table 2: Types of isomorphism.....	13
Table 3: The pillars of organizations in Neo-institutionalism.....	14
Table 4: The four dimensions of organizational culture.....	16
Table 5: The four dimensions of innovation culture.....	18
Table 6: Summary of the selected interview partners	31
Table 7: Analytical process	33
Table 8: Quantitative data analysis	34

1. Introduction

It has potential to really help drive and change the culture of the organization. We have a tool that can help us to do that, but it's been engagement, the communication, how we show the results...

(I-04).

For a considerable time, innovation has been regarded as a decisive factor for the economic success of companies (Schumpeter, 1934). In order to survive and shape the future in a competitive environment, companies seek to increase their ability to innovate. With the ambition of bringing new products to market or unlocking new markets, a company needs a culture in which employees strive for innovation (Zaltman, Duncan, & Holbek, 1973; Ahmed, 1998). In the context of this study, culture is regarded as the linchpin to innovation in a company. Various studies have taken different approaches to explaining which values, norms, behaviors, or even processes and structures are conducive to a culture of innovation. Several studies indicate that organizational factors can play a crucial role in enabling employees to be innovative (Damanpour, 1996). At the same time, culture can be considered as residing in each employee of a company. In this vein, different studies tried to identify which characteristics of employees foster innovation (Dobni, 2008). Generally, this thesis understands innovation culture to be a distinguishing trait of a company that can promote its innovativeness.

To support their innovation efforts, companies have been looking at Web2.0 applications. It is argued that such online platforms allow users to interact and collaborate despite temporal or geographical dispersion. Accordingly, an underlying assumption of using collaboration technologies is that companies can become more innovative by capitalizing on the knowledge and ideas of their employees (Recker, Malsbender, & Kohlborn, 2016). A prominent example of this are applications that enable the collection of ideas to predefined problems. Existing research on this topic typically looks at so-called enterprise social networks and how they can be used in the interest of the innovation process. In this regard, previous studies investigated how ideas progress on online platforms and which technical functionalities support innovation projects (Hrastinski, Ozan, Kviselius, & Edenius, 2010). To the researcher's knowledge, there is little research on the different intentions and motivations behind setting up such a platform in a company. Building on the idea that Web2.0 technologies can create an online space that enables knowledge sharing and collaboration, this thesis focuses in particular on innovation platforms that are set up in companies to foster innovation. This study addresses the research gap that exists beyond the impact of such platforms on the innovation process. To this end, this study relates the innovation platform to innovation culture and aims to answer the following main research question:

How can an innovation platform contribute to building an innovation culture in a company?

This research follows a qualitative approach within the context of a case study in a global company for mobility infrastructure. At the time of this research, the company at hand is in the process of the soft launch of its innovation platform. Therefore, the research question is addressed by conducting semi-structured interviews with four key actors involved in this process. This means that in particular the intention for setting up such a platform can be considered for this study. In addition, the structure of the platform is taken into account and initial insights are drawn from the use of the platform during the soft launch. This study does not aim to assess the extent to which the innovation platform has already had an effect on the innovation culture in the company, but rather what potential it has to contribute to the building of an innovation culture. In order to answer the research question, it is important to develop a detailed understanding of organizational culture and innovation culture. To this end, the study builds on existing research on these topics. Five hypotheses are formulated, which aim to investigate how an innovation platform can contribute to certain factors of innovation culture. In this regard, this thesis contributes to the existing body of research on Web2.0 technologies that aim to foster innovation. In particular, it identifies potentials of innovation platforms and contributes to the understanding of innovation culture. In light of the suggestion of Hrastinski et al. (2010) that a more detailed understanding is needed of how such technologies can be used in a targeted manner, this work makes an initial contribution specifically with regard to innovation culture.

This master's thesis is structured in the following way. After the introduction, a literature review on innovation, the innovation process, the open innovation model, as well as innovation platforms in organizations provides the basis for the theoretical approach to innovation culture. In section three, innovation culture is embedded in a wider theoretical framework with regard to the neo-institutionalist perspective on culture and the theory on organizational culture. Moreover, this section presents the seven factors of innovation culture identified by Dobni (2008). Subsequently, the methodology of this research is explained in detail. This involves the research design, the data collection methods and data analysis. After the description of the case and the innovation platform of the company at hand, the findings are presented in section six. Thereafter, the findings are discussed and related back to the theory. In doing so, the hypotheses of this study are addressed. Chapter eight concludes this thesis.

2. Literature Review

The aim of this section is to set the stage for the theoretical examination of innovation culture. Therefore, it is necessary to establish an understanding of innovation and the innovation process. While the term innovation is used to describe many things, and its reference has become rather generic, innovation is a topic of particular importance in the business context (Ahmed, 1998). In a first step, the relevance of culture for innovation in the context of a company will be discussed. Building on the understanding of innovation applicable to this study, the innovation process and the open innovation model are explained in more detail. In line with the focus of this research, innovation platforms in organizations are presented. This literature review provides the basis for the theoretical approach to innovation culture and allows for the analysis of the potential contributions of an innovation platform to innovation culture.

2.1. Innovation

For this study, it is important to consider different definitions of innovation in order to derive a suitable understanding for the subject at hand. First, different interpretations and understandings about the meaning of innovation are taken into account. By examining different components that make up the concept of innovation, the focus is directed specifically on the relation to organizational culture.

Schumpeter introduced the importance of innovation in the economic system in the 1930s and pointed towards the constant pressure of finding new sources of growth. Accordingly, innovations are novel combinations of inputs such as resources and knowledge that are used for the purpose of commercialization (Shah, Gao, & Mittal, 2014). This shows that there is a process involved and that an innovation is clearly linked to its commercialization. Consequently, an innovation needs to be distinguished from an invention, which is not necessarily linked to the intent of commercialization (Schumpeter, 1934). This is a first aspect that explains why Schumpeter (1934) considers innovation as the driving force for economic change. Hence, firms go to great lengths in the attempt of breaking away from the competition. In his work on *Technology and Competitive Advantage*, Porter (1985) emphasizes that such advantages over the competition, which are directly linked to greater profitability, can be achieved through acts of innovation. According to his theory, innovations are difficult to imitate and, in particular, superior to the offer of competitors. This underlines that innovation can be considered a crucial factor for the success of a company and its ability to thrive in the midst of competition (Villaluz & Hechanova, 2018). Sharifirad and Ataei (2012) suggest that the deep roots of innovation and competitive advantage lie in creating something new and in collaboration. The importance of innovation has not diminished over time, however, a plethora of definitions for innovation can since be found in the literature. These often build on the notions raised by Schumpeter,

but are to be understood in conjunction with one another. Table 1 summarizes some definitions of innovation and highlighting some key elements that fundamentally inform this work.

Christensen (1997) emphasizes the purpose of value creation and he describes innovation “*as a state of being, one that ranges from being disruptive to environments that are mildly benign*” (Sharifirad & Ataei, 2012, S. 495). It appears quite obvious, then, that innovation is not a trivial endeavor, or something that just happens. Drucker (1999) refers to a systematic, structured process that can be learned and practiced. Therefore, one could also speak of innovation as a discipline. Consistent with the focus on value creation, West and Farr (1990) define innovation as the intentional introduction and application of something new by certain organizations or people in a certain role. These different contributions provide a view on innovation as something that comes about through deliberate individual, but also collective behavior. However, for the next steps of this study, it is particularly interesting to look at innovation as a pervasive attitude (Colquitt, Lepine, & Wesson, 2009). This is in line with the work of Christensen (1997) and considers it as the enabling capacity for firms to shape the future. Buckler (1997) specifically refers to innovation as an environment, a culture, that can exist within a company (Ahmed, 1998, S. 30). Consequently, it appears rather logical that Rickne et al. (2012) consider the main objective of innovation management to be the cultivation of an environment that encourages innovation. The fundamental purpose of this study is to first build an understanding of the role that organizational culture plays in innovation in the business context. Based on this, this study aims to further contribute to the understanding of innovation culture and how such a culture could possibly be promoted through an innovation platform. Considering the research question of how innovation platforms can contribute to building an innovation culture, the understanding of innovation outlined here provides the basis for this work.

Author	Key elements of different definitions
Schumpeter (1934)	<ul style="list-style-type: none"> - Innovation as the introduction of new products, production methods, the acquisition of new sources of supply, the opening of new markets and the carrying out of the new organizations of any industry
Christensen (1997)	<ul style="list-style-type: none"> - <i>Innovation as a process</i> which transforms different inputs into <i>outputs of greater value</i>
West and Farr (1990)	<ul style="list-style-type: none"> - Innovation as the <i>intentional introduction and application</i> of ideas, processes, products or procedures, designed to benefit the individual, group, organization or wider society - Innovation as being new to the relevant unit of adoption
Herkema (2003)	<ul style="list-style-type: none"> - Innovation as a <i>knowledge process</i> with the objective of creating new knowledge focused on the development of commercial and viable solutions - Innovation as the adoption of an <i>idea or behavior</i> that is new to the organization
Damanpour (1996)	<ul style="list-style-type: none"> - Innovation as a means of changing an organization, either as a <i>response to changes in the external environment or as a pre-emptive action</i> to influence the environment. - Innovation to encompass a range of types, including <i>new organization structure or administrative systems, or new plans or program pertaining to organization members.</i>
Kimberly (1981)	<ul style="list-style-type: none"> - Innovation as a process - innovation as a discrete item including, products, programs or services - innovation as <i>an attribute of organizations</i>

Table 1: Definitions of innovation

2.2. The Innovation Process

The innovation process is an important building block for the explanation of how innovations occur in the business context. Generally, this process is distinguished into three main phases, which are distinct from one another (Tushman, 1977; Utterback, 1971). After the first phase of idea development, there is the problem-solving phase, in which a concept is developed for approaching the corresponding idea. The third phase is the implementation phase, which is about realizing the project within the organization (Myers & Marquis, 1969). The different phases are associated with certain activities that are recommended for progression in the innovation process. In reality, however, these activities are not necessarily sequential, but often take place concurrently (Ahmed, 1998). Building on these three steps, the innovation process can be viewed and expanded in a more refined way. A popular structured methodology for the innovation process is the Stage-Gate process. It can be understood as an operational guide for getting ideas to the market (Cooper, 2008). As the name implies, this methodology involves a series of stages, each followed by a gate. Based on an incremental commitment to a project, information is collected and work is done in each stage to advance the project. Each gate represents, by means of certain criteria, the decision stop to decide whether the project should proceed to the next stage (Cooper, 2008). Generally, this process begins with the discovery phase of idea collection, which is followed by an initial gate to sort out unpromising ideas. Typically the process ends with a post-launch review. In between there are five phases, after each of which the process can be stopped. For example, the project may not be scoped appropriately, the business case may not be convincing, the development may fail, the test may not show the expected results, or even the launch may go wrong (Recker, Malsbender, & Kohlborn, 2016).

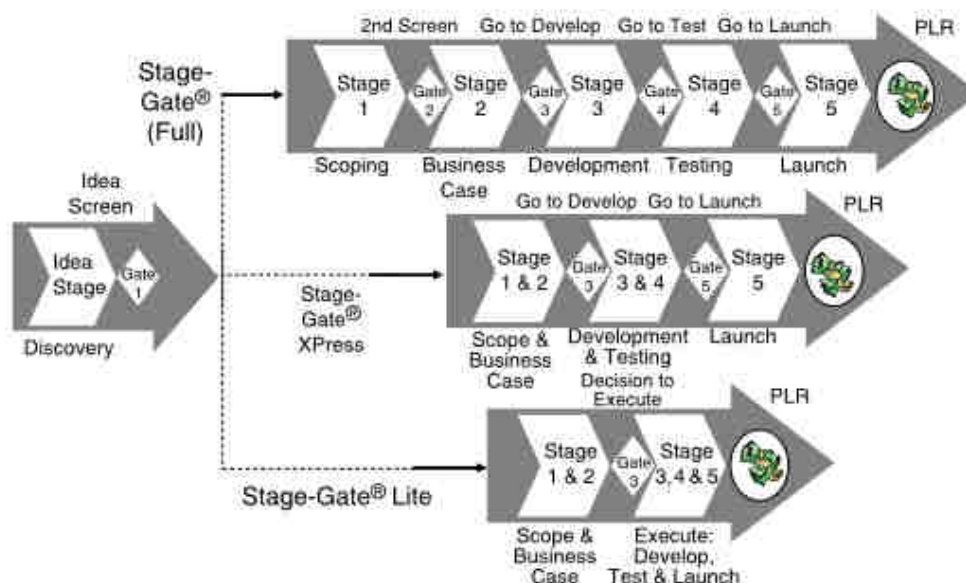


Figure 1: The Stage-Gate Process

Source: Cooper (2008)

Cooper (2008) points out that the respective stages should be cross-functional and that the corresponding activities should be carried out by teams consisting of people from different areas of a company. Specifically, this means that no particular department should be responsible for the carrying out of a certain stage. Although there are certain basic requirements for this process to work, such as how gates actually perform their function, the stage-gate process can be considered an adaptive approach. For less risky projects, the process can be reduced to 3 gates for the Stage-Gate XPress or to only 2 gates for Stage-Gate Lite. In these versions of the Stage-Gate process, activities of the five stages are regrouped and merged (Figure 1). In particular, the Stage-Gate process has been modified to accommodate open innovation and the trend towards interorganizational innovation processes. Here, the inputs, i.e. ideas for the process, no longer preferably come from internal sources, but companies begin to look "inside out and outside in and across all three levels of the innovation process" (Cooper, 2008).

2.3. Open Innovation

In view of the fact that the just mentioned model of open innovation is playing an increasing role in organization's considerations of the innovation process, it deserves a more detailed explanation and will be compared to what is traditionally understood by closed innovation. In the closed model, inputs for the innovation process come primarily from internal sources. Even though, market information and consumer reactions, for example, play a role, the task of coming up with new ideas and developing them lies with the respective R&D department of a company (Cooper, 2008). This model is characterized by control and self-reliance of firms and is based on the implicit assumption that high R&D investment and recruiting highly skilled talents ensure innovation success. These successes are associated with being the first to enter new markets, leading to a focus on defending intellectual property rights in this closed innovation model (Chesbrough H. W., 2003). Chesbrough (2003) argues that the underlying premises of this model, however, are no longer valid in the old familiar way. He argues that with the increasing mobility of knowledgeable workers the risk has increased that innovative ideas may succeed outside a company's boundaries. Moreover, the greater availability of funding and venture capital enable startups, for example, to pursue innovative endeavors disconnected from the logic of reinvesting profits into the development of the next innovation. Consequently, the advantages of internal R&D have declined and the exclusive right to reap the benefits from innovations is meanwhile of limited significance (Chesbrough H. , 2006). This is forcing companies to look for alternative routes for their innovation process.

In the model of open innovation, companies do not just pursue ideas that they came up with themselves. Instead, they draw on the knowledge and ideas of their environment in the attempt of unlocking new markets (Chesbrough H. W., 2003). This stands in contrast to the approach of relying on in-house processes and gathering as much information as possible in order to understand consumers (Simanis & Hart, 2009). While companies in both models weed out bad ideas as a first gate to the innovation process, the open model considers integrating ideas from outside the firm into the own process in the hopes of turning them into successes. Thus, open innovation can be considered as using both internal and external inputs to the innovation process and considering both internal and external pathways of ideas to market (Chesbrough H. W., 2003). In recognition of the fact that in the context of global competition and increasing complexity, the arsenal of knowledge should not be limited to what is available in-house, the open model embraces the purposive flow of ideas as the foundation for innovation (Westergren & Holmström, 2012). Lichtenthaler (2011, S. 77) defines Open Innovation as "the systematic exploration, storage and use of knowledge within and beyond the boundaries of an organization throughout the innovation process". An interesting example of this is when large companies fund startups and external ideas out of the interest in gaining initial insights and

actively exerting influence in the development of their industry. The practices and strategies of companies in the open innovation model always depend on the characteristics and innovation processes of specific industries (Cooper, 2008). However, according to the open innovation model, the innovation process should rather be understood as an interactive framework, with open behavior playing an important role. This behavior could even be responsible for the differences in the performance of companies. (Whelan, Parise, De Valk, & Aalbers, 2011). Westergren and Holmström's findings (2012) show that the adoption of the open innovation model relies among other aspects on the development of an innovation-friendly organizational environment and a knowledge-sharing culture. Minnig and Dörhöfer (2013) argue that a common cultural framework underlying the innovation process is important for the ability to interact and learn from one another. Such a cultural framework is particularly important in the development phase, helping to bring together different approaches to innovation in interorganizational networks (Minnig & Dörhöfer, 2013).

Different business models are emerging that seek to foster this openness in order to benefit from collaboration in the innovation process (Chesbrough H. , 2006). At the same time, the study of Birkinshaw et al. (2011) underlines that the associated costs and efforts related to open innovation should not be underestimated. In addition to the very practical and obvious issues around intellectual property and mutual trust regarding the organizational environment of a company, there are considerable costs of acquiring open innovation capabilities. Research shows that the ideal model of "uncontrolled" open innovation is rarely used (Birkinshaw, Bouquet, & Barsoux, 2011). Companies rather rely on different innovation practices that lie somewhere in between the open and closed model (Cooper, 2008). Therefore, it is important to know how to use internal and external inputs and pathways for ideas in a targeted manner.

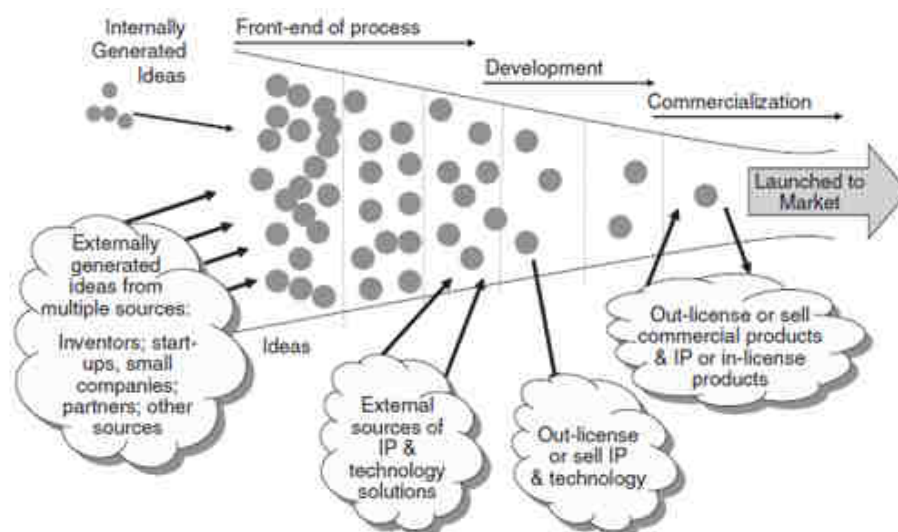


Figure 2: The open innovation model

Source: Docherty (2006)

2.4. Innovation Platforms

Innovation platforms are of particular importance for this work, as their role in the building of an innovation culture will be analyzed in more detail in the course of this study. Therefore, it should first be clarified what is meant by an innovation platform in the context of this work and why they are deployed in companies. Generally, an innovation platform is an online space that supports the innovation process by enabling interaction and access to relevant information. This online space can either be created exclusively for the members of an organization or have the goal of overcoming organizational boundaries. Companies have started to consider Web2.0 applications, such as innovation platforms, to support their innovation activities especially in an open innovation context (Murugesan, 2007). The main idea is to create the opportunity for users to engage in interpersonal relationships, with the underlying expectation that more communication and collaboration will have a positive effect on innovation efforts (Recker, Malsbender, & Kohlborn, 2016). While such Web2.0 applications for innovation can vary considerably amongst one another, there are two interesting areas identified that innovation platforms aim to address.

Engaging the crowd

This first aspect directly speaks to the idea of the open innovation model suggesting that contributions and inputs to the innovation process should be considered more broadly. The setup of the platform is the decisive factor for its role in the open innovation model. Depending on what is specifically understood by “the crowd”, a platform that is only open to members of a specific company may fall short of the claim of the open innovation model (Recker et al., 2016). It must be put into perspective that a platform may thus enhance the regular, internal company network, but is not necessarily directed externally. Overall, however, the creation of innovation platforms is based on the realization that companies want to derive more benefit from the insights and ideas of their employees (Kesting & Ulhoi, 2010). Unleashing the knowledge base of the employees through an innovation platform should therefore inspire the innovation process and add to the company’s performance. Apart from that, such a platform is always about user generated content. In most cases, ideas are to be suggested and discussed by the users, for example through chat or comment functions (Malsbender, Recker, Kohlborn, Beverungen, & Satya, 2013). In addition to generating ideas, there is often the possibility for what Recker et al. (2016) refer to as innovation support services. Accordingly, an innovation platform could be used to search for new technologies, suggest new ways to achieve goals, apply new working methods, or even secure resources for idea implementation (Yuan & Woodman, 2010, S. 324).

A key question for this aspect of an innovation platform is therefore to what extent such a platform is integrated into the innovation process, or perhaps even hosts it online. One conceivable function that the innovation platform could fulfill in this context would be, for example, the networking of different actors in the innovation process. In this regard, ideas could gain the necessary visibility through a platform in order to be brought to gatekeepers in the Stage-Gate process (Malsbender et al., 2013). Depending on how the platform is set up, it would also be conceivable for interorganizational cooperation to take place and processes to be harmonized. Considering the innovation process itself, the literature suggests that innovation platforms mostly support the earlier steps of the process. For idea generation and related decisions or even the building of a business case, it can be considered as a useful tool with the potential to increase employee involvement. (Recker et al., 2016; Malsbender et al., 2013). On the other hand, however, innovation platforms tend to play a lesser role in the subsequent stages of development, testing, and launch, as well as post-launch review, since these activities generally take place offline. (Malsbender et al., 2013).

