Delft University of Technology

Thesis Research

# How Do Different Organizational Structures Impact Employee-Driven Innovation

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# Executive Summary

Employee-driven innovation is when organizations involve their employees in generating and developing ideas. This comprises all personnel, from front-line workers to executives. More and more organizations acknowledge a wealth of information within their organizations that is hardly used, whether it is where the problems are or because they have a better understanding of the sector. This information can be utilized in the innovation process by involving these employees. This also strengthens the connection of employees with the company. Employee-driven innovation is a very new area of research. More and more is being learned about individual circumstances and organizational configurations that can enable EDI. However, little research has been conducted on how organizations might use this knowledge to make efforts to make way for EDI. Since organizations can be very different, so can the way they innovate. The way EDI can take place in the organization and how the organization can support EDI also differs.

This research aims to develop a framework to guide organizations in what approach they should adopt to support EDI. Different companies work in different ways, and often alternate approaches are more suited to attain the same goal. Different EDI support strategies may achieve this more efficiently in different firms to involve employees in the innovation process. There has been little investigation into this. As a result, to assist companies and future studies, this thesis investigates which EDI support strategies perform well in various enterprises. The following is the research question:

*How do different organizational structures impact employee-driven innovation?*

Employees, innovation managers, and innovation consultants are interviewed to answer this question appropriately. Employees and innovation managers are questioned about their knowledge and perspectives about the organization in which they work. people and consultants have specific expertise about how their business appears and whether or not the current techniques of incorporating people in the innovation process function properly. Consultants offer a broader perspective because they visit more firms and can compare how different organizations implement different EDI-supporting practices.

The information from the interviews is codified and analyzed. The analysis results show the different relations between the organizational structures and how EDI is supported within the organizations, a taxonomy of different manners to support EDI, and the optimal organizational structure for an organization to support EDI. This information helps to create an overview of the impact of different organizational structures on EDI. EDI takes place naturally in organizations with a flat hierarchical structure where employees can work autonomously on innovation projects and have no trouble connecting with employees of a different function. When organizations have a tall hierarchical structure where employees can not work autonomously on innovation projects or connect with employees of different functions easily, EDI needs a structure to allow employees to be involved with the innovation process. These structures can have many different shapes. In general, there is a divide in whether or not an organization prioritizes building a community. If this is the case, the EDI-supporting structure involves employees as much as possible. For example, EDI will be supported by supporting and involving employees in projects. If organizations do not prioritize building a community, structures that support EDI are focused on bringing innovative ideas that employees create to the R&D department.

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# Chapter 1

# Introduction

## 1.1 Background

In many industries, technical innovation is considered an essential factor for competitive success (Schilling & Shankar, 2019; Flocco, Canterino, & Cagliano, 2022; Kesting & Ulhøi, 2010). For this reason, many firms are looking for ways to innovate to keep a competitive advantage (Crossan & Apaydin, 2010; Schilling & Shankar, 2019). As the need to innovate increases, the innovation process becomes a point of interest. By improving the process in which an organization innovates, an organization becomes more innovative (Du Preez, Louw, & Essmann, 2006). Some processes exploit knowledge outside of the R&D department for innovation. The information from outside of the organization can come from competitors (Newell, Morton, Marabelli, & Galliers, 2019), new technologies within the industry (Schilling & Shankar, 2019), or feedback received from clients (Mahr, Lievens, & Blazevic, 2014). Organizations can better innovate and exploit knowledge by involving an organization's 'regular employees' as well (Flocco et al., 2022; Kesting & Ulhøi, 2010; Abstein & Spieth, 2014). This refers to employees who do not work in an R&D department or whose main function is not to innovate. Employees often have specialized knowledge of the technology and process they are working with and have knowledge of their industries (Flocco et al., 2022; Høyrup, 2010). By involving these employees in the innovation process, their knowledge is also involved (Høyrup, 2010). This type of innovation is the subject of the thesis. Employees are involved in the innovation process by participating in ideation and concept development. According to Flocco et al. (2022), improving innovation is not the only goal achieved with employee-driven innovation, but it can support creating a community within an organization.