Collaboration

The second aspect that is considered particularly interesting regarding innovation platforms is the communication activity that is enabled by them. First of all, and this is directly related to the first aspect addressed above, there is usually an interest in networking a larger audience in the interest of innovation. This is to enable employees to collaborate with other employees beyond their usual contacts (Recker et al., 2016). In effect, this could provide an entry point into the innovation process for employees who were previously not very involved in innovation efforts, but also provide increased opportunities for exchange overall. Such an online space generally enables communication across space and time. Moreover, and this is also in the nature of online spaces, interactions are traceable, stored and available (Malsbender et al., 2013). A critical point here is whether such a platform actually builds on existing interactions and leads to the collaborative further development of content. At the same time, there is a tradeoff between the richer, always-available digital content and the limited direct contact and exchange of personal expressions in the traditional way (Daft and Lengel, 1984). Chesbrough's (2006) work suggests that technologies can support open innovation efforts, but does not explain in what ways precisely and when this might be beneficial. Hratinski et al.'s (2010) work points to the findings of Gorden et al. (2015) who find that a Web2.0 application such as an innovation platform supports the early stages of the innovation process in several ways. Thus, they argue, people can help each other, access and share organizational knowledge, better visualize innovations and generate ideas. The underlying assumption is that an innovation platform can function as a collaboration technology, thereby promoting the exchange of knowledge.

3. Theoretical Background and Analytical Framework

3.1. The neo-institutionalist perspective on culture

In order to embed innovation culture in a more grounded theoretical framework and thus allow for stronger explanations, the neo-institutionalist perspective presents an appropriate option. Particularly with regard to the increasingly relevant model of open innovation and the associated networks between firms, this perspective is interesting for the research at hand because of its focus on interdependencies between organizations (DiMaggio & Powell, 1983; Scott, 1995, 2008). This approach identifies three relevant pillars for explaining the production and reproduction of institutions in the organizational field. Moreover, it supports the integration of a cultural perspective due to its reference to cultural-cognitive logics within organizations (Minnig & Dörhöfer, 2013). Unlike models of rationality that solely focus on goal-oriented and instrumental actors, neo-institutionalism emphasizes the institutional foundations of individual behavior (Zucker, 1983). From the theoretical rational perspective, actors are assumed to make efficiency-based decisions that are rationally best for the company. Old institutionalism already took socialization processes and organizational values as the basis for explaining behavior, but did not yet consider the influence of cognition and learning in human behavior (Palthe, 2014).

In neo-institutionalism, on the other hand, institutional logics, such as striving for legitimacy as well as unexpressed logics and values are of critical importance. Building on this, the theory of neo-institutionalism embeds this behavioristic focus in its living institutional environment, i.e. social actors do not act in isolation but always as part of their environment. There is the stream of research that states that organizations within an interorganizational context tend to resemble each other due to isomorphism (DiMaggio & Powell, 1983; Meyer & Rowan 1977). One of the three types of isomorphism, which are not mutually exclusive, is what is referred to as mimetic isomorphism. According to this, comparisons and for example benchmarking with another organization may lead to the possible desire to resemble it in some points and may provoke changes in the organization at hand. Having these adaptation mechanisms in mind may prove to be meaningful for analytical considerations of this work regarding the examination of efforts in the interest of an innovation culture.

Types of isomorphism	Description
Coercive isomorphism	Organizations adapt to both formal and informal pressures exerted by other organizations upon which they are dependent.
Mimetic isomorphism	Organizations tend to model themselves after similar organizations in their field that are perceived to be more legitimate or successful.
Normative isomorphism	Professionals tend to exhibit much similarity to their counterparts in other organizations regarding the conditions and methods of their work.

Table 2: Types of isomorphism

Source: DiMaggio & Powell (1983)

In addition, however, there is also the realization that organizations decouple their formal structure from the operational procedure. Thereby an organization may indicate to the outside world that they are conforming to the appearance of other organizations, although it is not reflected in their actual activities (Wanckel, 2021; Brunsson, 1989). This decoupling between talk and action relies on the assumption that inconsistency is easier and thus more likely than consistency. Hence, it could be possible that an organization claims to be innovative or even to have an innovation culture, although this does not correspond to the reality within the organization.

Looking more specifically at the composition of an organization, institutional pressure from within plays a role. This determines organizational behavior through actions, structures, and roles, with the power and legitimacy of shared meaning systems becoming paramount. Institutional theorists insist that organizational behavior is a product of values and beliefs that originate in the institutional context (Meyer & Rowan, 1977). Beyond reactions to market pressures, it is conformity to the institutional context and accepted conventions that contributes to the social support and persistence of organizations (Hatch, 1997). In a theoretical approach to explain these logics of production and reproduction of institutions within the organizational field, Scott (1995) identifies three pillars that provide legitimacy and work together in different ways. In principle, these pillars are central elements of institutions, forming the human system context. When these three pillars are well aligned, organizations achieve a high level of strength and legitimacy (Scott, 1995). The regulative pillar refers to formal and informal rules that regulate behavior in an organization. In this respect, authority and control mechanisms play an important role. The normative pillar is based on norms and values and their role in behavior within an organization. This refers to standard operating procedures as well as norms of behavior that are considered normal and legitimate. The third pillar refers to cultural-cognitive logics within an organization. This includes frames of reference to which the members of the organization relate. Thus, it is habits and rituals that profoundly guide interpretive schemes (Wanckel, 2021).

	Regulative	Normative	Cultural-cognitive
Basis of compliance	Expedience, control	Social obligation	Shared meaning systems
Indicators	Rules, laws, sanctions	Norms, values, expectations	Common beliefs, scripts, schemata
Affect	Guild vs. innocence	Shame vs. honor	Certainty vs. confusion
Behavioral reasoning	Have to	Ought to	Want to
Basis of legitimacy	Legality	Morality	Comprehensibility, cultural support

Table 3: The pillars of organizations in Neo-institutionalism

Source: Wanckel (2021)

When considering the social process through which members of an organization adopt shared definitions of reality, cultural influences can be reinforcing character (Palthe, 2014; Meyer & Rowan, 1977). Since this work seeks to consider institutional logics behind innovation culture rather than the necessary change management in the interest of an innovation culture, it is important to highlight that any attempt of achieving an innovation culture should not disregard the institutional context and a firm's adherence to existing ways of doing things. The theory suggests that social legitimacy, be it regulative (must), normative (should) or cognitive (want), should be considered as the frame for organizational change. (Minnig & Dörhöfer, 2013). Therefore, no organization can be considered in isolation, for its survival depends on the relationships it establishes with its larger surrounding context. The adoption of the neo-institutional perspective helps to broaden the focal firm perspective of this research and suggest taking into account the multi-layered interactions in the organizational context. Efforts in the interest of an innovation culture move in the dynamics of power relations (regulative), social commitments (normative), or mental conceptual beliefs (cultural-cognitive). Thereby, this perspective fundamentally informs the understanding of organizational culture and innovation culture that are addressed hereafter. In doing so, it underpins the constitutive component of culture for the innovative capacity and persistence of firms. Further, by means of the three pillars, it offers the opportunity to understand more precisely the organizational behavior with regard to certain efforts towards a culture of innovation.

3.2. Organizational Culture

Before examining innovation culture in detail, the obvious first step is to take a theoretical look at organizational culture. Research on organizational culture emerged in the late 1970s and 1980s seeking to explain the performance advantages and superior operational characteristics of Japanese companies (Yun, Zhao, Jung, & Yigitcanlar, 2020). It is said to be a key factor in organizational effectiveness (Deal & Kennedy, 1982) and accounts for sustained competitive advantage (Barney, 1991). In more general terms, House et al. (2002) refer to culture as a set of parameters of collectives. Relating the findings from Hofstede et al. (2010, p. 6) to the organizational context, it can be said that culture is a collective programming of the mind that distinguishes members of one organization from those of another organization. Therefore, organizational culture is the foundation of an organizational system and always peculiar to a given organization (Tian, Deng, Zhang, & Salmador, 2018). The differences between the organizational cultures of two distinct organizations lie in the institutionalized ways and the implicit beliefs, values, norms and premises, which underline behavior. This behavior and patterns of arrangement adopted by an organization account for the accepted way of solving problems (Ahmed, 1998). Consequently, values and underlying assumptions are reflected in the behavioral norms, which in turn shape a repertoire of skills and habits upon which members of an organization base their actions. In this sense, culture can be thought of as something being developed by the members of an organization as they “learn to cope with its problems of external adaptation and internal integration” (Yun et al., 2020, p.4). According to Yun et al. (2020), it is evident that organizational structures, as well as values and strategies, are crucial to organizational culture. Nevertheless, it should be emphasized that underlying assumptions, thoughts, and feelings are responsible for the emergence of values.

For this work, the definition of Colquitt, et al. (2009) provides a good basis for understanding the implications of organizational culture. According to them, organizational culture is the shared social knowledge within an organization regarding the norms, values and rules that shape the behavior and attitude of its employees. Once again, this highlights the relevance of norms, values and rules but it also speaks to the notion of learning and sharing amongst employees. Hence, it is through interactions that a certain social knowledge of employees about the organizational environment emerges. At the same time, it addresses the interrelation between the formal system and the less tangible aspects such as values. It is because of this interrelationship that promoting a particular organizational culture also entails influencing employee behavior (Yun et al., 2020). However, it is the concepts of values and norms that render organizational culture challenging to measure.

Sharifirad and Ataei (2012) adopt the model of Denison and colleagues (Denison, 1990, 2000; Denison et al., 2000; Denison and Mishra, 1995; Denison and Neale, 1996) to explain the relationship between organizational culture and innovation culture. Table 4 captures the 4 dimensions of organizational culture that lead to organizational effectiveness.

	Key element	Key ability	Description
Consistency	Internal integrity and coordination of activities	Creation of organizational systems and internal governance system based on consensual support	Linked to developing a mindset, identity and core values, as well as the ability to reach agreement
Adaptability	Cope with external changes	Translate demands of the organizational environment into action	Linked to customer focus (market orientation), reactive capacity, risk taking and organizational learning
Mission	Stability and direction that shapes goals	Express understandable vision for the future reflecting priorities and values	Linked to strategic objectives and sense of purpose helps to orchestrate external relationships
Involvement	Engagement and empowerment	Build organization around teams and develop participation and human capability at all levels	Linked to cooperative group interaction, commitment, sense of ownership and capability development

Table 4: The four dimensions of organizational culture

Source: Sharifirad & Ataei (2012)

In their study on the relationship between organizational culture and innovation culture in Iranian auto companies, Sharifirad and Ataei (2012) find that adaptability and involvement have a positive impact on innovation, whereas consistency may have a negative impact. Leading up to the theoretical discussion of innovation culture, it appears evident that organizational culture entails multiple elements, which can contribute to a firm's innovative capacity. Ahmed (1998) underlines this by pointing out that becoming innovative requires an organizational culture that guides the members of an organization to strive for innovation. Organizational culture can thus be considered the core element for innovation (Dobni, 2008; Tushman, 1977).

3.3. Innovation Culture

When it comes to innovation culture, it should first be made clear what it is intended to achieve and why it is being pursued. In this regard, innovativeness can be considered the main objective that companies aim to achieve through an innovation culture (Dobni, 2008). For this is the process of bringing opportunities into practical use, which is only achieved if they are actually adopted in practice (Schumpeter, 1934). Wang and Ahmed (2004) define innovativeness as the overarching capability to bring new products to market and enter new markets by combining a strategic orientation with innovative processes and behaviors. Dobni (2008) states that innovativeness can be broadly defined - "ranging from the intention to be innovative, to the capacity to introduce some new product, service, or idea through to the introduction of processes and systems which can lead to enhanced business performance" (Dobni, 2008, p. 4). Moreover, he first refers to the findings of Zaltman et al. (1973) that suggest that a critical part of innovativeness is cultural openness to innovation. He then specifies with reference to Subramanian and Nilakant (1996) that innovativeness is an enduring trait in organizations that manifests itself over time. Thus, recognizing innovativeness as a multi-dimensional subject consisting of many interconnected activities, it is the organizational culture that holds them together (Dobni, 2008). Thereby, the reason for striving for an innovation culture is that it is conducive to innovativeness and, in turn, increases organizational performance accounting for competitive advantages. From the perspective of a company, it is essentially about growth and performance, whereby the innovation culture can be an intangible organizational asset (Tian et al., 2018). The underlying assumption here is that if a company is able to change specific cultural characteristics, it will be more successful throughout the innovation process and thus produce more and better innovations.

Various studies have taken different approaches to explaining which values, norms, behaviors, or even processes and structures are conducive to a culture of innovation. For example, one could focus on the individual employee with the assumption that organizational culture resides in every individual of a certain group. The key to innovation being in turn to promote employee traits that foster innovation (Dobni, 2008). On the other hand, many studies on innovation culture focus on organizational factors, structural systems, and corporate governance (Damanpour, 1991). Given the previously explained interaction of behavior, values, and structural arrangements, it seems only appropriate to acknowledge their close interconnectedness in the context of innovation culture. It is therefore not in the interest of this research to collect and comprehensively discuss any potential influencing factors. Rather, the work of Dobni (2008) provides a promising basis for a more concrete understanding of innovation culture. Based on existing research, he first identified a large pool of potential items that might be part of innovation culture (Table 5). With the help of two innovation managers, 117 items

were selected, which in turn were reduced again by conducting an exploratory factor analysis of 86 defined constructs of innovation. In the end, the study proposes 7 factors, representing 70 constructs, as a measure of innovation culture. This model thus supports the theory that there are four general dimensions for innovation culture (Dobni, 2008). The four dimensions *Innovation Intention*, *Innovation Infrastructure*, *Innovation Influence* and *Innovation Implementation*, consisting of 7 factors are explained in more detail in the following and serve as a theoretical basis for this research. In doing so, some of the related concepts will be addressed and put into the context of organizational culture. This study considers innovation culture to be an aspect of organizational culture (Yun et al., 2020). Based on this understanding, the following section examines which theoretical constructs that are relevant for explaining innovation culture are reflected in the dimensions of organizational culture. In their study, Sharifirad and Ataei (2011) examined the influence of organizational culture on the building blocks of innovation culture and found, among other things, that adaptability and involvement are of highest importance for innovativeness in organizations. These findings are meaningful for the work at hand, however the focus here is more specifically on explaining the individual factors of innovation culture and establishing the theoretical link to organizational culture. This theoretical view of innovation culture enables the formulation of hypotheses as to how an innovation platform can perform within the identified factors. In addition, the contextualization from a neo-institutional perspective is relevant in order to interpret the findings, especially with regard to the model of open innovation. Martins and Terblanche (2003) emphasize that it is the interaction between individuals within an organization, with other organizations and the external environment that influence behavior in organizations. It is therefore an intriguing approach to examine innovation culture, with its role in maintaining groups and determining the conditions under which employees work, in the context of a company (Yun et al., 2020).

Dimension	Authors
Innovation Intention	Tesluk et al. (1997), Christensen & Raynor (2003), Martins & Terblanche (2003), Dobni (2006, 2008)
Innovation Infrastructure	Syrett & Lammiman (1997), Tushman & O'Reilly (1997), Hurley & Hult (1998), Martins & Terblanche (2003), Dobni & Luffman (2003), Wang & Ahmed (2004), Dobni (2006, 2008)
Innovation Influence	Kohli & Jaworski (1990), Narver & Slater (1990), Jaworski & Kohli (1993), Deng & Dart (1994), Hurley & Hult (1998), Hult & Knight (2004), Aldas-Manzano et al. (2005), O'Cass & Ngo (2007)
Innovation Implementation	Day (1990), Kohli & Jaworski (1990), Bossidy & Charan (2002), Dobni & Luffman (2003), Marinova (2004), Wang & Ahmed (2004)

Table 5: The four dimensions of innovation culture

Source: Dobni (2008)

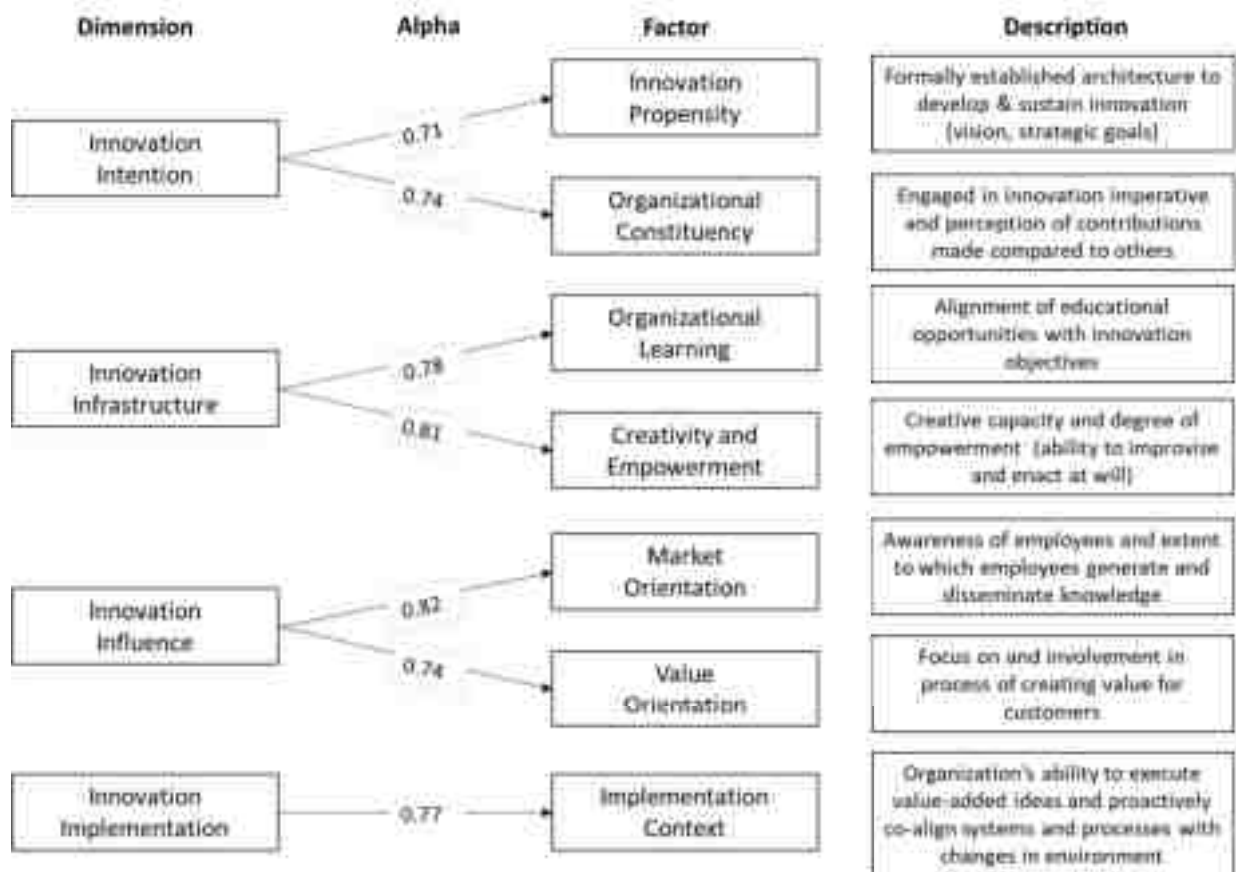


Figure 3: Dimensions and factors of innovation culture

Source: Dobni (2008)

3.3.1. Innovation Intention

The term *intention*, evoked in the beginning of this study in presenting West and Farr's (1990) definition of innovation, constitutes the first dimension of innovation culture. This dimension identified by Dobni (2008) includes the factor *innovation propensity* and *organizational constituency*. It involves an organization's deliberate decision to be innovative on the one hand, and the employee engagement in this intention on the other hand.

Innovation Propensity

For the dimension of *innovation intention*, the factor *innovation propensity* relates to the formal architecture that a company establishes in the interest of an innovation culture. Specifically, it is a question of how the intention to develop and maintain innovations is reflected in the strategic goals and communicated vision of a company. On top of that, the existing business model and processes in particular can reflect this innovation intention (Dobni, 2008). Consequently, this factor of innovation culture accounts for the direction of the innovation imperative and ties back to the *Mission* dimension of organizational culture (Table 4). The meaning of the word propensity speaks to the inclination to behave in an innovative manner. Consequently, a specific innovation intention helps employees see how innovation precisely relates to what they do. Martins and Terblanche (2003) point out that a shared mission and vision, focused on the future, are core to innovation. Such a shared mission and vision implicitly go along with efficient and comprehensible communication. While strategic goals can be regarded as guidelines for action providing the framework for innovation endeavors in an organization, innovative activities also require a large degree of freedom within the context of these goals (Judge, Fryxell, & Dooley, 1997). In effect, some authors consider organizational support to achieve these goals as a crucial element of innovation culture on the organizational level (Gumusluoglu & Ilsev, 2009; Martins & Terblanche, 2003). Gumusugulu and Ilsev (2009) point out that it is especially the employee's perception of this support that matters. They thereby underscore the importance of the visibility and communication of the innovation intention and corresponding support. In explaining different support mechanisms that promote innovation, Martins and Terblanche (2003) point out that the availability of resources and time are necessary to render the achievement of the strategic goals possible (Martins & Terblanche, 2003). It can be argued that information technology such as an innovation platform is a resource through which the internal communication and thus visibility of the strategic intention can be supported. Hence, this study puts forward the following hypothesis:

H1: An innovation platform contributes to the building of an innovation culture by communicating the organizational innovation intention.

Organizational Constituency

The second factor of this dimension of innovation intention relates to the level to which employees are engaged in the innovation imperative. For the factor of *Organizational Constituency*, it is particularly relevant how employees see themselves in terms of their contribution and value within the organization (Dobni, 2008). It therefore relates to the *involvement* dimension of organizational culture and depends directly on the personal self-perception of employees. The term constituency, even more so than terms like participation or engagement, emphasizes that employees are able to influence the activities of the organization. Employees can thus become an active constituency through willful and purposeful participation in the innovation process and move the organization in a direction that is more effective or innovative, for example (Connolly & Conlon, 1980). The extent to which employees care about the organization and are committed to the innovation intention is a crucial aspect for innovation culture. On top of that, organizational commitment has been proven to enhance organizational performance (Villaluz & Hechanova, 2018).

According to Sharifirad and Ataei (2012), for employees' work to be in line with strategic goals, commitment and a sense of ownership are vital aspects. To this end, participative decision-making and perceived freedom in the innovation process contribute to the involvement and commitment of employees (Damanpour, 1991; Sharifirad & Ataei, 2012). Tian et al. (2018) underline this point by highlighting that involvement of all members and shared responsibility maximize the value of human capital and encourage members of an organization to participate in the innovation process. Further, the work of Telsuk, Farr and Klein (1997) suggests that for employees to actually be invested in the innovation imperative, it may be relevant to have shared ideas about the means by which innovation should take place. In addition to the emphasis placed on innovation goals, this can be considered the driving force for employee commitment to the innovation intention. Consequently, it could be an important characteristic of an innovation platform to inform the users not only about the vision and strategic goals regarding innovation, but also to promote a general understanding of how innovation should take place. In that light, it is also of interest what role and what contribution to the innovation process employees see for themselves through the use of an innovation platform. With reference to the section on *engaging the crowd*, an innovation platform in theory provides the opportunity to expand involvement in innovation projects. The decisive factor could be whether the platform supports participative decision-making mechanisms.

3.3.2. Innovation Infrastructure

The innovation infrastructure dimension looks more closely at the extent to which an organization and its members are able to pursue innovation. In other words, it is specifically about how an organization is positioned to achieve its innovation intention. Dobni (2008) identified the factor *Organizational Learning*, as well as the factor *Creativity and Empowerment* as relevant components of innovation culture.

Organizational Learning

The factor *Organizational Learning* speaks to the alignment of educational opportunities with innovation goals (Dobni, 2008). Hence, particular attention should be paid to ensuring appropriate training in line with the specific innovation intention at the organizational level. Consequently, it is about empowering employees to pursue the communicated innovation goals. The root of this lies in the recognition that learning and keeping knowledge and skills up to date plays a crucial role in innovation (Tian, Deng, Zhang, & Salmador, 2018). More generally, organizational learning is about the learning capacity of an organization and its members. The description of the adaptability dimension of organizational culture suggests that organizational learning also plays a role in dealing with changes in the environment. Regarding innovation, it is particularly about learning from one's own experiences. Organizational learning consists primarily of the aspect of reviewing successes and failures in the pursuit of innovation goals, and logically, in a second step, of generating relevant insights from these experiences. Velasco et al. (2012) point out that companies that are poor at learning from past experiences have poorer innovation capabilities. Several studies point to the positive impact of an organizational learning culture on innovation and thus consider it as an integral component of innovation culture (Tian et al., 2018; Skerlavaj et al., 2010; Dobni, 2008; Hurley & Hult, 1998). Through educational opportunities in the interest of innovation and inquisitive, creative thinking, the necessary skills and capabilities can be built and maintained to pursue the innovation intention. In their study of 201 Korean companies, Skerlavaj et al. (2010) point toward three constructs of organizational learning culture: *information acquisition*, *information interpretation* and *behavioral and cognitive changes*. Building an effective system infrastructure that prioritizes the promotion of educational opportunities, learning capabilities and knowledge sharing could be meaningful to innovation culture. In line with the fundamental premise of organizational learning, innovation platforms aim to enable mutual communication and knowledge sharing among employees. Therefore, this work puts forward the following hypothesis:

H2: By enabling knowledge sharing among users, an innovation platform contributes to organizational learning and the building of an innovation culture.

Empowerment and Creativity

The second factor of the Innovation Infrastructure dimension focuses more specifically on the employees themselves. The creativity and empowerment factor includes the creative capacity of employees, as well as the degree of empowerment held by employees (Dobni, 2008). Lubart (2001) defines creativity as the creation of an original or feasible solution to a complex or only partially defined problem. This shows the very important role of creativity in the innovation process, where generating creative ideas is part of innovative behavior (Yuan & Woodman, 2010). At the same time, the close connection between the organizational and individual level becomes apparent as structural support and the general working conditions are decisive for employees' creative capacity (Gumusluoglu & Ilsev, 2009; Telsuk, Farr, & Klein, 1997). With this in mind, it can be argued that creativity resides at the individual level with certain attitudes and psychological aspects being of particular importance. Yuan and Woodman (2010) show that intrinsic interest in a task has a positive influence on creativity. Regarding the creative capacity of employees, characteristics such as intellectual curiosity, open-mindedness, non-conformity and risk-taking make up the personality of creative individuals (Kudesia, 2015, S. 191). Ahmed (1998) also emphasizes that individuals play an important role in organizational culture, naming some personality traits that promote innovation. These include a broad interest, persistence and being attracted to complexity. He also points out that cognitive factors such as fluency of expression influence idea production. This makes creativity at the individual level an important aspect for the recruiting process of an organization. Hiring employees of different abilities, backgrounds and interests can be seen as ideal for creative and innovative employees. Not least because of their openness to other participants and their broad interest, creative and innovative employees seem to thrive on diversity (Leavy, 2005; Dobni, 2008).

The aspect of empowerment relates to the factor of Organizational Constituency and refers to whether employees can realize their creative potential. Dobni (2008) highlights the ability to improvise and enact at will as a crucial element for this factor of innovation culture. In the description of organizational culture, the aspect of empowerment is addressed in the *Involvement* dimension. Accordingly, it is about organizing an organization around teams where cooperative interaction takes place. This leads to the development of capabilities at all levels of an organization and at the same time promotes a sense of ownership among employees (Sharifirad & Ataei, 2012). This aspect of ownership helps employees assume that their work is in line with the organization's goals. In addition, a positive reciprocal relationship exists between participation and empowerment, with more engagement and participation contributing to a sense of empowerment, which in turn leads to more participation (Villaluz & Hechanova, 2018; Sharifirad & Ataei, 2012).

The section on innovation platforms demonstrated that these technologies often encourage employees to share ideas and can be designed towards opening up new ways to achieve innovation goals (Yun & Woodman, 2010). In particular, innovation platforms can account for more involvement in the earlier steps of the innovation process by sharing ideas and knowledge. In the description of Organizational Constituency it also became clear that aspects such as ownership and commitment depend on whether the platform supports participatory decision-making processes. Therefore, no specific hypothesis was formulated in this regard, because influence and perceived freedom depend on how the platform is specifically designed. However, the factor of creativity and empowerment suggests that an innovation platform may increase participation and potential for creative contributions of employees. Therefore, the following hypothesis is formulated for this work:

H3: An innovation platform expands the opportunities for participation in the innovation process and supports the building of an innovation culture, particularly with regard to creativity and empowerment in the early steps of the process.

3.3.3. Innovation Influence

The two factors *Market Orientation* and *Value Orientation* identified by Dobni (2008) for the *Innovation Influence* dimension refer to the knowledge and orientation of employees to support certain ideas. The two factors particularly relate to the *adaptability* dimension of organizational culture. Consequently, this dimension of innovation culture also speaks to the reactive capacity of an organization, the coping with external changes and customer focus (Table 4; Sharifirad & Ataei, 2012). On the individual level, it is about behaviors necessary to influence a market and how value orientation shapes actions in relation to innovation (Dobni, 2008).

Market Orientation

For the factor of market orientation, key capabilities of employees include contextual awareness and the ability of market and competitor sensing (Jaworski & Kohli, 1993). This refers to the extent to which employees generate and disseminate knowledge about the value chain, the industry, the competition, and customers (Damanpour, 1991; Dobni, 2008). Dobni (2008) states in his work that the antecedents of innovation culture are very similar to those of a market-oriented culture, which in turn suggests that market orientation is conducive to innovation. This is because market orientation goes beyond the implementation of the marketing concept and refers specifically to how close employees are to developments on the market and how they translate these into their actions. Context-based information, such as information about future trends, technological developments and regulations are indispensable for making good decisions in the innovation process (Kesting & Ulhoi, 2010). In view of the innovation support services mentioned by Recker et al. (2016), an innovation platform may enable employees to obtain this context-based information. Consequently, the exchange of such knowledge in particular would help to promote market orientation. Thus, the following hypothesis can be formulated about the contribution of innovation platforms to innovation culture:

H4: By encouraging contextual awareness among users, an innovation platform contributes to the building of an innovation culture.

Value Orientation

The factor of value orientation is closely related to market orientation and refers specifically to the extent to which employees are focused on and involved in the process to create value for customers (Dobni, 2008). In other words, this is about the fundamental orientation of activities in the interest of creating value for customers. Martins and Terblanche (2003) argue that innovative companies should always include the focus on solving customer problems in their business objective. This could, for example, be addressed in the innovation propensity, whereby the customer focus is reflected in the

mission and strategic goals. More importantly, however, is the extent to which the business model and existing processes allow employees to embrace this focus. Consequently, the main focus of this factor lies in the individual perception of employees. In terms of an innovation culture, employees should therefore be able to identify their contribution to the customer and value creation. The fact that everyone in an organization is working toward the common goal of satisfying the customer may even create a sense of pride. (Jaworski & Kohli, 1993, S. 57). This study sees the potential for an innovation platform to contribute to this factor through an open design that includes customers. However, the explanation of innovation platforms in the context of this work has shown that they typically aim to enhance the internal company network. While the exchange of users on an innovation platform may promote value orientation, depending on which user generated content takes place on the platform, this study does not consider an innovation platform to fundamentally affect the process of creating value for customers per se.

3.3.4. Innovation Implementation

There is only one factor with an alpha coefficient of more than 0.70 for the Innovation Implementation dimension in the study of Dobni (2008). The factor Implementation Context. By considering the structural and procedural suitability of an organization with regard to its context, this dimension of innovation culture speaks directly to the adaptability dimension of organizational culture. It is thus the interaction between organizational functioning and the context, which needs to support the implementation of value-added ideas.

Implementation Context

This factor of innovation culture refers to the organization's ability to proactively co-align systems and processes with changes in the competitive environment (Dobni, 2008). In general, one may assume that in a rather stable environment, systems and processes, or even products and services, require rather little modification. One reason for this could be that customer preferences tend to change less in situations of low competition due to limited alternative options. Dobni (2008) points out that within this factor, there might be a ranking of factors. For example, metrics to measure innovation might be more important than the ability to sense when customers are either over served or under served.

According to Wang and Ahmed (2004), the capability to implement, i.e., to bring new products or services to the market, is related to the combination of strategic orientation and innovative processes. Consequently, the structure of an organization has an impact on its ability to execute and implement innovations. Garcia (2015) points out that the structure of an organization's network designed for execution differs from those of organizations designed for creativity. In execution-oriented organizations like-minded employees are tightly connected allowing them to pursue established procedures with a high degree of trust. In creative organizations, on the other hand, employees of differing perspectives are loosely connected, allowing them to thrive on diversity (Leavy, 2005). As was made clear in the sections on innovation platforms and on the creativity and empowerment factor, this research considers innovation platforms as a way of expanding the organizational network and involving more employees in the innovation process across space and time. In terms of the structure of the organizational network, an innovation platform is therefore not regarded as something that fundamentally promotes the execution-oriented organization as described by Garcia (2015).

An interesting element for this study, however, is whether the setting up of an innovation platform reflects the translation of contextual circumstances into the organizational set-up. Thus, an innovation platform could address the innovation implementation dimension in that it can be seen as an adaptive behavior of an organization in order to support the implementation of innovations. Given the focus on the interaction with the organizational context, the neo-institutional perspective could provide a

suitable explanation for the setting up of innovation platforms in companies. It is conceivable that an innovation platform is not set up merely out of the desire to foster an innovation culture. Rather, it could be the product of mimetic isomorphism as defined in the section on neo-institutionalism. Consequently, the setting up of an innovation platform can be considered as an indication of adaptive behavior in relation to the organizational environment rather than a pro-active alignment of processes in order to support the implementation of innovations. Therefore, this study puts forward the following hypothesis:

H5: An innovation platform is not set up to support the implementation of innovations.

3.4. Analytical Framework

Combining the insights generated from the theory on organizational culture and innovation culture with the provided explanations on the innovation process, the open innovation model as well as innovation platforms presents a fruitful framework to analyze the role of innovation platforms in the building of an innovation culture. Figure 5 provides an overview of the factors of innovation culture for which hypotheses were formulated. It also shows how the factors of innovation culture could be related to the dimensions of organizational culture according to the theoretical representation of this work. In line with the findings of Sharifirad and Ataei (2012), according to which *Consistency* has a negative influence on innovation, no line was drawn to this dimension of organizational culture. However, this must be put into the perspective of the theoretical discussion at hand. It is not the objective of this study to identify and test the relationship between innovation culture and organizational culture. Instead, an association to the most appropriate dimension of organizational culture was made in the course of describing the individual factors, thus enabling deeper explanations and a more concrete understanding.

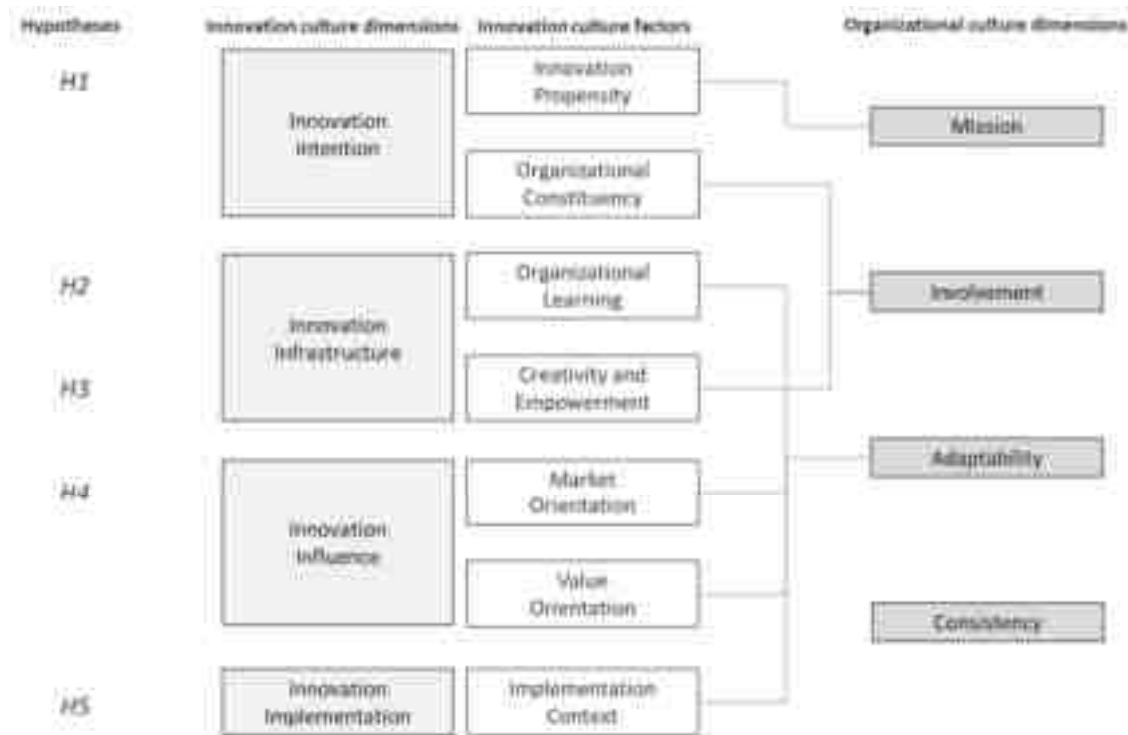


Figure 4: Overview of analytical approach

In the course of this work, the formulated hypotheses are reviewed and examined for their validity and reliability. The analysis of this work enables to cover these hypotheses with reference to the respectively applicable elements of the theory. In this way, based on Dobni's (2008) theory, innovation culture is analyzed in more detail, focusing on the innovation platform as a means of potentially fostering an innovation culture.

4. Methodology

This section describes the methodological approach of this study. In a first step, the research design is explained including the discussion of arguments for this approach. In a second step, the strategy of collecting data is laid out, including considerations of data validity and reliability of the chosen method. The third section addresses the two-step approach of data-analysis based on Miles et al. (2014). Consequently, this section aims to ensure the comprehensibility and reproducibility of this study.

4.1. Research Design

This study follows a case study research design and is based on a qualitative approach, which is appropriate for small *n*-studies (Flick, 2007). With this approach, the main objective of this research is to analyze the phenomenon of interest in its context with the relation of the phenomenon and its context not being entirely clear (Yin, 2003, p.13). Therefore, the single-case case study of this research allows for the analysis of how an innovation platform, in the context of a single company, stands in relation to the phenomenon of innovation culture. A substantial first step is the description of the case, forming the starting point for the analysis. A comprehensive description of the case at hand follows this section on the methodology of this study.

In view of the main research question formulated for this study, this research aims to contribute to the understanding of the "how" of the contribution of innovation platforms on innovation culture (Yin, 2003). With regard to the complex notion of innovation culture in the context of a company, this study requires a strong theoretical foundation. For this reason, the presented theoretical understanding of innovation culture and the description of the respective factors serve as the basis for analysis in the context of this work. Building on the exploratory work of Dobni (2008), the role of innovation platforms will subsequently be examined in more detail. At the same time, an indispensable criterion for good qualitative research is that the research is just as dependent on theory as it aims to contribute to progress in theory (Strübing, Hirschauer, Ayaß, Krähnke, & Scheffer, 2018). This research does not aim at testing theory-based propositions, as is customary for this type of research. Instead, expectations are formulated that are grounded in theory and may serve as a basis for future research that examines more specifically the "why" of this relationship (Miles, Huberman, & Saldana, 2014; Yin, 2003). This research design allows for the gathering of in-depth qualitative data about the role of an innovation platform within the theoretical construct of innovation culture. The appropriateness of the case results from the coordination of theory, question, empirical case, method and data types (Strübing et al., 2018, p. 86). For this purpose, the approach to data collection is explained in the following.

4.2. Data Collection Methods

This study pursues the formulated research question through semi-structured interviews of key actors who promise to be relevant respondents regarding the innovation platform set up in the company. These interviews are intended to inform a further understanding of the role of an innovation platform for an innovation culture in a company. Consequently, in order to obtain in-depth data on the personal perceptions and experiences of respondents, the selection of interviewees followed a purposive sampling approach (Campbell, et al., 2020). The main objective was to gather comprehensive information across the interviews that can be related to the theory. To ensure that the range of factors addressed in the theory on innovation culture can be addressed during the interviews, respondents with different roles and relations to the innovation platform were selected (see Table 6). The following section of the case description further explains this selection in the context of the case.

Role of the interview partner	Relation to the innovation platform
Interview Partner 1: <i>Head of Digital Communications and Social Media</i>	User, Pilot, Admin Involved in the developments of the platform since its beginnings
Interview Partner 2: <i>Innovation Director of the company and one of the company's assets</i>	User, Pilot, Admin Key stakeholder in the setting up of the platform and leader for innovation activity on the platform
Interview Partner 3: <i>Innovation Manager of one of the company's assets and leader of one Innovation Centre of Excellence</i>	User, Pilot Involved in innovation activities and leader for one business area of the company on the platform
Respondent 4: <i>Member customer satisfaction team of the platform provider</i>	Superadmin, Pilot Responsible for the functioning of the platform and the implementation of desired adjustments

Table 6: Summary of the selected interview partners

One of the interviews was conducted face-to-face, and three were conducted via the online video tool Microsoft Teams. It should be noted for the interviews that were conducted online, social reactions, such as facial expressions of respondents could only be taken into account to a limited extent. One of the interviews was conducted in French, and references to this interview were translated into English for the analysis. According to the purposive approach of selecting interviewees, different questions were asked depending on the role of the different respondents and their relation to the innovation platform. In the sense of a semi-structured interview, all conversations followed a guideline of general topics based on the literature and the research interest at hand. Despite the variations of the different interviews, all interviews started with a general introduction to the research topic and covered the following 5 general themes:

Theme 1: Understanding of respondent's perception of the innovation platform

Theme 2: Impact of the innovation platform on communication about the topic of innovation

Theme 4: Potential use of the platform and its different features

Theme 5: Increasing participation on the platform across the company

Theme 6: Perception of the reasons for and the expected benefits of the platform

In addition, the role of the researcher on the platform during the research period (04.04.-15.08) plays a key role in the data collection of this study. As a *user*, *pilot* and *admin* of the innovation platform for a period of four months, the researcher was able to acquire a thorough understanding and knowledge about the platform and the contextual circumstances within the company and its environment. During the research period, the researcher reported to the Innovation Director as a member of the company and was tasked, among other things, with helping to set up the innovation platform and being in regular contact with the provider. This enabled the continuous gathering of insights that are included for this research. In this way, the implication of the researcher in the related developments leads to knowledge relative to particular circumstances. According to the interpretivist paradigm, the research is in part guided by the researcher's set of beliefs and feelings about the situation (Levers, 2013). This is due to the researcher's role in the company in which the research took place. At the same time, this enables the researcher to recognize different experiences and to see the respective situation from the point of view of other actors. During the semi-structured interviews, it was particularly important to capture the personal assessments and perceptions of the platform. The trustworthiness of observations and interpretations is vital to account for the validity of the findings and is therefore prioritized for the analytical reasoning of this work (Flick, 2007).