Employee-driven innovation refers to the generation and implementation of new ideas (Kesting & Ulhøi, 2010). A well-known example of employee-driven innovation is the time-off policy in Google (Page & Brin, 2004; Adams, 2016; Clark, 2022; Schilling & Shankar, 2019). This policy stated that Google employees were to spend 20% of their time on developing innovations, which led to the creation of Gmail, Google Maps, and AdSence. Google also encourages employees to use other formal and informal methods, such as recognition awards and quarterly idea contests (Groysberg, Thomas, & Wagonfeld, 2009). Other mechanisms supporting employee-driven innovation are hackathons, internal innovation contests, and internal crowd-sourcing (Tirabeni & Soderquist, 2019). As can be concluded from the examples, there are multiple different practices for organizations to support employee-driven innovation.

## 1.2 Problem Statement

These examples of procedures that can be used to promote EDI are highly distinct and will not work for all organizations. So, suppose a firm wants to use EDI. In that case, it must look for a practice appropriate for the company and thus assists employees as efficiently as possible to help the organization innovate. Determining which EDI-supporting practices are a good fit for businesses is difficult. The majority of EDI research has focused on how different elements enable EDI. Little research has been done into how firms should navigate these many practices and elements to identify what works best. For

example, research has been conducted to determine how the goal of EDI influences the choosing, but this does not include that the organization's structure also has a factor. Organizations do not start from scratch; standards and structures are already in place. This limits the viable possibilities and applies to devices that must interface with legacy systems and new activities that must fit inside a company's structure and culture. If not, the practice may differ significantly from how the activities are carried out or the 'praxis' (Newell et al., 2019).

## 1.3 Knowledge Gap and Research Objective

The research aims to support organizations to innovate using the knowledge of employees by helping organizations navigate design choices as to what practices to adapt or structures to change to better support EDI within the organization. As organizations have different structures and cultures from one another, organizations might need different practices to support and make use of EDI. The goal is to help organizations navigate the different practices that support EDI by creating a framework.

To achieve developing an overview, several topics need to be investigated. First, a taxonomy of different EDI-supporting practices needs to be developed. A taxonomy must also be developed between the organizations. Subsequently, the various relationships are examined, which supporting practices suit a company well to support EDI within a company.

## 1.4 Research Questions

Research must take place to achieve the goal of helping organizations navigate what employee-driven innovation-supporting practices are a good fit for an organization and create an overview. To obtain all of the information required to achieve the aim, the main research question is as follows:

**Main research question:** *How do different organizational structures impact the implementation of employee-driven innovation?*
To answer this question, I need to gather information on the various practices of employee-driven innovation and the impact of different organizational structures on how organizations best innovate.

The first topic that needs to be investigated to answer the research question is the relations between different organizations and EDI methods and what themes can be identified. These relations need to be examined in detail to answer how the organizational structures impact the implementation of EDI. This would also help create a taxonomy of the different types of organizations. The second research topic will identify a taxonomy of the different practices that help support EDI. The taxonomy found in literature might not be the taxonomy that is applied in practice. Lastly, the organizational structure that is most suitable to support EDI is designed. What organizations are the best fit for EDI are analyzed. This leads to the following questions that need to be answered for the research question to be answered:

*Sub-question 1: What are the relations between different organizational structures and the way employee-driven innovation is supported?*

*Sub-question 2: What kind of employee-driven innovation methodologies are implemented in an organization?*

*Sub-question 3: What is the optimal structure for organizations to encourage and support employee-driven innovation?*