Moreover, the researcher participated in the development, as well as in content creation, user initiation and the monitoring of the platform during the research period. Through this role, it was possible to record quantitative data related to the platform and actors involved. This contributes to the data collection of this case study (Maxwell, 2009). The monitoring of the activity on the platform took place on a monthly basis and will be explained in more detail in the following section. This accounts for a more comprehensive understanding of the case at hand and triangulates the data of the semi-structured interviews with quantitative data from the platform (Patton, 2014; Yin, 2003). In the context of qualitative research, triangulation provides the opportunity to counteract the single source bias and enables reviewing the information from different sources for their validity (Carter, et al., 2014). Consequently, the additional view into the quantitative data collected through platform monitoring helps to include further contextual knowledge and to better understand and classify statements made in the interviews.

4.3. Data Analysis

The interview transcripts and relevant notes recorded during the research period are analyzed according to the 2-step coding approach of Miles and colleagues (2014). In order to process the raw data for the analysis, codes capture the meaning of the gathered information in a short phrase or word (Maxwell, 2009). They serve to categorize data, which in turn can be considered as a first analytical step. In this process, the collection of data took place concurrently to the analysis of data, thereby contributing to the strategy of generating new data (Miles et al., 2014). With regard to the literature review and the theoretical framework, five coding dimensions were identified to structure the first round of deductive coding. In this first round, relevant data segments were subordinated to the identified dimensions, allowing to address the hypotheses of this study (Saldaña, 2013). The *Communication* dimension contains data segments in which respondents addressed specific interactions on the platform, as well as the communication of the innovation vision and goals, for example. The second dimension of *Knowledge sharing* frames the data segments that refer to the generation and dissemination of information, as well as learning practices. The *Participation* dimension contains information on contributions, involvement and cooperation on the platform. Information on the respondents perceptions of the ability to understand the market, technological developments and the competition are included for the fourth dimension of *Contextual awareness*. Finally, *Strategic orientation* more broadly sorts data segments that describe circumstances, structures and characteristics of the company and its employees. Subsequently, the sorted segments were coded according to the inductive approach (Gioia, Corley, & Hamilton, 2012). In this second step, so called process-coding was used to grasp the context and implied actions of the respective data segments (Miles, et al., 2014, p.75) The data segments of similar content were assigned with the same first-order category. Building on the first step of sorting data segments in a deductive manner, this second step resulted in 20 different codes for a total number of 127 segments. To provide the structural basis for the analysis, these 20 different codes were aggregated into 9 second-order themes (Gioia, et al., 2012, p.20). Thus, a tangible set of themes emerged to serve as topics for the sections of the analysis. Table 7 shows an example of this analytical process.

Coding	Example
Step 1 - deductive coding:	Participation
	<i>I don't see the team joining aspect to be a key part of it (...) I think they might be interested to say I wanna follow this initiative to be able to get the updates</i>
Step 2 - Inductive coding:	
1 st order	Participation – Driving engagement
2 nd order	Employee engagement

Table 7: Analytical process

Apart from the data analysis of the interview data, the quantitative data retrieved from the innovation platform serves as a second source of data for the analysis. At the beginning of every month, the researcher extracted the respective data from the back-office of the innovation platform in order to be able to track any changes and developments on the platform. Consequently, four measuring cycles took place (02.05.; 01.06.; 01.07.; 01.08.). In the context of this data analysis, the metrics focused on uploaded innovation initiatives on the one hand, and user engagement on the other hand. One option would be to analyze this data in relation to itself and its evolution over time. In the context of this work, it is most useful to examine the data in relation to the statements made during the interviews. In this way, specific findings from the qualitative data analysis can be confronted with the quantitative data. Table 8 shows a summarized representation of the structure of the collected data.

Initiatives	Engagement
Per business area <i>A</i> <i>B</i> <i>C</i>	Active users per business area <i>A</i> <i>B</i> <i>C</i>
Per strategic program <i>X</i> <i>Y</i> <i>Z</i>	Active / inactive ratio Originator / contributor ratio Initiative views / visitor ratio
Pending initiatives Deactivated initiatives	News articles uploaded
New initiatives	Events and activities promoted
Views per initiative Likes per initiative Comments per initiative	
Per workflow step <i>Idea</i> <i>Explore</i> <i>Develop</i> <i>Trial</i> <i>Production</i> <i>Closed</i>	

Table 8: Quantitative data analysis

5. Description of the case

5.1. Description of the company

The company in which the case study is conducted, and in which the researcher worked during the research period, is a global leader in mobility infrastructure. With its integrated model of designing, financing, building, operating and maintaining infrastructure, the company develops concessions and is a shareholder of a portfolio of operating concessions. Across its three main business areas of, this comprises over 80 projects, located in 24 different countries in Europe, Asia and the Americas. The decentralized structure of the company is of particular importance to this work. Generally, the parent company holds a share in each project. This results in a complex structure where the parent company is represented in the projects through its share in the project companies. At the same time, the business model is based on the company being the private partner in public-private partnership contracts, which are long-term development and service contracts for the delivery of public infrastructure. The 2021-2022 activity report shows that innovation is one of five focus topics for communication. In this regard, it is pointed out that the company has established 5 Innovation Centers of Excellence (ICE), 3 of which belong to one of the three business areas. Of these three, each is focused on a different strategic area for innovation. The other two ICE each address these three topics in a unified way. The general idea for the ICE is to lead and coordinate innovation activities, to generate new solutions and to address the strategic focus areas for innovation.

On its website, the company states that the three main areas are part of a comprehensive innovation strategy, placing open innovation at the heart of its efforts. It is described that through partnerships with startups and collaboration with local and global innovation ecosystems, universities and accelerators, the company wants to lead the way in inventing the mobility of the future. For that, the company wants to keep abreast of emerging technologies and trial solutions in the field to constantly improve. In this regard, the aforementioned ICE play a key role in stimulating discussion and gathering information. Considering the internal processes related to innovation, the researcher is able to point out that there are recurring innovation roundtables led by the leaders of the ICE. The intention for these meetings is to bring together the different innovation ambassadors of the individual projects within each business area. Since one of the three business areas involves only one project, these roundtable discussions exist for two of the three business areas. For the main business area, involving the most projects, there is a dedicated Innovation Committee in which senior managers of the respective business area participate every two months. Apart from that, there is an innovation committee across all three business areas at the top level of the company that takes place twice a year. This first general description of the company indicates that innovation is of strategic importance in the

company at hand and that internal structures and processes are in place. It should be emphasized that the 80 project companies all differ in structure and not every project company has a designated innovation department or innovation manager. Therefore, the two ambassador networks have a particular structural importance for the field of innovation. The 2 existing innovation roundtables, led by ICE-leaders, consist of about 10 people each, and are expected to drive the global approach to innovation. In addition, one of the ICE leaders also has the position of Innovation Director and coordinates and oversees all innovation efforts at the group level.

5.2. Description of the innovation platform

On the website, as well as in the company's activity report, it is mentioned that there is a global digital platform for innovation deployed in the company. In this context, the platform is referred to as contributing to the development of an innovation culture among the teams of the company. At the same time, innovation is described as a global culture. This background represents the roots of the research interest of this study. Since this company publicly communicates that innovation is part of everyone's job, the role of an innovation platform is of particular interest. With a workforce of around 20.000 employees, the innovation platform could play an important role in the decentralized structure of this company. The description of the platform will address the structure, and the status of the platform at the time of this study. This provides the necessary contextual understanding for the following analysis on the potential contribution of an innovation platform to an innovation culture.

5.2.1. Structure of the innovation platform

The innovation platform of this company consists of 5 core elements regarding its structure and interface. First, there is the homepage, which appears after logging in. Here, the three strategic fields for innovation are described and the user is presented with the possibility to share an innovation in line with one of these three strategic fields. In addition, the homepage provides a feed of popular innovations, suggestions and news, which draw their content from the other elements of the platform.

The second page of the platform specifically explains the company's innovation program. Here, explanations are provided in relation to the company's innovation strategy, including explanations on the decentralized structure and open innovation, which are particularly noteworthy. With regard to the decentralized structure, the platform explains that the ability to innovate lies with the individual project companies or entities and expertise is then shared openly within the network. This is reflected in the understanding of open innovation in this company, where it is primarily about openness within the network of 20,000 employees. This is an important internal focus of the open innovation ambition, showing that in large companies, such as this one with 80 different project companies, open innovation can first be focused on the companies belonging to the group network. However, the understanding of open innovation in this company is not contrary to the one presented in the literature review, as a strategic explanation of the company's role in the ecosystem can also be found on this page of the platform. In addition to the innovation strategy explanations, this page provides more information about the ICE and gives contact information for the ICE leaders and those working in innovation at the group level. Finally, different pathways that an idea can take to market are also highlighted on this page.

The third element of this platform is the page where innovation initiatives can be found. This is where all ideas end up that are uploaded to the platform, for example via the option given on the homepage. It is possible to search through the initiatives according to strategic field they address, or according to the business area in which they emerged. Among other filtering options, there is also the ability to search through the initiatives by workflow step. This indicates that initiatives on the platform go through a specific process. This process is similar to the stage-gate process explained in the literature review and is illustrated in Figure 9. In each stage, guiding questions are asked, the answers to which allow the project to progress. The figure shows that the ICE leaders have the role of gatekeepers at each gate. However, it should be said that at the time of this work, the stages only indicate the progress on the platform and are not linked to a procedure in which the progress is reviewed or checked. Thus, the initiatives can be moved between ICE stages by the authors. In terms of the structural setup of the platform the progress of initiatives follows the logic of the stage-gate process (Cooper, 2008).

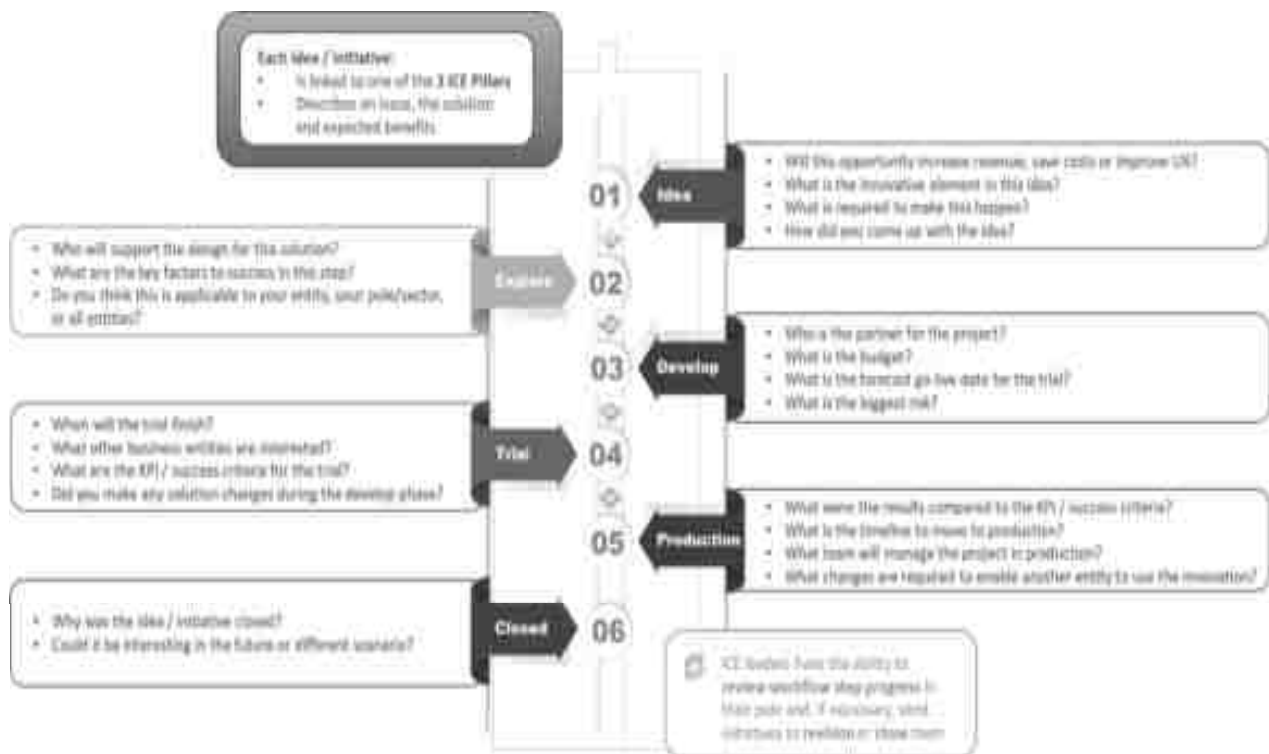


Figure 5: Workflow steps and questions on the innovation portal

With regard to the individual innovation initiatives there are a number of social actions that can be carried out. There is the possibility to like, comment or share an initiative with someone via email. On top of that, it is possible to follow an initiative. In this case, one receives updates via email and on the platform for when the initiative moves to a new workflow step, for example. Another feature related to the initiatives is the option of requesting to join the team of an innovation. Team members can work together on an initiative and make use of a section within the initiative to communicate and share documents.

The fourth page of the platform displays all users of the platform. It allows to search for people and, by clicking on their profile, to get insight into what initiatives that person has posted on the platform. Additional information about each person can be found regarding their role in the company, the location where they work, their email address, as well as their stated interests in the innovation field.

The fifth page of the platform is specifically designed to present news and articles on the topic of innovation. This can be innovation news from the group network, or articles about innovations in the industry. Administrators and pilot users of the platform can upload articles that may be of relevance to other users. These include publications on developments and innovations on the market, as well as articles on technical topics that are relevant to the three business areas. In addition, conferences and events are announced, and activities happening in the innovation labs across the group network are communicated. In the future, the company wants to upload an innovation toolkit to explain methodologies and innovative ways of working. This part of the platform in particular can therefore be considered as a knowledge resource available to users of the platform.

To conclude this part on the explanation of the structure of the platform, it is useful to briefly describe the different roles on the platform. First, there are the regular users who have access to all elements of the described interface and can upload innovation ideas. In addition, there are pilot users who can upload articles and gain further insights into platform activities of members of their business area. Pilot users are linked to their respective business area and can perform supportive actions. Consequently, the pilot user role on this platform is primarily for ICE leaders. Moreover, there is the admin role, that enables someone to access insights about platform activities independent of business areas and to make changes to the platform via the back office. The role of the superadmin lies exclusively with the provider of the platform and includes options for making changes to the basic configuration of the platform.

5.2.2. Status of the innovation platform

It is an important step to describe the status and usage of the innovation platform during the research period as it largely informs the analysis of this work and puts the findings into perspective. The project to establish an innovation platform started about 9 months before the researcher joined the company. When the researcher joined the company, the basic structure of the platform was in place, but the amount of user-generated content and level of participation was still very low. This is due to the fact that at the beginning of the research period, the platform had not yet been released to the entire workforce of approximately 20,000 employees. This was also not the case at the end of the research period. Therefore, there are fundamental remarks to be made about the study at hand. First of all, this means that the quantitative data do not allow for an analysis of the effects of a fully launched

innovation platform on an innovation culture. Rather, this work looks at the preparatory measures and the structure of an innovation platform as well as the activities in the course of the soft launch of the platform. The soft launch of the platform refers to the gradual expansion of the user base and the content shared on the platform.

Without an extensive campaign to launch the platform for all employees, the number of users increased from 27 to 53 during the research period. This is primarily due to the fact that the link to the platform was shared with some employees in the course of the further development of the platform. At the same time, this means that the users on the platform are mostly employees from the innovation area who became aware of it during ICE roundtable discussions, for example. Based on this situation of a soft launch, the selection of the interviewees deserves further explanation at this point. Since this study cannot test the effect of the innovation platform on the identified factors of an innovation culture, it is important to consider the expectations, the potential and the first experiences with the platform. Thus, through the responses of key actors, a first insight can be gained into how the innovation platform can work in the interest of an innovation culture in a full launch scenario in the future. It is already clear that ICE leaders are in regular exchange with innovation staff, and that they could take on an important role on the platform. Therefore, two people with this role were interviewed, one of them is also the innovation director and therefore very familiar with the innovation platform project. In addition, the head of digital communication of the company was interviewed in order to include the perspective of a potential user outside the innovation area and to include a global view on the project. The interview with the platform provider is relevant to capture their experiences from working with other companies and to understand their view of the innovation platform project in the company at hand. In this way, it is possible to analyze the potential contribution of an innovation platform to the building of an innovation culture, despite the platform's status of not being deployed yet across the group network.

6. Findings

This section presents the results of the data analysis. For this purpose, the deductive dimensions identified for the data analysis provide the general structure for the presentation of the results. Within these 5 dimensions, 10 subsections allow for the detailed explanation of the results according to the second-order themes that are derived from the analytical process. The aim of this section is to provide the foundation for the discussion of the results.

6.1. Communication

Visibility of innovation focus

The interviewees generally expressed the view that the topic of innovation and the corresponding innovation strategy and strategic goals are not yet sufficiently communicated across the company (I-01, I-04). The realization that there is no general understanding of innovation and the goals set across the company is one of the reasons for setting up the platform in the way described in the previous section. In this context, the innovation platform is seen as an opportunity to communicate more on the topic of innovation and to promote a global vision (I-04). As previously described, the platform provides explanations of the company's innovation structure and ambition. It is also emphasized in the interviews that this page on the platform is specifically dedicated to giving more visibility to the strategic focus of the innovation area (I-03). At the same time, the platform is seen as one of several options to communicate on the topic of innovation and the need for a comprehensive approach to communication is expressed (I-01). In the past, the company has used another platform to run innovation challenges and gather ideas from employees. These challenges were seen as a good opportunity to talk about innovation (I-01). The current platform also offers the possibility to run challenges, but with regard to the status of the platform during the research period, this did not take place. The platform monitoring data does not provide insights into how many people consulted the existing page about the innovation program. Therefore, it is not possible to examine the effect that the creation of this explanation page has had on users so far. Taking the different perspectives of the interviewees together, it can be assumed that the platform was deliberately designed to offer information about the innovation strategy and strategic orientation on a permanent basis. However, this has not been linked to a communication campaign so far and communication on the subject is not expected to be taken over entirely by the platform (I-01).

A central point for innovation

The interviews show that using a platform is not something entirely new for the company at hand. In the past, there were already two platforms, one for project reporting and one for challenges (I-01). The decision was made to set up a single central platform, partly for budgetary reasons and also to include an educational layer (I-01). There was no central information point before where people could see what was happening from a strategic point of view (I-03). Therefore, the current platform is designed to offer a comprehensive overview for the topic of innovation.

(...) if it's about innovation, it's here, it's on this site. This is where you go (I-03).

This ties back to the page on the platform that describes the innovation program. In addition, however, the platform should also make clear that the existing innovation program is there to support employees in their innovation efforts (I-02, I-03). In particular, the interview with the provider of the platform highlights that it is of great importance to inform employees that necessary resources and time, or even mentoring and training are available (I-02). Promoting a better understanding of the vision may help employees to see what to do and how they should devote personal resources (I-01). Apart from that, it is about being able to support employees in pursuing innovation projects (I-02). According to the platform provider, a common mistake that companies make is to underestimate how much time and effort it takes to both manage a central platform and to offer actual support (I-03). In the present case, the reference to the ICE leaders and the global innovation team on the platform does provide a first point of contact. However, there is no explicit communication on what this support looks like specifically for individual projects and employees. Moreover, it is not necessarily apparent to the user who is managing the platform and the program that goes with it. The provider considers this as a crucial element for the functioning of a central platform (I-03). In context of this case, when it comes to responsibilities in the area of innovation, it is often assumed that in principle there are the teams and time for it (I-01).

6.2. Knowledge sharing

Project database

A key factor for the setting up of this platform is the intention to build expertise and a global vision (I-04). The responsibility of identifying relevant topics and driving discussions lies in particular with the ICE leaders (I-01). For the purpose of disseminating information across the network, the platform is seen as a tool that enables ICE leaders to do so (I-01, I-02). The focus of this platform is therefore to create the possibility to access initiatives and innovation ideas from the network by providing a database of projects. Outside the platform, information about innovation is disseminated occasionally with the focus not being on ideas but rather pilot projects or implemented innovations (I-01). One of the interviewed ICE leaders pointed out that this mandate to identify and review innovations via the platform applies to all innovation ambassadors (I-02). To allow for the dissemination of information about projects, it is of crucial importance that ongoing projects and innovation ideas are uploaded onto the platform. At the same time, the innovation director wants to avoid that the platform requires detailed reporting (I-04). In this context, the soft launch of the platform was particularly about making projects and ideas available on the platform. While this can be considered as a necessary step to equip the platform, this very process often involved transferring projects documented in excel spreadsheets into the format of the platform. One advantage of this process is that projects are presented in a visual and structured way. The overview of all projects and the provision of videos and photos of the individual projects is useful to enhance meetings outside of the platform and to communicate on the topic of innovation (I-01, I-04). Furthermore, having this material on the platform is considered to be a helpful reference for new users, for whom such a platform can be confusing and new (I-02). At the same time, existing examples are seen as a valuable reference for evaluating and managing the quality of new material (I-02, I-04). One of the main challenges that the interviewees identified is the fact that employees need to see the value in sharing their project ideas with others (I-01, I-04). The aim for the platform is to help employees realize that they can benefit from obtaining other users' perspectives on their project and, in turn, want to give back (I-04).

This database of projects from the network is expected to be the basis for discussions on innovation projects (I-02, I-04). The platform offers the possibility to exchange information linked to uploaded projects. Thus, it is possible to exchange with other users either in the comment section of a project or via direct messages that are linked to a project. Consequently, there is the potential for interested employees to enter into topic-specific discussions with other employees that work on an innovation initiative. A look at the quantitative data for the platform shows that at the time of this study, 6 of the 53 users left a total of 25 comments. At the same time, 17 of the 53 users uploaded an initiative while 16 contributed through either likes or comments. Looking at the status of the platform and the user

base, many of whom work in the innovation field, the adoption of this opportunity to exchange about projects can be considered as rather low (Appendix A). It can therefore be said that the possibility of project-related discussions has not yet been used to a great extent.

Sharing and learning

Apart from the database of projects that the platform aims to provide, it is particularly interesting to see how information is shared in the company and what the platform promises to support in this regard. Generally, innovation news from within the network are addressed during regular meetings of the different communication departments (I-01). However, the company's innovation director explains for the innovation area that outside of the meetings described in section 5.1., the individual companies in the network tend to work for themselves rather than with one another. This means that the gathering and sharing of knowledge tends to take place within the individual companies of the network. One of the ICE leaders described that currently interesting articles and news about innovation are shared within the teams via email or LinkedIn (I-02). Consequently, in the context of the decentralized structure, innovation mainly takes place within the respective innovation teams (I-04). The ambition is that the platform promotes the exchange across companies and that relevant news and knowledge are shared on the platform.

We want to create a space as well that says we want the culture that communicates and talks about it openly, which is something we're missing a little bit today (I-04)

In conversation with the platform provider, it became clear that some of their other customers are setting up their innovation platform as a resource for employees. One reason for this is that companies acknowledge that they are not able to provide sufficient support for all individual projects. Therefore, they offer coaching and teaching material to enable employees to pursue their projects themselves (I-03). This means that the platform can provide education about innovation and help employees reach a generic level of knowledge, which in turn may attract their interest in the platform (I-03). In these cases, companies usually share many articles on the platform, host seminars and webinars, and make all material available to everyone via the platform. For this purpose, companies oftentimes create teams that take care of providing material on a daily basis (I-03). At the time of this study, the company is in the process of preparing an innovation toolkit that should be made available via the platform. Thus, users will be introduced to relevant topics and methodologies and are given the opportunity to learn new skills (I-04). One respondent describes such a toolkit and the associated hosting of events and workshops as relevant for building an innovation culture (I-02). At the same time, it is seen as an opportunity to make the platform more attractive to many users. Thus, a "one-stop-shop" for innovation could be created, saving people time in their search for information. On top of that, it would gather everyone in one place allowing for the potential exchange of knowledge (I-04). The provision of

the toolkit could be in line with the aspect of knowledge sharing, if the experiences and insights of individual companies are included in the content creation. For example, it is intended to enrich the explanation on hackathons with the experiences of a company on this topic. With regard to the quantitative data, a total of 51 different articles and innovation news are available on the platform at the time of this study. It should be noted that during the soft launch of the platform the researcher took care of sharing this type of information and provided 45 new articles in the research period. This means that different pilot users did not yet make use of the possibility to upload the articles they otherwise share internally. Rather, the researcher identified LinkedIn posts and news about some of the companies and uploaded relevant information onto the platform. The interviews show that the respondents see value in the concept of one company talking to another (I-01, I-04). However, at the time of this study, the analysis does not indicate that this is already supported by the platform. With regard to the quantitative data for the interaction with uploaded articles, the 45 articles have been viewed 140 times, accounting for an average of 3,1 views per article. On the other hand, the 45 innovation articles and news received only 8 likes (Appendix A). This indicates that during the research period, the articles have received some attention from the 53 users, but it remains to be seen how the interaction with the material provided on the platform will develop in the future.

6.3. Participation

Employee engagement

Building on the last section, and especially with regard to the status of the platform, the main challenge for the platform is the participation of employees. Although it is important to remember that the platform has not yet been released to everyone in the company, the interviews point towards interesting aspects regarding potential participation. The company has run an innovation challenge on another platform twice in the past. The first time, about 800 ideas were generated. Subsequently, employees voted for ideas in a participatory decision-making process, but the winning idea could not be successfully implemented (I-01). In the second challenge, participation was already significantly lower, and the company was again unable to present a success story (I-01). The experience gained from this is of importance for the new platform. A challenge is still seen as a good way to generate discussion and excitement, and to show that innovation is an inclusive and participatory process (I-01, I-03, I-04). However, it is recognized that it is crucial to be transparent and to show results (I-01, I-03). With the new platform, the goal is to open the discussion about innovation projects to everyone and to provide a variety of engagement possibilities.

People are intrigued by Innovation. They like the topic and so that way they'll sort of click on it. They'll go take a look at it and be like OK, cool. This is nice to see. The harder part is to keep them coming back or to get them to contribute, to actually input information (...) (I-04)

While one of the interviewees suggests that many employees will be happy to use the platform because they are interested in looking for information and projects, the key question is how to encourage employees outside the innovation area to participate in the platform (I-02). The platform provider points out that it is especially important to clearly define who you want to engage and whether you rather want to generate a large amount of ideas or whether you want to take a structural approach (I-03). The provider believes that it is possible to have elaborate and quality collaboration in the digital space and describes that other companies had successful experiences with the platform because they linked the interaction on the platform with the opportunity for real-life experiences (I-03).

Social media interaction

In this company, the social media aspect is referred to as a way to enable simple yet valuable interaction. Due to the fact that likes and comments are visible to everyone and help a project make it into the trends on the homepage, projects can gain in visibility through the platform. This mechanism can give employees a voice and draw attention to idea authors (I-04). In this way, this type of interaction becomes relevant to all users and enables users to contribute to an innovative solution

through likes and comments (I-02, I-04). Consequently, this type of interaction could create more interest in the platform, making it a safe and easy way to participate in innovation (I-04). At the same time, this interaction can also be gamified on the platform. It is possible to receive experience points on the platform for social interactions, but the data on experience points is not meaningful at the time of the study due to the status of the platform. However, the data shows that at the time of the study, 26 of the 53 users had already interacted with a project in this way. There are a total of 46 likes from 13 people and 25 comments from 6 people. With an engagement of 49% through social interactions, it can be said that this type of interaction, albeit at a low level, is already widely adopted (Appendix A). Besides that, the quantitative data show that current users interact more with projects than with articles. Overall, this low-threshold type of participation could be a good way to involve employees outside the innovation area. However, one of the interviewees said:

I think it's more for the innovation community, honestly... Because what is the employee going to look for - he will maybe go once out of curiosity (...) Afterwards, on the platform, will he comment, like, share etc.? - I'm not sure (...) (I-01)

One key element to ensuring recurring participation could be the ability to identify contact persons through the platform. For example, the platform makes it possible to contact the people of a project directly (I-04). In addition, the leadership role of the ICE-leaders is of great importance to actively show users the benefit of this platform (I-01). ICE-leaders can monitor users' access and seek dialogue with people on the platform (I-04). In this regard, it is important that users receive feedback and acknowledgement for any kind of contribution to the platform (I-03). Generally, the platform offers a new channel for people to get the gratification of being told that their work is interesting and important (I-04).

Innovation community

The interviews show that engaging in social interactions is an important part of the platform in this company. However, the focus is not only on how the user can contribute on the platform, but on also what the platform tells the user (I-04). While there is the idea that the platform is primarily for those who are already working on innovation, it is intended to build and enhance the innovation community. Generally, the idea of working more in communities is considered as desirable in this company (I-01). The platform should first help to identify those who are working on innovation across the network and should also be designed in such a way that this community is open to everyone (I-01, I-04).

So we want to create more of that. Communities that people know, who else they can talk to in the group to be able to benefit from the shared knowledge that we have (I-04).

Due to the decentralized structure of the company and the many different companies in the network, not all contact data is always available. Collaboration via Microsoft Teams, for example, is sometimes limited because of different access rights and different mail addresses across the network. According to the provider of the platform, this lack of a central point to collaborate and retrieve contact information is an issue for many companies, and therefore an important selling point for this platform (I-03). The platform allows users to search for other users by name, country, business area, or listed skills. The mandatory fields in the registration process on the platform force users to provide at least their name, email address and business area in which they work. In addition, projects are directly linked to people, which makes it possible to identify the relevant people for a project and to reach out to them to ask for more information, for example (I-04). These additional points of contact may enable users to find like-minded people in the area of innovation (I-04). There is potential, that this will allow idea originators to identify and contact the relevant people in the network to help their ideas to get more visibility and the necessary support. In addition, a list of all users can be consulted on one of the pages on the platform, thus providing an overview of the innovation community. The availability of this information can encourage others to find out who is involved in innovation topics and to get involved themselves (I-04). Therefore, the platform can be considered as an opportunity to create an open community for the innovation area. However, the extent to which this community can play an active role depends on how the platform creates value for these people. It appears obvious that without information exchange, the platform does not create any added value for this community (I-01, I-04). At the same time, it is precisely this community that must embrace the platform as a means of information exchange and interaction in order to create value for itself (I-02).

6.4. Contextual awareness

Overviewing the network

The description of the platform as well as the first presentations of findings demonstrate that the platform provides articles that contain news about innovation topics and developments on the market. In the course of the analysis of the knowledge sharing aspect, it became clear that it is important that employees also upload the articles that they usually share internally. When it comes to the contextual awareness of employees, the interviews show that in this company the focus is mainly on the dissemination of news and information about innovative projects from within the network. Thus, a main component of the platform is the provision of a database of projects from the different locations. It is pointed out that in the network of 80 different infrastructure projects, a lot is already happening in terms of innovation, but people do not always know about it (I-04). It is therefore a matter of showcasing what is happening in the rest of the company in order to make people aware of the fact that innovation endeavors are oftentimes duplicated independent of one another (I-04). Making this information about innovation experiences from within the network available via the company's innovation platform could therefore lead to what this study refers to as internal contextual awareness. This awareness may not only help people learn from the experiences and projects of others, but may also create optimism (I-04). The innovation director refers to a conversation with the director of one of the three business areas who assumed that about a handful of innovative ideas are pursued in this business area. The fact that over 40 innovation projects can be found for this business area on the platform came as a positive surprise. (I-04, Appendix A). In the course of the soft launch of the platform, the objective was to upload ongoing projects in order to create the basis for this awareness. During the research period, the number of projects on the platform increased from 73 to 130 (Appendix A). The actual awareness for the projects can be analyzed by looking at the number of views that the projects generated. With 513 views on the 130 projects, the average number of views per project is at 3,95. This does not mean that on average each project is viewed by 4 of the 53 users, because one user can account for several views on one project. Even though 42 of the 53 users already viewed an initiative on the platform, it can be said that the users have not yet consulted the 130 projects in an extensive way (Appendix A). It could be meaningful for the platform to ensure that reviewing projects is possible in a user-friendly and well-organized way (I-02). With regard to the searching for projects on the platform, one of the interviewees mentioned that he likes the possibility to look through the projects via key words and emphasized:

(...) you know, people here (...) are going to do that. They're going to go on the platform and they are going to look for the project that they want (I-02).

This consistent with the idea that employees like to be up to date on the progress and results of initiatives (I-01, I-04). In particular, as part of a company, people want to know what is happening in the company before they hear about it in the media (I-04). The platform can therefore be an opportunity to provide employees with this exposure to innovation topics at an early stage, thereby ensuring that they gain in awareness of innovation activities across the company.

Market information

In addition to the objective of promoting internal contextual awareness, there is also the expectation that the innovation area is able to anticipate new trends and is in contact with the ecosystem (I-01). It is worth pointing out that in the case at hand, open innovation is generally described as openness within the network of the company (I-04). On top of this, however, the company wants to encourage the exchange with external partners, startups, incubators and the market in general. While the platform's internal setup does not explicitly promote direct contact with end customers and external partners, there is still the possibility to obtain information about the external environment via articles on the platform. One ICE-leader points out that not all colleagues from the innovation area have access to the platform so far, but that it is a crucial element to ensure that these people look for information (I-02).

We don't really have that community of people to find out what is going on, how do we information share it, how do we share different articles. It happens sort of ad hoc within the teams (I-04)

The page of the platform dedicated to making articles available to users may allow for the creation of a centralized place to obtain information about the market. The idea behind this is to present users with something new for each visit to the platform (I-04). The ICE-leader is sure that if the link to the platform is shared more widely, new users will look for such information (I-04). During the research period and in the course of the soft launch of the platform, a total of 45 articles were uploaded within 3 months, which corresponds to one new article being made available on the platform every two days. However, it should be noted that these 45 articles are divided into the sections Events, Network News and Industry News. A closer look at the data reveals that 16 of these articles contain information about the market or innovations from the external environment. These 16 articles on Industry News received 47 of the 140 views (Appendix A). This underlines the impression that the platform is primarily intended to showcase innovations from the internal network. In the interest of knowledge sharing and the dissemination of market information, it could be a possibility to ask different users to collect information about the market and technological developments and make them available on the platform. One challenge of the decentralized structure and the three different business areas is to identify the information that is relevant for the users.

6.5. Strategic orientation

Ways of working

Regarding the strategic orientation of the company and the alignment of internal structures, the data from the interviews point towards two different perspectives. On the one hand, it is interesting to examine whether the creation of the platform itself can be considered as a strategic realignment in the innovation area. On the other hand, the use of the platform may trigger a reconsideration of internal structures and ways of working. In view of the second point, it can be observed that the innovation area is expected to “shake up people and break habits” (I-01). With its focus on information exchange, discussion and collaboration, the platform can be seen as a way to break with the isolated processes that exist within the individual companies of the network (I-04). Despite the difficulties that the decentralized structure of the company poses for the adoption of global solutions, one of the interviewees said that all the different, local approaches and ideas have an invigorating effect. (I-01). The platform may enable users to realize that other projects from within the network are easy to adopt which in turn may contribute to the creation of global solutions across the network (I-01, I-04). Thus, it could be possible to collectively benefit from the sharing of information on the platform.

Internal structures and processes

While the platform could change the ways of working in the innovation area across the network, it is clear that the decentralized structure will not be questioned because of this. This means that there will be no centralized approach in which, for example, one identifies a promising project on the platform and then it will get implemented in all locations (I-04). So the question is whether the platform influences the processes of implementation across the company. In general, the different companies in the network have different objectives and priorities (I-02). Although the platform creates another channel to communicate the innovation strategy, these priorities of the individual companies are not hierarchically subordinated to the global objectives. Rather, it is a matter of promoting and realizing projects that are compatible with the goals and objectives of the global strategy (I-01). According to the innovation director, an important aspect for this is that the platform offers the possibility to monitor the projects in the network. This enables pilot users and admins to track the status of projects on their way to implementation (I-04). Through this visibility, one could reach out to the people involved in a project and offer support in the innovation process. An important condition for this capability is that the respective teams keep the projects on the platform up to date.

...to drive new initiatives to drive new solutions, implement them and to share that results across the group is what will be fundamental to helping other departments and other assets to pick that up and to implement it as well. (I-04)

In particular, if an innovation presents successful results on the platform, another company may be inspired to adopt this project as well (I-01). In turn, the implementation efforts could be supported through the availability of points of contact on the platform who can share experiences. It appears logical that especially innovations that are less complex in the implementation process may be adopted more easily in the decentralized model (I-01). Consequently, it is the collaborative elements of a platform that, when realized, may stimulate implementation in a decentralized model. Additionally, the recurring meetings between innovation ambassadors can play an important role in further supporting implementation efforts. In this regard, the innovation platform can enhance these roundtable discussions.

Realignment of the innovation area

In considering whether the creation of the platform itself represents a strategic realignment of the innovation area, the interviews reveal that the intention is to counter the challenges of the decentralized model (I-01, I-04). In addition, the innovation director points out that the company at hand recognized that other companies are also using innovation platforms for their teams. When it comes to the creation of an innovation platform, it is perceived as an endeavor in which everyone is trying to find out how it can best be used for the benefit of the company (I-04). The provider of the platform also describes that a few customers reached out to them saying:

We know we need to do this. What should we do (I-03).

In the same way that the provider describes that an innovation platform is typically a long-term project, which requires many resources, the innovation director emphasizes that the stability of the platform is a crucial aspect (I-03, I-04). In the company at hand, there is a general commitment to the platform and the coming year is expected to show whether it will bring the desired benefits (I-04). However, this study does not find that the platform itself comes with fundamental adaptations to the innovation area of this company. In part, this can be explained by the fact that at the time of this study, no dedicated team was set up for the innovation platform and specific roles and responsibilities were not assigned. Rather it appears that the innovation platform serves as a communication tool. The platform provider described the possibility to set a sign in the company with regards to the internal structures and processes by combining the platform with offered trips and activities. Thereby, it may be possible to demonstrate that the platform is in fact more than a communication tool and that collaboration and mobility is promoted across the company (I-03). So far, the company of this study has not developed a comprehensive strategy for the use of the platform and the related adjustments to internal processes. Therefore, the innovation platform itself is not considered as a strategic realignment in the innovation area.

7. Discussion

In this section the findings are related back to the theory on innovation culture and answers to the hypotheses are provided. The aim of this section is not to either accept or reject the hypotheses, but rather to interpret them in the context of the findings and to draw conclusions about the contribution of an innovation platform to the building of an innovation culture. For this purpose, the presented results are systematically discussed with regard to the applicable elements of the theory. Since the data does not allow to test the effect of the platform on innovation culture in the company at hand, it is about what the innovation platform may enable in terms of its setup and potential. Therefore, this section draws on the findings from the qualitative interviews and the insights that can be drawn from the quantitative data on the use of the platform. Through this discussion of the findings in relation to theory, it is possible to derive relevant implications for the impact of innovation platforms on innovation culture. This elaboration of the results of the case study thus suggests possible starting points for future research and exposes limitations of the study, which will be described in more detail in the course of the conclusion.

The theoretical framework showed that a first component of innovation culture is the reflection of innovation intention in the strategic goals and the communicated vision of a company (Dobni, 2008). The description of the case demonstrated that innovation is one of five topics on which the company communicates. In addition, there is an innovation strategy in place. The system architecture built around innovation centers of excellence aims to drive this global strategy in the context of the company's decentralized model. The findings show that the innovation platform is a means to support this approach and can be understood as a communication channel for the innovation strategy. With regard to the first hypothesis of this case study, it can be said that an innovation platform is a way to communicate the innovation intention. However, it is not clear how many people consult the information on the innovation strategy through the platform. Consequently, it is not possible to identify an innovation platform as an effective way of communicating the strategy. Rather, this study shows that it can be used complementarily to other ways of communication. Considering innovation culture in the company at hand, the innovation platform promises to be a resource in the interest of innovation propensity. In addition, organizational support is an important aspect for innovation culture (Damanpour, 1991; Martins & Terblanche, 2003). The platform could in itself be regarded as an expression of organizational support, as it provides the innovation area with a tool. However, in this case it is not specified what this support looks like for the individual users. In order to ensure that the organizational support is perceived by the users, it could be meaningful to use the platform to describe how innovation can be pursued and how exactly support will be provided. The platform provider emphasized the importance of providing the necessary resources to pursue innovation via a platform.

Another aspect of innovation culture is the ability to learn as an organization and to keep knowledge and skills up to date (Tian, Deng, Zhang, & Salmador, 2018). Generally, an innovation platform can be seen as a place from which learning may emanate, especially with regard to the possibility of providing an innovation toolkit via a platform. Since it is of particular importance to enable educational opportunities in line with the innovation intention, it could be an important consideration for a toolkit to provide skills needed to pursue the innovation strategy (Dobni, 2008). This study shows that with regard to organizational learning and the second hypothesis, especially the learning from own experiences can be supported by a platform (Velasco, Zamanillo, & Garcia Del Valle, 2012). Providing a project database together with relevant contact details can ensure more information exchange and prevent duplication of failed innovation efforts. For knowledge sharing to actually take place, it is crucial that the platform successfully promotes mutual communication. In this case, the platform offers this opportunity, but the users realized it only to a limited extent during the soft launch. While there has been some interaction regarding projects, the different users did not yet exchange articles via the platform. It can therefore be assumed that a certain adoption process for the platform needs to be completed in order for knowledge sharing to take place. In principle, however, the aspects of information acquisition and interpretation of organizational learning are supported by the innovation platform (Skerlavaj, Song, & Lee, 2010).

The findings show that, in addition to the change in the ways of working and knowledge sharing, employee participation in particular is a challenge that can be addressed by the platform. During the soft launch, the number of users nearly doubled and half of the users interacted in some way with the content on the platform. The study identifies social media interactions as a low-threshold way to encourage participation in the innovation process. Users can thus support the visibility of innovations in the network through likes and comments. Moreover, the permanent possibility to propose ideas can be seen as a way to stimulate creativity (Yun, Zhao, Jung, & Yigitcanlar, 2020). This impression that innovation is open to everyone, with creative contributions being valued, can have an empowering effect. Although it is not possible to say at the point of this study whether users outside the innovation area contribute to the innovation process beyond social media interactions, it can be confirmed with regard to the third hypothesis that an innovation platform can provide new opportunities for participation. The fact that idea authors can get attention via the platform could encourage creativity and promote a sense of ownership (Sharifirad & Ataei, 2012). In addition, challenges and voting procedures on platforms offer the possibility of participatory processes (Damanpour, 1991). Due to the status of the innovation platform at the point of this study, it is not possible to establish whether the promotion of creativity and empowerment relates exclusively to the early stages of the innovation process.