## 1.5 Study Method

The research is divided into three phases, each accompanied by research questions. First, the relations between organizations and EDI-supporting practices and what within the organizations influences these relations are analyzed. In the second stage, a taxonomy of the EDI-supporting practices is described, and the optimal organizational structure is described. Employees, innovation managers, and consultants provide information for all three subjects. For the first and third phases, the input of the consultants is the most informative, as they have been to multiple organizations, which gives them a broader vision of what

the different relations might be. Although the input of the consultants is more informative, the input of the innovation managers and the employees is also very important. They provide more in-depth knowledge of the functioning of an organization, which is a great addition to the broad knowledge the consultants provide. For the second question, the information comes from all three groups again; in this scenario, the importance of the interviewee groups is reversed; the detailed perspective of the innovation managers and employees is more informative than the broad perspective of the consultants. The information gathered from these interviews is compiled and analyzed. This is accomplished qualitatively using interviews and qualitative analytic methodologies. A framework is created from the studied data to answer the research question and fill the knowledge gap. Chapter 3 provides a full explanation.

## 1.6 Research Scope

The research scope is constrained in two ways. First, the organizations examine how the structure affects EDI. Because an organization's culture is inextricably linked to its structure and is impossible to separate completely, it is also partly covered. The second area where research is restricted is in the field of EDI. The (Kesting & Ulhøi, 2010) terminology is utilized; EDI addresses the production and implementation of ideas, not what happens once a functioning prototype is created.

## 1.7 Relevance

### 1.7.1 Societal Relevance

The societal benefit of this research is that organizations are better supported in deciding whether to implement EDI. How an organization might involve people more in organizational innovation is still unclear. The thesis findings should assist organizations in determining the best strategy to support EDI. An organization can assess how they appear and what they want to achieve using EDI before determining the best strategy to support EDI. While in some organizations, the emphasis is on motivating employees to contribute to innovation to involve them in the innovation process, in others, it is preferable to create a structure where employees meet regularly or at special events where ideas are welcomed. These are some diverse perspectives on EDI that will not work for every organization. Promoting a type of EDI appropriate for the organization is recommended to encourage enterprises to involve employees' expertise in the innovation process. As a result, more firms can help their employees and benefit from their employees' knowledge in the innovation process.

### 1.7.2 Scientific Relevance

The present focus of the EDI study is on what enhances and diminishes EDI, such as how the ideas of autonomy, perceived autonomy, or self-leadership affect EDI. The knowledge need has been identified in section 1.3: there is currently no research into which techniques of supporting EDI suit different organizations. This study adds value to research into EDI by investigating which organizational structures work best with different EDI structures. This also puts other theories into perspective; in one study, perceived autonomy has no influence (Echebiri, 2020), while in another, it does (Lempiälä, Yli-Kauhaluoma, & Näsänen, 2018). In these studies, information about the EDI environment was not considered when forming conclusions. If this thesis concludes that supporting employees in this manner greatly impacts some organizations and not as much in others, the contradictory findings could coexist next to one another. The findings could imply that the scope of future research should be modified to the kind of organization; elements such as perceived autonomy would then be explored in an organizational type so that the research better describes the truth. As a result of this research's added knowledge, future research can be more targeted.

## 1.8 Outline of the Thesis

The literature is reviewed in Chapter 2. First, the literature on EDI and how it might be supported are described. It then explains how structure can assist EDI and how culture can support EDI. A conceptual framework follows the review of the literature. The methodology and data are described in Chapter 3. This chapter describes why a qualitative study was chosen, why semi-structured interviews were

used, and how the interviewees were chosen. It is then detailed what will be done with the information gathered from the interviews. The study's findings are discussed in Chapter 4. Based on these findings, a framework is built to assist enterprises in selecting EDI-supporting practices that are appropriate for their organization. The thesis then enters its final phase, which closes with a discussion of the research's findings in chapter 5. In chapter 6, the practical implications of the results are described. Furthermore, the research's practical implications are listed, and recommendations for future research are provided in chapter 7. Finally, there is a conclusion to the thesis in chapter 8.