In the context of this study, it was found that the innovation platform can especially promote internal contextual awareness in the decentralized model of this company. For this purpose, knowledge about innovations is promoted by sharing information about projects of the different companies in the internal network. Thus, this platform primarily focuses on openness and connectedness across the company. With regard to market orientation and knowledge about the industry and competition, the platform provides articles and news. This makes information about technological developments and the market accessible to all users (Kesting & Ulhoi, 2010). While it could be said that the platform contributes to market orientation in the sense of the fourth hypothesis, it should be noted that this information was only accessed to a limited extent during the soft launch. In order to actually promote this aspect of the innovation culture, it is important that users interact with this content. Nevertheless, context-based information about projects and the market can be provided via an innovation platform, thus creating the opportunity for necessary knowledge and awareness. At the same time, it appears obvious that this opportunity can only be realized for the users of the platform.

The prevailing impression that emerges from the findings of this study is that the innovation platform is used to deal with the circumstances of the decentralized model of this company. In the interest of the global innovation strategy, one of the main objectives is to promote adaptations in the innovation area in terms of knowledge sharing and involvement in the innovation process. Although the decision-making process for the platform took into account what other companies do to support their innovation efforts, there is not enough evidence suggesting that establishing an innovation platform may be a sign of mimetic isomorphism (DiMaggio & Powel, 1983). The fact that the company at hand presents the platform as a contributor to innovation culture on its website and in its activity report can be considered as decoupling with regard to the neo-institutionalist perspective (Brunsson, 1989). While the platform exists, it has not yet been released to the entire workforce, meaning that the effects on the innovation culture are not yet apparent. However, this study does not identify this decoupling of talk and action as an adaptive behavior in relation to the organizational environment. Furthermore, it is also not apparent that the innovation platform is accompanied by deliberate adjustments to the internal systems and structures. Accordingly, there is no extensive program that aims to change the implementation processes in the company. However, contrary to the fifth hypothesis of this study, the findings indicate that an innovation platform may support the implementation of innovations. By being able to learn from other projects and to get in touch with relevant people via the platform, the implementation process in individual companies could be simplified. In addition, the collaboration capabilities of the platform may allow successful innovations from within the network to be adopted more easily in other locations. Overall, more communication and interaction between companies within the network can lead to an alignment of working methods.

8. Conclusion

In the course of a case study in a global company for mobility infrastructure, this thesis analyzed how an innovation platform may contribute to the building of an innovation culture. In a first step, this study established an understanding of the role of culture in innovation and the innovation process. The explanations on the open innovation model and innovation platforms further informed the intended purpose of establishing an innovation platform in a company. By employing a neo-institutionalist perspective and relating innovation culture to the construct of organizational culture, the identified factors of an innovation culture are embedded in a wider theoretical framework. The findings show that innovation platforms have the potential to promote an innovation culture in several ways. An innovation platform may enable the communication of the innovation strategy and the provision of organizational support. Through their focus on collaboration and discussion, innovation platforms provide the opportunity for knowledge sharing among users. In the context of this study, it appears that an innovation platform can become a central point for innovation in a decentralized company structure. Thus, a platform could be a resource through which market orientation and organizational learning are addressed. In particular, internal contextual awareness can be increased in an international company by allowing different companies from within the network to share information about projects and experiences with each other. Based on 4 semi-structured interviews triangulated with quantitative data from platform monitoring, this thesis underlines the main challenge of driving engagement on a platform. At the same time, social media interactions such as liking and commenting on projects are identified as a low-threshold opportunity for participation in the innovation process. With regard to the status of the platform at the time of the study, this is one of the functions that users already adopted. While in the company of this case study, the platform is primarily intended to create an open community for innovation, the benefit that the platform may provide for users depends on whether they embrace its use. If the collaborative capabilities of an innovation platform are realized, the implementation of innovations can be supported. However, this study does not identify an innovation platform as the single best way to foster an innovation culture. Rather, the findings suggest that the innovation platform can be considered as a response to the decentralized structure of the company. For this purpose, the platform is a tool to simplify communication and to help achieve the strategic innovation goals. Depending on the usability of a platform, it may evolve into a sophisticated means of pursuing innovation. Providing educational opportunities and a comprehensive program that goes along with the platform could thus empower employees to be more innovative.

Contributions to research

This work contributes to the literature on innovation platforms and innovation culture in two ways. First, the study provides a more detailed understanding of the factors of innovation culture identified by Dobni (2008). In doing so, it considers which aspects are addressed by an innovation platform. The qualitative approach of conducting interviews with key actors involved in the creation and use of an innovation platform allows for insights on the intention for setting up such a platform. In particular, it indicates which role an innovation platform can play for the building of an innovation culture from the perspective of these actors. A notable finding is that open innovation in a decentralized structure of more than 80 companies can initially be related to the internal network. In addition, this study demonstrates the potential relevance of a platform in a company beyond its collaborative purpose. Secondly, this highlights the importance of the adoption process for establishing an innovation platform in a company. While the findings highlight the potential that a platform can have in terms of innovation culture, it became clear that the actual use of the platform is crucial for building an innovation culture. The quantitative data collected through monitoring the platform during the soft launch indicate which elements of an innovation platform may be relevant for users. At the same time, however, it appears logical that elements of a platform that promote an innovation culture are only meaningful if they are also used.

Limitations

The research design of this study entails several limitations. First, the findings of this case study on an innovation platform cannot be generalized to any other company. This is due to the specific setup of the platform and the unique circumstances of the decentralized structure of the company at hand. The different setup of an innovation platform may have significant implications for the potential contributions to innovation culture. Because of the status of the platform at the time of the research, the results of this study are limited to the potential an innovation platform might entail. A further point worth recalling at this point is the fact that the researcher was an employee of the company during the research period. The interpretative paradigm and concerns about objectivity were countered in a methodological way throughout the study, yet the role of being involved in developing and deploying the platform may have had an impact on the responses of interviewees. However, the qualitative data is triangulated with quantitative data retrieved from the platform whenever appropriate in this study. Aiming at reliability and validity of the findings, the methodological approach of this study is described in detail. Therefore, the findings of this study offer a contribution to research based on Dobni's (2008) theoretical approach to innovation culture. An explorative analysis of further factors of innovation culture lies outside the scope of this work, as this would have required a different methodological approach.

Implications for further research

Generally, more research is warranted on the contributions of innovation platforms to building an innovation culture. Considering the second contribution of this study with regard to the literature, the importance of the necessary adoption process for establishing an innovation platform may be of particular interest for future research. While this study found that an innovation platform may contribute to building an innovation culture on several factors, it is meaningful to consider how such a platform can actually come into widespread use in a workforce. Building on the findings of this study, it would thus be possible to analyze in more detail which general conditions need to exist and how engagement can be driven. Considering the fact that this study refers to the set-up phase and soft launch of a platform, it is an intriguing aspect to further analyze how an innovation platform may realize its potential contributions to innovation culture through its long-term use. Additionally, the significance of an innovation platform going beyond the early steps of the innovation process could be an interesting starting point for future research on this topic (Godron, et al. 2015). As the data collected for this study did not allow for the testing of the actual effects of an innovation platform on an innovation culture in a company, further research is required to understand the impact of the use of such a platform. In this context, it could be meaningful to conduct a comprehensive survey in the workforce of a company in order to assess the innovation culture. There is still a small amount of research on the benefits of deploying Web2.0 applications in the interest of innovation capabilities of companies (Murugesan, 2007). Further consideration needs to be devoted to innovation culture-enhancing technologies and how they can be deployed in a targeted manner.

Bibliography

- Ahmed, P. K. (1998). *Culture and climate for innovation*. European journal of innovation management.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). *Assessing the work environment for creativity*. Academy of Management Journal, Vol. 29 No. 5.
- Arad, S., Hanson, M. A., & Schneider, R. J. (1997). *A framework for the study of relationships between organizational characteristics and organizational innovation*. The Journal of Creative Behavior, Vol. 31 No. 1, pp. 42-58.
- Barney, J. (1991). *Firm resources and sustained competitive advantage*. Journal of Management, Vol. 17 No. 1, pp. 99-120.
- Bessant, J. (2002). *Developing routines for innovation management within the firm*. Innovation as Strategic Reflexivity, Prentice Hall, Upper Saddle River, NJ.
- Birkinshaw, J., Bouquet, C., & Barsoux, J.-L. (2011). *The 5 Myths of Innovation*. MIT Sloan Management Review.
- Brunsson, N. (1989). *The Organization of Hypocrisy*. London: Wiley.
- Buckler, S. A. (1997). *The spiritual force of innovation*. Research-Technology Management, March-April, pp. 43-7.
- Calatone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). *Learning orientation, firm innovation capability and firm performance*. Industrial Marketing Management, Vol. 31 No. 6, pp. 515-24.
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., . . . Walker, K. (2020). *Purposive sampling: complex or simple? Research case examples*. Journal of Research in Nursing, 25(8), 652-661.
- Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014). *The use of triangulation in qualitative research*. Oncol Nurs Forum, 41(5).
- Chesbrough, H. (2003). *Open Platform Innovation: Creating Value from Internal and External Innovation*. Intel Technology Journal, Vol. 07.
- Chesbrough, H. (2006). *Open Innovation: A new paradigm for understanding industrial innovation*. In Chesbrough, H., Vanhaverbeke, W. & West, J. (Eds.). Open innovatio: Researching a new paradigm (pp. 1-12). Oxford University Press Inc.
- Chesbrough, H. W. (2003). *The Era of Open Innovation*. MIT Sloan Management Review.
- Christensen, C. M. (1997). *The Innovator's Dilemma*. Harvard Business School Press, Boston, MA.
- Colquitt, A. C., Lepine, J. A., & Wesson, M. J. (2009). *Organizational Behavior: Improving Performance and Commitment in the Workplace*. McGraw-Hill, New York, NY.
- Connolly, T., & Conlon, E. J. (1980). *Organizational Effectiveness: A Multiple-Constituency Approach*. The Academy of Management Review 5(2):211.
- Cooper, R. G. (2008). *Perspective: The Stage-Gate Idea-to-Launch Process -- Update, What's New and NexGen Systems*. Journal of Product Innovation Management.

- Damanpour, F. (1991). *Organizational innovation: a meta-analysis of effects of determinants and moderators*. *Academy of Management Journal*, Vol. 34 No. 3.
- Damanpour, F. (1996). *Organizational complexity and innovation: developing and testing multiple contingency models*. *Management Science*, Vol. 45 No. 3, pp. 555-90.
- Deal, T. E., & Kennedy, A. A. (1982). *Corporate Culture: The Rites and Rituals of Corporate Life*. Addison-Wesley Publishing Company, Reading, MA.
- DiMaggio, P. J., & Powell, W. W. (1983). *The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields*. *American Sociological Review*, Vol. 48, No. 2, pp. 147-160.
- Dobni, C. B. (2008). *Measuring innovation culture in organizations: The development of a generalized innovation culture construct using exploratory factor analysis*. *European journal of innovation management*.
- Dobni, C. B. (2008). *The DNA of innovation*. *Journal of Business Strategy*, 29(2), 43-50.
- Docherty, M. (2006). *Primer on "Open Innovation": Principles and Practice*. *Visions* 30(2).
- Drucker, P. F. (1999). *Knowledge worker productivity: the biggest challenge*. *California Management Review*, Vol. 41 No. 2, pp. 79-94.
- Flick, U. (2007). *What is qualitative research? In U. Flick. Designing Qualitative Research* (pp. 1-16). London: SAGE Publications Ltd.
- Flick, U. (2016). *Sozialforschung: Methoden und Anwendungen - Ein Überblick für die BA-Studiengänge*. Reinbek bei Hamburg: Rowohlt Verlag GmbH.
- Garcia, S. (2015). *Improving Innovation with Organizational Network Analysis*. *OD Practitioner*, Vol. 47 No. 2.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). *Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology*. *Organizational Research Methods*, 16 (1), 15-31.
- Godron, S., Tarafdar, M., Cook, R., Maksimoski, R., & Rogowitz, B. (2015). *Improving the Front End of Innovation with Information Technology*. *Research-Technology Management*, 50-58.
- Gumusluoglu, L., & Ilsev, A. (2009). *Transformational leadership and organizational innovation: the roles of internal and external support for innovation*. *Journal of Product Innovation Management*, Vol. 26 No. 3, pp. 264-277.
- Hamel, G. (1999). *Bringing silicon valley inside*. *Harvard Business Review*, Vol. 77 No. 5, pp. 70-84.
- Hargadon, A., & Sutton, R. I. (2000). *Building an Innovation Factory*. *Harvard Business Review*.
- Hartog, D. N., & Wilkins, A. L. (2004). *High performance work systems, organisational culture and firm effectiveness*. *Human Resources Management Journal*, 55-78.
- Herkema, S. (2003). *A complex adaptive perspective on learning within innovation projects*. *The Learning Organization*, Vol. 10 No. 6, pp. 340-6.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind: Intercultural Cooperation and its Importance for Survival*. McGraw-Hill, New York, NY.

- House, R., Javidan, M., Hanges, P., & Dorfman, P. (2002). *Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE*. *Journal of World Business*, Vol. 37 No. 1, pp. 3-10.
- Hrastinski, S., Ozan, H., Kviselius, N. Z., & Edenius, M. (2010). *A Review of Technologies for Open Innovation: Characteristics and Future Trends*. IEEE Xplore.
- Hurley, R. F., & Hult, G. T. (1998). *Innovation, market orientation and organizational learning: an integration and empirical examination*. *Journal of Marketing*, Vol. 62, pp. 42-54.
- Jaworski, B. J., & Kohli, A. K. (1993). *Market Orientation: Antecedents and Consequences*. *Journal of Marketing*. Vol. 57, 53-70.
- Judge, W. Q., Fryxell, G. E., & Dooley, R. S. (1997). *The new task of R&D management: creating goal-directed communities for innovation*. *California Management Review*, Vol. 39 No. 3, pp. 72-85.
- Kesting, P., & Ulhoi, J. P. (2010). *Employee-driven Innovation: Extending the License to Foster Innovation*. *Management Decision* 48, 65-84.
- Kimberly, J. R. (1981). *Managerial innovation*. in Nystrom, P.C and Starbuck, W.H. (Eds.), *Hand Book of Organization Design*, Oxford University Press.
- Kudesia, R. S. (2015). *Mindfulness and creativity in the workplace*. *Mindfulness in organizations: Foundations, research, and applications*, 190-212.
- Leavy, B. (2005). *A leader's guide to creating an innovation culture*. *Strategy & Leadership*, 33(4), 38-45.
- Levers, M.-J. D. (2013). *Philosophical Paradigms, Grounded Theory, and Perspectives on Emergence*. Sage Open, Vol. 3 (4).
- Lichtenthaler, U. (2011). *Open innovation: Past research, current debates, and future directions*. *The Academy of Management Perspectives*, 25 (1), 75-93.
- Lubart, T. I. (2001). *Models of creative process: past, present and future*. *Creativity Research Journal* 13(3-4), 295-308.
- Malsbender, A., Recker, J., Kohlborn, T., Beverungen, D., & Satya, T. (2013). *Much ado about nothing? Tracing the progress of innovations borne on enterprise social network sites*. In Chau, M. & Baskerville, R. (Eds.) *Proceedings of the 34th International Conference on Information Systems*.
- Martins, E. C., & Terblanche, F. (2003). *Building organisational culture that stimulates creativity and innovation*. *European Journal of Innovation Management*, Vol. 6 No. 1.
- Maxwell, J. A. (2009). *Designing a qualitative study*. *The SAGE handbook of applied social research methods* (pp. 214-253).
- Meyer, J. W., & Rowan, B. (1977). *Institutionalized organizations: formal structure as myth and ceremony*. *American Journal of Sociology*.
- Miles, M., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: a methods sourcebook*. (H. Salmon, Ed.; Edition 3). Sage.

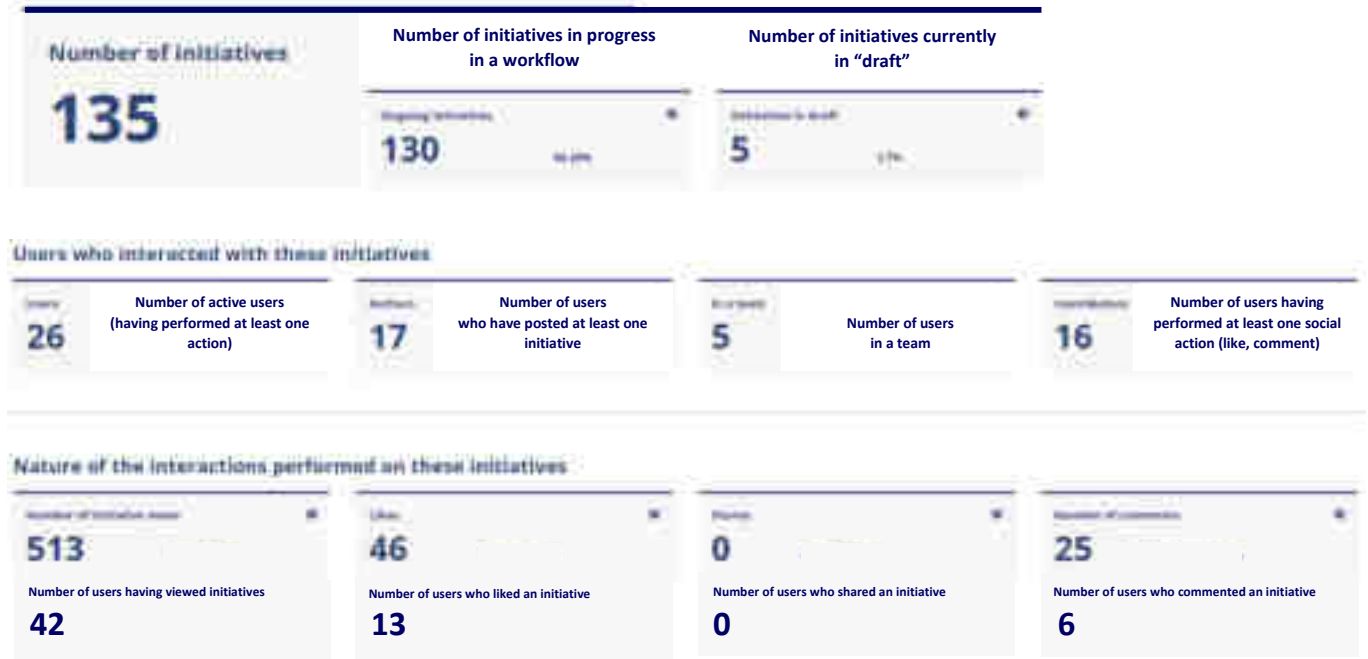
- Minnig, C., & Dörhöfer, S. (2013). *Open Innovation in Geographically bounded Organizational Fields: Recent developments in the pharmaceutical industry*. Research Journal of Accounting and Management Vol. 14 No. 1.
- Murugesan, S. (2007). *Understanding Web 2.0*. IT Professional 9, 34-41.
- Myers, S., & Marquis, D. G. (1969). *Successful Industrial Innovations*. National Science Foundation.
- OECD. (2018). *Oslo Manual: Guidelines for Collecting, Reporting and Using Data on Innovation*. Organisation for Economic Co-operation and Development, & Statistical office of the European Communities.
- Palthe, J. (2014). *Regulative, Normative, and Cognitive Elements of Organizations: Implications for Managing Change*. Management and Organizational Studies, Sciedu Press.
- Patton, M. Q. (2014). *Qualitative evaluation and research methods*. (4th ed.).
- Porter, M. E. (1985). *Technology and Competitive Advantage*. Journal of Business Strategy, Vol.5 (3).
- Recker, J., Malsbender, A., & Kohlborn, T. (2016). *Using enterprise social networks as innovation platforms*. IT Professionals, 18(2), pp. 42-49.
- Rogers, E. M. (2003). *Diffusion of Innovations*. (5th ed.), Free Press, New York, NY.
- Saldaña, J. (2013). *The Coding Manual for Qualitative Researchers (Vol. 2)*. SAGE Publications Ltd.
- Schein, E. H. (1984). *Coming to a new awareness of organizational culture*. Sloan Management Review, Vol. 25 No.2, pp. 3-16.
- Schein, E. H. (1985). *Organizational Culture and Leadership*. Jossey-Bass, San Francisco, CA.
- Schumpeter, J. (1934). *The Theory of Economic Development*. Harvard University Press, Cambridge, MA.
- Scott, W. R. (1995). *Institutions and Organizations*. SAGE.
- Seawright, J., & Gerring, J. (2008). *Case selection techniques in case study research: A menu of qualitative and quantitative options*. Political research quarterly, 294-308.
- Shah, R., Gao, Z., & Mittal, H. (2014). *Innovation, entrepreneurship and economy in the US, China, and India: Historical perspectives and future trends*. Academic Press.
- Sharifirad, M. S., & Ataei, V. (2012). *Organizational culture and innovation culture: exploring the relationships between constructs*. Leadership & Organization Development Journal.
- Simanis, E., & Hart, S. (2009). *Innovation From the Inside Out*. MIT Sloan Management Review.
- Skerlavaj, M., Song, J. H., & Lee, Y. (2010). *Organizational learning culture, innovative culture and innovations in South Korean firms*. Expert Systems with Applications, Vol. 37 No. 9, pp. 6390-403.
- Strübing, J., Hirschauer, S., Ayaß, R., Krähnke, U., & Scheffer, T. (2018). *Gütekriterien qualitativer Sozialforschung. Ein Diskussionsanstoß*. Zeitschrift für Soziologie, 83.100.
- Subramanian, A., & Nilakanta, S. (1996). *Organizational innovativeness: exploring the relationship between organizational determinants of innovation, types of innovation, and measures of organizational performance*. Omega, Vol. 24 No. 6, pp. 631- 47.

- Telsuk, P. E., Farr, J. L., & Klein, S. R. (1997). *Influences of Organizational Culture and Climate on Individual Creativity*. *The Journal of Creative Behavior*, 31(1), 27-41.
- Tian, M., Deng, P., Zhang, Y., & Salmador, M. P. (2018). *How does culture influence innovation? A systematic literature review*. *Management Decision*.
- Tushman, M. L. (1977). *Special boundary roles in the innovation process*. *Administrative Science Quarterly*, pp. 75-88.
- Utterback, J. M. (1971). *The Process of Technological Innovation within the Firm*. *The Academy of Management Journal*, pp. 75-88.
- Velasco, E., Zamanillo, I., & Garcia Del Valle, T. (2012). *Mobilizing Company Members' Full Innovative Potential*. *Human Factors and Ergonomics in Manufacturing & Service Industries*, Wiley Periodicals Inc.
- Villaluz, V. C., & Hechanova, M. R. (2018). *Ownership and leadership in building an innovation culture*. *Leadership & Organization Development Journal*.
- Wagner, R. (2016). *The Invention of Culture*. University of Chicago Press.
- Wanckel, C. (2021). *Introducing a digital tool for sustainability impact assessment within the German Federal Government: A neo-institutional perspective*. *International Review of Administrative Sciences*.
- Wang, C. L., & Ahmed, P. K. (2004). *The development and validation of the organizational innovativeness construct using confirmatory factor analysis*. *European Journal of Innovation Management*, Vol. 7 No. 4, pp. 303-13.
- West, M. A., & Farr, J. L. (1990). Innovation at work. In M. A. West, & J. L. Farr, *Innovation and Creativity at Work: Psychological and Organizational Strategies* (pp. 3-13). Wiley, Chichester.
- Westergren, U. H., & Holmström, J. (2012). *Exploring preconditions for open innovation: Value networks in industrial firms*. Elsevier Ltd.
- Whelan, E., Parise, S., De Valk, J., & Aalbers, R. (2011). *Creating Employee Networks That Deliver Open Innovation*. MIT Sloan Management Review.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). *Toward a theory of organizational creativity*. *Academy of Management Review*, Vol. 43, pp. 290-306.
- Yin, R. K. (2003). *Case study research: Design and Methods (Vol. 5)*. Sage publications.
- Yuan, F., & Woodman, R. W. (2010). *Innovative Behavior in the Workplace: The Role of Performance and Image Outcome Expectations*. *Academy of Management Journal* 53, 323-342.
- Yun, J. J., Zhao, X., Jung, K., & Yigitcanlar, T. (2020). *The Culture for Open Innovation Dynamics*. *Sustainability* 2020, 12, 5076.
- Zaltman, G., Duncan, R., & Holbek, J. (1973). *Innovations and Organizations*. Wiley, New York, NY.
- Zucker, L. G. (1983). *Organizations as institutions*. *Research in the Sociology of Organizations*. JAI Press 2, 1-48.

Appendix A

Quantitative Data - Platform statistics and monitoring

53 Users



	Number of articles about industry news	Number of articles about upcoming events	Number of articles about news from within the network	Other articles
Number of articles 51 <small>45 uploaded research period</small>	Industry articles 16 <small>13 uploaded during research period</small>	Events articles 11 <small>11 uploaded during research period</small>	Network articles 21 <small>18 uploaded during research period</small>	Other 3 <small>3</small>
Number of views 140	47	24	54	15
Number of likes 8	1	0	6	1

Platform Monitoring - User Engagement

		5/2/2022		6/1/2022		7/1/2022		8/1/2022		8/20/2022	
ID	Indicator	#	%	#	%	#	%	#	%	#	%
User engagement	V8 interaction	11/27	40.74%	13/31	38.71%	13/33	36.36%	18/42	42.86%	26/53	49.06%
	V8.1 A	6/8	75%	6/9	67%	6/11	55%	6/14	43%	7/16	44%
	V8.2 B	1/3	33%	2/6	33%	2/6	33%	6/10	60%	10/17	59%
	V8.3 C	0/2	0%	1/2	50%	1/2	50%	2/4	50%	3/4	75%
	V8.4 HQ	4/14	38%	4/14	21%	4/14	29%	4/14	29%	6/16	38%
	V9 engagement per pole	11	100%	13	100%	13	100%	18	100%	26	100%
	V9.1 A	6	55%	6	46%	6	46%	6	33%	7	27%
	V9.2 B	1	9%	2	15%	2	15%	6	33%	10	38%
	V9.3 C	0	0%	1	8%	1	8%	2	11%	3	12%
	V9.4 HQ	4	36%	4	31%	4	31%	4	22%	6	23%
	V10 originator / contributor ratio	9/4		11/6		10/6		14/10		17/13	
V11 initiative views	195		271		341		434/33		513		

Platform Monitoring - Initiatives

		5/2/2022		6/1/2022		7/1/2022		8/1/2022		8/20/2022	
ID	Indicator	#	%	#	%	#	%	#	%	#	%
V1	initiatives per pole	73	91.25%	84	93.33%	110	93.22%	128	96.97%	130	96.30%
V1.1	<u>A</u>	51	69.86%	64	76.19%	64	58.18%	80	62.50%	80	61.54%
	Strategic Pillar 1	27	52.94%	32	50.00%	32	50.00%	42	52.50%	42	52.50%
	Strategic Pillar 2	11	21.57%	16	25.00%	16	25.00%	16	20.00%	16	20.00%
	Strategic Pillar 3	13	25.49%	16	25.00%	16	25.00%	22	27.50%	22	27.50%
V1.2	<u>B</u>	12	16.44%	15	17.86%	43	39.09%	46	35.94%	48	36.92%
	Strategic Pillar 1	3	25.00%	4	26.67%	8	18.60%	8	17.39%	10	20.83%
	Strategic Pillar 2	2	16.67%	2	13.33%	12	27.91%	14	30.43%	14	29.17%
	Strategic Pillar 3	7	58.33%	9	60.00%	23	53.49%	24	52.17%	24	50.00%
V1.3	<u>C</u>	0	0.00%	1	1.19%	1	0.91%	1	0.78%	1	0.77%
	Strategic Pillar 1	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Strategic Pillar 2	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Strategic Pillar 3	0	0.00%	1	0.00%	1	0.00%	1	0.00%	1	0.00%
V1.4	<u>HQ</u>	10	13.70%	4	4.76%	2	1.82%	1	0.78%	1	0.77%
	Strategic Pillar 1	3	30.00%	1	25.00%	0	0.00%	0	0.00%	0	0.00%
	Strategic Pillar 2	5	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Strategic Pillar 3	2	20.00%	3	75.00%	2	100.00%	1	100.00%	1	100.00%
V2	initiatives per program	73	91.25%	84	93.33%	110	93.22%	128	96.97%	130	96.30%
V2.1	Strategic Pillar 1	33	45.21%	37	44.05%	40	36.36%	50	39.06%	50	38.46%
V2.2	Strategic Pillar 2	18	24.66%	18	21.43%	28	25.45%	30	23.44%	32	24.62%
V2.3	Strategic Pillar 3	22	30.14%	29	34.52%	42	38.18%	48	37.50%	48	36.92%

Quantity

Quality	V3 pending initiatives	6	7.50%	5	5.56%	7	5.93%	4	3.03%	5	3.70%					
	V4 deactivated initiatives	1	1.25%	1	1.11%	1	0.85%	0	0.00%	0	0.00%					
	TOTAL	80		100%	90	100%	118	100%	132	100%	135	100%				
	# of new initiatives	0			11		26		18		0					
	total number of views	195			271		341		434		513					
	total number of likes	9			16		17		25		46					
	total number of comments	1			5		5		17		25					
	share of initiatives in phase 1	24		33%	21		25.00%	48		44%	66		52%	66		51%
	share of initiatives in phase 2	10		14%	12		14.29%	12		11%	12		9%	14		11%
	share of initiatives in phase 3	15		21%	16		19.05%	16		15%	16		13%	16		12%
	share of initiatives in phase 4	8		11%	16		19.05%	15		14%	14		11%	14		11%
	share of initiatives in phase 5	13		18%	12		14.29%	12		11%	12		9%	12		9%
	share of initiatives in phase 6	3		4%	7		8.33%	7		6%	8		6%	8		6%

Appendix B

Qualitative Data

ID	A priori codes	Segment	Inductive coding	Aggregation	Ref.
Head of Digital Communication	Contextual awareness	<i>I would say above all it is to be at the service of the business and the professions (it can be operational or not). To always anticipate tomorrow's trends... (...) To be the vector of growth or added value whether it is financial or not That's the number one role.</i>	keeping up to date with external information	market information	I-01
Head of Digital Communication	Knowledge sharing	<i>The other role for me is more about the mindset, a bit like the Comm, but even more so To be a bit ahead of the curve, to be able to provoke the company a bit on new subjects, on new trends (...) To inform us, to alert us, to share expertise - its the role of a watchdog The Comm can also play this role, that's why the comm and innovation are together here (...)</i>	collaborating in new ways	Sharing and learning	I-01
Head of Digital Communication	Strategic orientation	<i>And all that, and also the role of shaking up people internally a little bit - I think that's important (...) to be a bit of a provocative element you know - to question habits, processes, especially when there is a real innovation behind it.</i>	innovating in the decentralized model	internal structures and processes	I-01
Head of Digital Communication	Contextual awareness	<i>And for the innovation department to be in touch with the ecosystem also from other sectors and other countries etc. to ensure the links with startups, with the people that matter, the researchers with all that... And to always make sure that we don't get locked in.</i>	creating open innovation ability	market information	I-01

Head of Digital Communication	Communication	<p><i>I think that the pillars etc. are clear, once you know them, you understand</i></p> <p><i>Afterwards, in terms of - whether it's internal or external - I think that it's not sufficiently known... Because of a lack of communication on the subject</i></p> <p><i>Clearly, I think that we need to make a real Communications plan on innovation by saying to whom we want to talk - internally or externally - what we want to say of course and how - which lever we use is not the same</i></p> <p><i>And it's not just the innovation platform that will do it (communicate on innovation)</i></p>	communicating on innovation	visibility of innovation focus	I-01
Head of Digital Communication	Participation	<p><i>Because honestly, at the beginning, only a few employees will go there (...)</i></p> <p><i>And even then, in my opinion, it's going to be those who are already working on innovation</i></p>	creating a community	Innovation community	I-01
Head of Digital Communication	Communication	<p><i>So clearly, we need to communicate much more internally on this - and externally - AND have it carried by people - by examples and by people ... Speeches in different formats that explain, this is innovation, where we are, what we are doing, and why ... And after a speech, proof of what we do in the field</i></p>	communicating on innovation	visibility of innovation focus	I-01
Head of Digital Communication	Knowledge sharing	<p><i>Today we disseminate a little, we share small news - things that are done on the right and on the left - I find it difficult to link them to the global mission - there is little visibility on this</i></p>	developing a global vision	project database	I-01
Head of Digital Communication	Contextual awareness	<p><i>And also, I think we should talk a little more to the users, the end customers, and the partners</i></p> <p><i>Because in innovation we are often in collaboration, co-creation, open innovation - it's not that we all do it in our corner</i></p>	creating open innovation ability	market information	I-01
Head of Digital Communication	Knowledge sharing	<p><i>And when we're a bit short of topics, we'll go and get them either on ActBook or on the platform - not much, I admit</i></p>	showcasing innovation of the network	project database	I-01

Head of Digital Communication	Knowledge sharing	<i>So is the Comm aware of the innovations in the assets, I'm not sure, it's not the same people After that, it's true that we don't communicate on the ideas... maybe because it's a little less credible or less advanced (...)</i>	showcasing innovation of the network	project database	I-01
Head of Digital Communication	Knowledge sharing	<i>Is the link between comm and innovation well done? I don't know...I don't know... And I don't think that we at the head office are doing enough. I think we can build more bridges - and imagine more regular exchanges</i>	showcasing innovation of the network	project database	I-01
Head of Digital Communication	Communication	<i>And one thing I think is missing is in terms of formats. Often we don't have photos, we don't have videos - but above all in terms of innovation, we need to make it dream. And it's not easy, because often it's things that are not visible or not yet deployed etc (...)</i>	visualizing innovation	visibility of innovaion focus	I-01
Head of Digital Communication	Communication	<i>So in the assets I don't really know how it works, but I have the impression that there are people in charge of innovation who are responsible for the subjects...So, in principle, they have time and teams, I don't know</i>	availability of time and resources	a central point for innovation	I-01
Head of Digital Communication	Communication	<i>I think what's missing is to bring a little more vision of where we want to go, so that people know what to do and that they can free up time to propose ideas</i>	availability of time and resources	a central point for innovation	I-01
Head of Digital Communication	Participation	<i>After on the autonomy, the fact of being able to propose things... YES, I think that it exists</i>	enabling contributions	Employee engagement	I-01
Head of Digital Communication	Strategic orientation	<i>(...) how do you scale up to the whole network and how does it fit into the global strategy and can be deployed...This is the strength of the decentralized structure - frankly it's a real benefit to have all this decentralization, it infuses On the other hand, sometimes it can become a bit of a hindrance. Because of course it has to be linked to a more global framework (...) And sometimes, we've already seen that, that people from the assets say that it's a nice project, but when it arrives at the head office, it's not seen as relevant</i>	innovating in the decentralized model	internal structures and processes	I-01

Head of Digital Communication	Strategic orientation	<i>(...) And above all, it has no business impact behind it, operational I mean - in the sense that it's easy to deploy... So the assets say, ah yeah it's cool, it's interesting - and well, actually, most other things are much more complicated to deploy - a lot of stakeholders etc.</i>	innovating in the decentralized model	internal structures and processes	I-01
Head of Digital Communication	Communication	<i>At the time there were 2 platforms. We had one for the challenges and one for the ideas, to ask for ideas... And we wanted to combine the two platforms into one, for budgetary reasons That's why we started with this platform that we have now (...) So it was too costly and in addition we wanted to bring a more educational layer of what is innovation at VC etc..</i>	creating innovation focus	a central point for innovation	I-01
Head of Digital Communication	Communication	<i>Yeah, the challenges were always a good excuse to talk about innovation. There was an innovation challenge, an innovation day, there was the new innovation strategy that was put in place -</i>	communicating on innovation	visibility of innovation focus	I-01
Head of Digital Communication	Participation	<i>Yeah, it worked very well. What was criticized was not concluding the challenges Besides, people voted, we came up with a great idea, and then we didn't follow-up on whether it was implemented, whether it was implemented in several assets etc. you know we should have finished the challenges by explaining - this is what happened with numbers (...)</i>	enabling contributions	Employee engagement	I-01
Head of Digital Communication	Participation	<i>I think it's more for the innovation community, honestly Because what is the employee going to look for - he will maybe go once out of curiosity - he will see ok, the main lines of innovation, some examples of projects and then, he will move on to something else you know... He might subscribe to a feed, to be aware of the news about innovative projects... Afterwards, on the platform, will he comment, like, share etc.? - I'm not sure (...)</i>	platform use and interactions	social media interactions	I-01

Head of Digital Communication	Participation	<i>Muah, it (challenges) is more to activate people a little, to take advantage of it to pass on the innovation messages to establish or maintain a culture of innovation So that people say to themselves, even if I don't know, I work in the payroll, ok I'm taking the extreme example, I don't give a damn about innovation - BUT I feel that I'm in a company where things are happening, people are thinking, they're asking me for my idea</i>	enabling contributions	Employee engagement	I-01
Head of Digital Communication	Participation	<i>But the objective is not to come up with a crazy innovation, it's rather to create a dynamic - to show that innovation is horizontal, everyone can participate And it's important to come back to what has been done - you need transparency</i>	enabling contributions	Employee engagement	I-01
Head of Digital Communication	Participation	<i>Well yes, of course, if it's something that you impose from headquarters - well - you do it once at the beginning, and then... unless it's one of the things that you know, compliance or legal, the things where you don't have a choice, you have to do it</i>	platform use and interactions	social media interactions	I-01
Head of Digital Communication	Participation	<i>It's honestly, it's leadership - but leadership, for me, is not imposing things, it's convincing people that it's better for them - because it meets their need (...) After that, of course, if it takes more time, it's a pain in the ass</i>	platform use and interactions	social media interactions	I-01
Head of Digital Communication	Participation	<i>How many people are you talking about, when you talk about innovation community, it's 100-200 people, not even. (...) but we need to work more in communities, this was one of the results of (...)</i>	creating a community	Innovation community	I-01
Head of Digital Communication	Knowledge sharing	<i>Or can the platform help you, the people from the Innovation Centers, to identify a more global vision of the projects that come up - and at some point - you say to yourself, well, this one I "pick" - well, how can I try to scale it... That's the role of the ICE people, to have the expertise</i>	developing a global vision	project database	I-01

		<i>and this global vision, to identify the subjects and to bring up a certain number of them each year (...)</i>			
ICE Leader	Knowledge sharing	<i>The slide that you shared with me, on the innovation toolkit, it's one step of innovation culture, no?... It's also about events, no?</i>	learning opportunities	Sharing and learning	I-02
ICE Leader	Knowledge sharing	<i>Yeah, well, here in x, we have Innovation the innovation area – and there we have our Innovation Ambassadors – it's a group of 7 workers - And the objective, is that they promote the culture of innovation – identify initiatives and innovation ideas ... But honestly, this group was confirmed, I think last year - ... and I have to reactivate this group</i>	showcasing innovation of the network	project database	I-02
ICE Leader	Contextual awareness	<i>I think there's the two sides for what can be useful (on the platform) 1 is for (...) the projects from here... And the other side is, some workers here have initiatives and ideas and want to look for new projects</i>	looking for projects	overviewing the network	I-02
ICE Leader	Contextual awareness	<i>(...) So for example, with the innovation circle, that I mentioned, I'm not sure if they know about the platform and if they have accessed ... So it's important for me, to make sure that they are looking for information</i>	creating open innovation ability	market information	I-02
ICE Leader	Knowledge sharing	<i>I think, it's going to be mainly to check ideas ... And after that I have to follow-up to introduce what more functions has the portal, but I have to work on this</i>	showcasing innovation of the network	project database	I-02
ICE Leader	Contextual awareness	<i>But if I share the link, they are only going to look for information but I think, we're looking for more than that, to get more interactive</i>	creating open innovation ability	market information	I-02
ICE Leader	Knowledge sharing	<i>Yes, yes, we send an email, also by LinkedIn, because you know, we're all connected there too But it can be useful, if we can share this for the portal too</i>	collaborating in new ways	Sharing and learning	I-02

ICE Leader	Contextual awareness	<i>So the platform can be a resource for everyone to get information – I think one of the functions the platform should have, is to highlight the more interesting projects, you know, those with the most likes (...)</i>	finding information from other assets	overviewing the network	I-02
ICE Leader	Participation	<i>For example, one of my tasks, that I didn't do, is to watch more projects in the portal and leave likes and comments ... Because it's important to all the users, no?</i>	platform use and interactions	social media interactions	I-02
ICE Leader	Strategic orientation	<i>You know, it's the structure of the company. You have different companies with different objectives and priorities ... The important thing is, that if there are many similar projects, to update in the portal (...)</i>	innovating in the decentralized model	internal structures and processes	I-02
ICE Leader	Participation	<i>Yes, it's going to be useful (for people who don't work in innovation). For here, for us in x, yes. Because, we have a lot of workers that are interested in research, investigating. You see the experience with the x project, we talked with the areas and after that, look they use it... I think if we deploy this in more areas, it's going to be the same result</i>	driving engagement	Employee engagement	I-02
ICE Leader	Knowledge sharing	<i>Yes, maybe I have to use the portal more in order to professionalize, review the information, make sure that we complete the information that we register on the portal It's an extra tool, I think we can be more powerful with this platform Because we can make comments, the owner can respond (...)</i>	developing a global vision	project database	I-02
ICE Leader	Contextual awareness	<i>I like for example that you can look for a word, and then you get the projects ... Yes, maybe it's more for people with a specific interest, but you know people here at x are going to do that. They are going to go on the portal and they are going to look for the project that they want They're going to look right for some words</i>	looking for projects	overviewing the network	I-02

ICE Leader	Knowledge sharing	<i>Yes, of course, people are not going to do everything on the platform That's what we talked about... dynamic... Of course, the goal is to use all sections I think if we can complete the information, it's useful – it's powerful information to communicate – to have a database of projects - You know, still a lot of initiatives are not complete – I think we have to work on that – how to describe and communicate information – videos, pictures, emails, I don't know</i>	showcasing innovation of the network	project database	I-02
Platform Provider	Communication	<i>Like if it's about innovation, it's here, it's on this site. This is where you go.</i>	creating innovation focus	a central point for innovation	I-03
Platform Provider	Knowledge sharing	<i>not only sourcing ideas and projects, sourcing talent, that sort of thing but they also were publishing tons of articles, they were doing a lot of webinars and that sort of stuff (...)</i>	learning opportunities	Sharing and learning	I-03
Platform Provider	Participation	<i>So those are really the two key that either have a very short time frame and they're really just trying to get a ton of ideas or they have a more systematic approach like between January and March is where we're doing ideas between April and May is when we're doing selection phase and then they help them and then some clients went so far as to actually get incubators involved, and so they would do like project management, but that was much more the exception than the just general thing.</i>	driving engagement	Employee engagement	I-03
Platform Provider	Knowledge sharing	<i>Umm, I think the most frustrating thing about putting into play a platform like this is it's new. People are a bit confused and just the general change management. There's not enough information shared. So you know, sometimes there's people who are able to tell you absolutely everything. Talk about last year's program and then other people in the same company are like I've never heard that in my life.</i>	developing a global vision	project database	I-03

Platform Provider	Knowledge sharing	<i>having so many examples on the platform and so I think that that is really helpful and inspiring for them to say ohh OK well, you've gone so far as to give us, you know, a few different themes that you'd like us to work around. But really having those concrete examples helps.</i>	showcasing innovation of the network	project database	I-03
Platform Provider	Communication	<i>depending on what you want to get, having examples like that is really helpful. And also there was, like you said, a lot of resources that were put on. I know they were working a lot on videos articles, and also having just some of the general company information also shared on the platform, so that that was also a link back you know with the sort of making a full circle of saying, OK, you can find this on just the general company website, but you can also find it here so we can divert a little bit of traffic to also be on here.</i>	creating innovation focus	a central point for innovation	I-03
Platform Provider	Communication	<i>(...) there's a page dedicated to explaining like, what the gist of it is, how you can participate and then what the examples I will say, the one thing I think that you didn't include and some people don't was really where that's in line with the strategic company goals.</i>	communicating on innovation	visibility of innovaion focus	I-03
Platform Provider	Communication	<i>We know that we're going to get the chance to publicly discuss and sort of hype up... Our project, we know that we are going to have, if necessary resources and time as well as mentoring or coaching dedicated to us to make sure it's a success or at least to get to a point where we can see if it's actually, you know, fiscally sensible to continue with this project</i>	availability of time and resources	a central point for innovation	I-03
Platform Provider	Strategic orientation	<i>companies that knew you were going to have to put quite a large amount of money, energy and resource into these programs to get something. The first one to three years maybe, but they're typically on a much longer projection,</i>	adapting to others	realignment of the innovation area	I-03
Platform Provider	Participation	<i>the key is engagement... But the question is who were you trying to engage? Are you trying to give every person a voice, or are you trying to dig out that top talent (...)</i>	driving engagement	Employee engagement	I-03

Platform Provider	Knowledge sharing	<i>I think that today it depends on your workforce and how comfortable they are and the digital realm because some workforces are younger, some are a bit older and less tech savvy. So that depends a great deal. I think just the general Workforce themselves</i>	collaborating in new ways	Sharing and learning	I-03
Platform Provider	Participation	<i>(...) but I think that you can have really elaborate and quality collaboration even digitally at the distance, but there's always that human aspect that it is really nice, even if it's just a couple of days</i>	enabling contributions	Employee engagement	I-03
Platform Provider	Strategic orientation	<i>Or, you know, little workshops or boot camps, that sort of thing. And being able to bring them together just to have that human aspect and actually meet people in real life so typically what they'll do in those events is obviously like coaching, mentoring and so using that not only as a collaborative moment but a teaching moment and to just give them a nice experience out of that. And I think there is a huge benefit from that because they see that as a reward, getting to travel, getting to go somewhere that can really boost engagement.</i>	reconsidering existing approaches	realignment of the innovation area	I-03
Platform Provider	Participation	<i>It's really there's some major worldwide corporations and I will say even in the same country, they're not working on the same... So some of them are on zoom, some of them are on teams, some of them are on other platforms. And I think that centralizing that, even if it is a third party service (...), I think that's really helpful because you (...) search by country, you can search by division, you can search by department, you can search by the skills that they put on their profile. And I think that that really is something that is missing in many, many, many corporations, and which is a was always a huge selling point for us</i>	connecting people	Innovation community	I-03

Platform Provider	Participation	<i>(...) I can come on to the platform and I can have an idea I can be interested in someone else's idea and just want to discuss with them, ask them questions. You know, maybe I'll contribute to the project in some way. Maybe I'm curious to sponsor this project, maybe I'm wanting to mentor someone. So I think that just sort of having a variety of engagement that they can do is also really helpful, like you don't have to submit an idea or a project, you can just discuss someone else's help boost and communicate</i>	platform use and interactions	social media interactions	I-03
Platform Provider	Knowledge sharing	<i>on the platform itself, there's not really like a messenger thing. But on the projects you can communicate and on the directory you do see their emails. So you can go outside of the platform and communicate with them directly... So I think that that was just a communication barrier that was able to be brought down, which was really helpful to a lot when they're on different systems and maybe the directory is typically not as up to date as it should be</i>	collaborating in new ways	Sharing and learning	I-03
Platform Provider	Knowledge sharing	<i>part of their day-to-day was to create content and to facilitate webinars, educational seminars, that sort of thing. And So what they did and what was really nice is that if you weren't invited to that, if you weren't able to attend it for whatever reason, they would then put the videos or the interviews and that sort of stuff back in the news and resources pages</i>	learning opportunities	Sharing and learning	I-03
Platform Provider	Knowledge sharing	<i>So I think having those little toolkits, those little sort of tips and tricks, guides and just general I think education about what is innovation, why is it important? What is entrepreneurship, why it's useful? Just getting people to a generic level of knowledge about that is also going to drive up the engagement because people are afraid of the unknown, and so they don't understand that they're not familiar with it. They're always going to hesitate. And so if</i>	learning opportunities	Sharing and learning	I-03

		<i>you give them just an easy to digest source of information, you're gonna have a lot better turn out.</i>			
Platform Provider	Strategic orientation	<i>Not the majority, but I would say a handful that came through and were very much like. We know we need to do this. What should we do</i>	adapting to others	realignment of the innovation area	I-03
Platform Provider	Communication	<i>(...) how are you gonna get this program managed, which I think is a big mistake, a lot of people make is just the actual time needed for running these programs. They'll put people on them for like ohh like if you can help us out with this when in reality it's a full time job. (...)</i>	availability of time and resources	a central point for innovation	I-03
Platform Provider	Communication	<i>(...) Thinking outside the box and just discussing and trying and failing and trying again and failing and a lot of people don't have the energy and the bandwidth for that, which is really unfortunate because I think a lot of projects and ideas probably fall through the cracks because they think just the fact of going through trial and error and getting this to a functional space we can't commit to that.</i>	availability of time and resources	a central point for innovation	I-03
Platform Provider	Participation	<i>and giving them feedback I think is also really helpful. So not only thanking them for the contribution, whether it's just voting, whether it's putting an idea, whether it's being a teammate or, you know, helping create content for the platform, whatever form of support they're giving to the program, but also saying we want to give back to you and giving that them that outlet.</i>	driving engagement	Employee engagement	I-03
Platform Provider	Knowledge sharing	<i>I think that the ones that really treat a portion of it as a resource and say, look, we're not able to give you the support, we're not able to give you coaching or put you into an incubator or whatnot, but here are some toolkits. Here are some resources. Here are some, you know, group events or like partners that we approve and think can give you good insight. And if you're dedicated and motivated, feel free to move forward with this project on your own</i>	learning opportunities	Sharing and learning	I-03

Platform Provider	Participation	<i>Yeah, it's the visibility. It's the visibility that it's always there that anybody can look at it. It's I think that's also. I mean obviously there's so many huge pieces, but I think just clearly around the program and every step and everything that's gonna happen and that is possible. And then just free access to it. You know, you don't have to pay for it. You don't have to request to be part of this. You work at this company, you have access to this and you are allowed to participate in this program,</i>	enabling contributions	Employee engagement	I-03
Innovation Director	Participation	<i>we didn't see it as a complete package and we felt that it was more about reporting because it wasn't open to other people. So it was more about reporting administration as opposed to open innovation collaboration</i>	driving engagement	Employee engagement	I-04
Innovation Director	Contextual awareness	<i>was to give us a common repository of where we could see across like the center of excellence teams about what are the topics being able to update that creating a standard look and feel as well</i>	finding information from other assets	overviewing the network	I-04
Innovation Director	Knowledge sharing	<i>and to simplify the that monthly meeting or quarterly meetings in the committees to say this is where we are and it created a repository for people to be able to go and consult that</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Contextual awareness	<i>Part 2, which to me was the more important part of it, was to create that open innovation.</i>	creating open innovation ability	market information	I-04
Innovation Director	Contextual awareness	<i>So really to be able to showcase and engage to the rest of the company what is happening and to help stimulate new ideas, but also to give perception. That said, we are doing a lot of things on the innovation space and we're duplicating</i>	finding information from other assets	overviewing the network	I-04
Innovation Director	Participation	<i>opening that dialogue and discussion up to everybody. It gave us much more opportunity to engage the innovation folks outside of the innovation teams specifically and find more of the innovators within the respective teams.</i>	enabling contributions	Employee engagement	I-04

Innovation Director	Knowledge sharing	<i>OK, so that's the decentralized nature of what we have. Therefore, the result is that innovation is kind of within the Innovation group itself, which is a smaller community and it's more that the company in general across the assets run innovation through the respective teams.</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Communication	<i>So they don't necessarily know about the innovation program that (the company) has to help support them in their respective day-to-day.</i>	creating innovation focus	a central point for innovation	I-04
Innovation Director	Communication	<i>No (general understanding of innovation across the company). I think not. And that's kind of why one of the key parts was to make sure we have the partnerships with like for example in the airports, the other business lines to make sure that that's folded into it</i>	communicating on innovation	visibility of innovation focus	I-04
Innovation Director	Communication	<i>So it's really trying to help to disseminate that because we had no sort of central information point that people could identify what is happening from a strategic view (...)</i>	creating innovation focus	a central point for innovation	I-04
Innovation Director	Contextual awareness	<i>help promote that culture that says there is a lot happening as we just don't know about</i>	finding information from other assets	overviewing the network	I-04
Innovation Director	Knowledge sharing	<i>Yeah, I think it's kind of to be honest, a lot of it (gathering and sharing knowledge) is done within the asset</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Contextual awareness	<i>but we don't really have that community of people to find out what is going on, how do we information share it, how do we share different articles. It happens sort of ad hoc within the team</i>	keeping up to date with external information	market information	I-04
Innovation Director	Participation	<i>So we want to create more of that. Communities that people know, who else they can talk to in the group to be able to benefit from the shared knowledge that we have.</i>	creating a community	Innovation community	I-04
Innovation Director	Knowledge sharing	<i>We want to create the Community kind of discussions across the group, either on a skills perspective or on the specific initiative topics and to really help to give that voice though an opportunity for somebody who may not be one of those little communities today to be able to see what's happening</i>	developing a global vision	project database	I-04

		<i>and to express themselves and really be more connected to the group.</i>			
Innovation Director	Contextual awareness	<i>We wanna see that people can see how can they utilize that specific technology or that specific theme across the industry to get stimulated</i>	looking for projects	overviewing the network	I-04
Innovation Director	Participation	<i>the more that you can provide things together, the better it is for the individual right at the end of the day is that innovation is about curiosity and about trying new things and finding like minded people that want to question the status quo and to disrupt a little bit.</i>	creating a community	Innovation community	I-04
Innovation Director	Knowledge sharing	<i>And I think having that location, they can go to to be introduced to the topic such as the toolkit, they can learn about new skills that they can use. They can see a more modern way of working</i>	learning opportunities	Sharing and learning	I-04
Innovation Director	Knowledge sharing	<i>I can understand that there's a value to this way of working and it gives sort of a one stop shop that instead of having to click on 14 different links, defined innovation topics on skills or innovation topics, on articles by going to one centralized location, when you've got 5-10 minutes of somebody, they can see all of it at once and they know to go back to it on a regular basis.</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Strategic orientation	<i>So what we want to do is to really showcase what's happening across the group and to accelerate the adoption so that we can have more global solutions from the group.</i>	supporting implementation	internal structures and processes	I-04
Innovation Director	Knowledge sharing	<i>big part of where innovation today takes a long time, because people don't have the information of the way of working to be able to implement something of that. Or a relevant use case or case study to justify the investment in that particular area. So we can really help to do that. And I think there's a huge opportunity across the group</i>	collaborating in new ways	Sharing and learning	I-04

Innovation Director	Participation	<i>the other 50% is to really help to stimulate people to express their ideas, to express their challenges, to be able to think a little bit outside the box or how to articulate what their particular solution they're looking for is.</i>	enabling contributions	Employee engagement	I-04
Innovation Director	Participation	<i>So therefore, you have things like the challenge are really relevant to help stimulate. And sort of force that discussion, create a bit of excitement and a culture compared to just saying here's a bunch of initiatives. Go for it. So it's kind of make sure we can drive the discussion, but also giving them an opportunity to learn from the platform itself.</i>	driving engagement	Employee engagement	I-04
Innovation Director	Strategic orientation	<i>by having a visibility on the topic itself and how it's progressing, we can maintain momentum. The easiest thing for innovation to do is to sort of follow on the side of the desk</i>	supporting implementation	internal structures and processes	I-04
Innovation Director	Strategic orientation	<i>something visible that we can monitor the progress and to see, OK, this hasn't moved in the last six months.</i>	supporting implementation	internal structures and processes	I-04
Innovation Director	Participation	<i>Now, we know who are the contacts. We can contact them directly either via the platform or via the contact details on the platform</i>	connecting people	Innovation community	I-04
Innovation Director	Participation	<i>People are intrigued by Innovation. They like the topic and so that way they'll sort of click on it. They'll go take a look at it and be OK, cool. This is nice to see. The harder part is to keep them coming back or to get them to contribute to actually input information, whether be from articles, whether it be from commentary on the different things they see and or ideally of course the ideas and initiatives.</i>	driving engagement	Employee engagement	I-04
Innovation Director	Contextual awareness	<i>also that stimulate your creativity part to really create a currency of knowledge that says there's new articles, there's new things that every time you go back. You're presented with something a little bit different,</i>	keeping up to date with external information	market information	I-04
Innovation Director	Contextual awareness	<i>creating that idea that says there is innovation happening across maybe your own asset or other assets gives people optimism.</i>	finding information from other assets	overviewing the network	I-04

Innovation Director	Contextual awareness	<i>what are the innovations that are happening? Cuz I only know about my team. So how do we give them exposure to the other topics at an earlier point and I believe is that by working as part of an organization, you kind of want to know what's happening in the organization before you see it in the media</i>	finding information from other assets	overviewing the network	I-04
Innovation Director	Contextual awareness	<i>So we want to give that kind of a reference that says, hey, these are the things that are in progress, not just the final results. So I think that's the early engagement that says if people know what early and they know who to contact and follow up is a big part of it</i>	looking for projects	overviewing the network	I-04
Innovation Director	Participation	<i>by the platform having that point of contact relationship, that person becomes relevant instead of it always being coming from the communications team to the last release or from a CEO or CTO is to really help to engage the people who are actually doing the innovation and not just the sponsors.</i>	driving engagement	Employee engagement	I-04
Innovation Director	Knowledge sharing	<i>I think things like the project management capability within the individual initiative I don't think it's particularly useful to the wider audience.</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Knowledge sharing	<i>we're not looking for the detailed reporting, we're looking for information, ideas, results and a point of contact</i>	showcasing innovation of the network	project database	I-04
Innovation Director	Knowledge sharing	<i>we want to create a space as well that says we want the culture that communicate and talk about it openly, which I think is something we're missing a little bit today.</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Participation	<i>So I think the social media components of this, the liking and others, can start to create an interest for people because they feel they're contributing back into a global solution that gets to the heart of what this company is.</i>	enabling contributions	Employee engagement	I-04

Innovation Director	Participation	<i>better traction is to open up the gamification is another way to kind of help entice people to say everyone likes the competitive nature of stuff and they get points and collect this and that that we can entice people through that engagement tool to contribute more and by opening up that kind of discussion we get more freedom for people to comment and to contribute because of the fact that they see other people there</i>	enabling contributions	Employee engagement	I-04
Innovation Director	Participation	<i>So I don't see the team joining aspect to be a key part of it in terms of I think they might be interested to say I wanna follow this initiative to be able to get the updates</i>	driving engagement	Employee engagement	I-04
Innovation Director	Participation	<i>(...) that's a really positive feedback for people like to get that gratification of being told that their work is interesting, their work is good for that. There's a wider interest in what they're doing and we don't have a lot of those channels today. So this gives us a way to do that.</i>	platform use and interactions	social media interactions	I-04
Innovation Director	Participation	<i>that's why we also need our champions to be able to be monitoring the access, the activity that takes place to help drive that dialogue</i>	driving engagement	Employee engagement	I-04
Innovation Director	Participation	<i>Hey, by doing this, actually all the CEO's of all the airports across the network just got an update about my project. And think that's a powerful mechanism to create a voice for people within their companies.</i>	enabling contributions	Employee engagement	I-04
Innovation Director	Contextual awareness	<i>So they wanted to see, OK, how do we have this relevance across the world and to showcase what we're doing is good if that information is available online, it helps to accelerate that discussion</i>	looking for projects	overviewing the network	I-04
Innovation Director	Strategic orientation	<i>We don't have like that centralized structure would mean that we say we are going to do this innovation and we're gonna do it across the whole network. That's not the way that we operate because we operate on the decentralized model. So it really is about saying how do we do better information sharing, how do we collectively take advantage</i>	innovating in the decentralized model	internal structures and processes	I-04

		<i>of the knowledge that we have across the group that says as you look at it 130 initiatives on there</i>			
Innovation Director	Knowledge sharing	<i>So the ICE leaders are some of that should be in ambassador for, you know, sharing that information across their their network</i>	developing a global vision	project database	I-04
Innovation Director	Knowledge sharing	<i>we know that having one asset talking to another asset also adds a lot of value.</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Participation	<i>. So that people have additional points of contact that they can reach out to to get information</i>	connecting people	Innovation community	I-04
Innovation Director	Knowledge sharing	<i>So it's creating a bit more local knowledge on that topic and then to really drive the forms of discussion and knowledge within that topic.</i>	developing a global vision	project database	I-04
Innovation Director	Strategic orientation	<i>to drive new initiatives to drive new solutions, implement them and to share that results across the group is what will be fundamental to helping other departments and other assets to pick that up and to implement it as well. Likewise, headquarters to hear about that initiative.</i>	supporting implementation	internal structures and processes	I-04
Innovation Director	Knowledge sharing	<i>But today, a lot of the assets work within the assets. They don't work across the assets. So this is where a platform like this makes it possible.</i>	collaborating in new ways	Sharing and learning	I-04
Innovation Director	Communication	<i>(...) It's a tool that gives us an opportunity to help that communication take place. to help promote that group perspective</i>	communicating on innovation	visibility of innovation focus	I-04
Innovation Director	Participation	<i>(...) But we still have to engage on the tool to be able to create value from the tool by itself. It doesn't matter. It's what we do with the headquarter perspective to create the communities to drive the value for why somebody would want to share information. Because if nobody shares it adds no value.</i>	creating a community	Innovation community	I-04

Innovation Director	Participation	<i>But now that they can see that there's a wide range of topics that are on there, across all three poles from across the world. I can see an opportunity, they're going to say this is a better way now to engage.</i>	driving engagement	Employee engagement	I-04
Innovation Director	Knowledge sharing	<i>And even as we go through, we have to obviously manage what is the information, how do we get it on to there, what is the quality of the content that gets up onto there? Are we ready to support it as well as a group. So from headquarter perspective, do we have someone that can actually manage the platform? Do we have the capabilities, the knowledge to actually drive that and not let it sit by itself?</i>	showcasing innovation of the network	project database	I-04
Innovation Director	Strategic orientation	<i>we saw other companies had it. We know the risk that goes into it as well what is the stability of the platform, the look and feel, the usability of something, that dynamic and easy to navigate</i>	adapting to others	realignment of the innovation area	I-04
Innovation Director	Participation	<i>being able to engage on social interactions between people was a big part of it. To build that community and the flexibility of it also providing value like the current trends, so that it's not just what what the user tells, but what does the system tell the user</i>	connecting people	Innovation community	I-04
Innovation Director	Strategic orientation	<i>I think everyone's trying to figure out how that communication channel should work and that everybody knows there's a lot of WhatsApp groups. We know there's a slacks and yammers of the world.</i>	reconsidering existing approaches	realignment of the innovation area	I-04
Innovation Director	Participation	<i>It's how to give a place for people to talk. People want to talk, people want to share and contribute to society today but they need to have a safe place to do that. And that's where I think of Portal, that sort of focuses on innovation is relevant, but it's how do we make sure we're not segmenting too much</i>	enabling contributions	Employee engagement	I-04
Innovation Director	Strategic orientation	<i>what we can do, though, is also open up specific sections to be public facing. So if we want to do a challenge, we can open it up to the external people, can submit ideas and</i>	reconsidering existing approaches	realignment of the innovation area	I-04

		<i>different opportunities, but they cannot see all the list of initiatives internally.</i>			
Innovation Director	Participation	<i>It has potential to really help drive and change the culture of the organization. We have a tool that can help us to do that, but it's been engagement, the communication, how we show the results.</i>	driving engagement	Employee engagement	I-04
Innovation Director	Knowledge sharing	<i>How do we get people seeing that they can talk to each other and feeling safe to do so and creating that environment that they can actually get value themselves to say that, hey, I can go to the platform extract value, but also then to get more value I could share value, I could contribute to it to be able to give value to other people, to benefit from what I'm doing to get perspective from other people and to help showcase what they're doing to get more visibility.</i>	developing a global vision	project database	I-04
Innovation Director	Knowledge sharing	<i>But we don't have this idea of asset to asset kind of open discussion. This is a new concept that helps to change our culture.</i>	collaborating in new ways	Sharing and learning	I-04

Declaration of Authorship

I hereby confirm that this thesis and the work presented in it is entirely my own. All statements taken literally from other writings or referred to by analogy are marked and the source is always given. This paper in the same or similar form has not yet been submitted to another examination office.

Paris, 25.08.2022,