# Chapter 2

# Literature Review

Kesting and Ulhøi (2010, p.66) defined Employee-Driven Innovation as the following: "Employee-Driven Innovation (EDI) refers to the generation and implementation of significant new ideas, products, and processes originating from a single employee or the joint efforts of two or more employees who are not assigned to this task." Because EDI is defined in this manner, EDI occurs only when employees are actively generating innovative ideas and developing those ideas. If employees are merely active in coming up with ideas but not in developing these ideas further, this is referred to as continuous improvement rather than EDI (Flocco et al., 2022). The definition also implies that the type of innovation is irrelevant. Innovation can be radical or incremental, involving ideas, goods, or processes. The final aspect of EDI is that innovation must come from at least one employee whose primary job is not to innovate (Kesting & Ulhøi, 2010; Flocco et al., 2022).

The literature review consists of four sections. The first section is about how organizational structures influence how organizations organize innovation. This section helps to understand how organizations adapt their innovation methods to fit and work better with the organizational structure. The second section examines how the culture within an organization influences the innovation process. The culture within an organization influences how the organizational structure is implemented in practice and is thus a factor that can play a role in the relationship between structures and the innovation process. The emphasis, therefore, remains on the organizational structure; the culture is taken into account because it can influence the effect in practice. The first two sections analyzed how organizations organize innovation differently based on what suits the organization best. The third section looks specifically at EDI, this section looks at how EDI can be supported. The different characteristics of EDI are looked into, such as what practices companies can use to support EDI and how EDI can be managed. The different goals for which EDI can be used are all topics that this section will look into. Thus, the first two section analyzes how organizational structures and cultural factors impact how organizations support innovation, and the third section analyzes how EDI specifically can be supported. Further research in the thesis examines how organizations with different organizational structures can best support EDI. The fourth section illustrates a conceptual framework for this.

## 2.1 Organizational Structures

Before it can be theorized how organizational structures impact EDI, information about how organizational structures impact innovation is necessary. In this section, a couple of different organizational structures are outlined, as well as the different impacts the structures have on innovation. Afterward, the underlying features of the organizational structures are then investigated. This section closes by comparing the underlying features to their impact on innovation. The aim of this section is to illustrate how organizations with different organizational structures have different practices in which innovation is supported. This section also informs that factors such as standardization and formalization are properties of organizational structures that affect how organizations innovate.

### 2.1.1 Innovation in Different Organizational Structures

First, the different organizational structures must be differentiated to learn how organizational structures impact EDI. Different organizational structures are listed and briefly explained. A couple of organizational structures are chosen: the hierarchical organization structure, the flat organization structure, the matrix organization structure, and the holacratic organization structure. These structures are chosen because they are used in organizations and can be differentiated. The different organizational structures impact innovation, a well-known topic, and a lot of literature is available on this topic. The effect of the organizational structure on innovation within organizations is also summarized for every organizational structure. It is important to note that in practice, organizations are more than just one of the organizational structures as they are documented in the literature. Either the organizations are a combination of the structures, or the organization made their adaptation.

#### 2.1.1.1 Hierarchical Organization Structure

An organization with a tall hierarchy is an organizational structure with a strong hierarchy. In the classic hierarchical organization structure, communication flows along the organization chart. Communication and decision-making can be slow, as the knowledge of the employees must be passed along multiple layers until it reaches the person who is allowed to make the decision (Newell et al., 2019). In the classic hierarchical organization structure, a lot of bureaucracy is involved, processes are standardized, and the organization is very rigid (Newell et al., 2019).

Organizational hierarchies have both beneficial and adverse effects. Hierarchical organizations, for example, can ensure cooperation and coordination within their development activities (Schilling & Shankar, 2019). There is a lot of clarity about where the firm wants innovation to go, and requirements can be allocated effectively. The disadvantage of a hierarchical structure is that processes tend to be slow due to bureaucracy (Newell et al., 2019). Employees outside of R&D are less likely to contribute to the innovation process because the communication flows from the top to the bottom of the hierarchical tree. There is less freedom for autonomy and creativity. Because a hierarchical firm is rigid, innovations cannot be applied rapidly; change can be problematic in the more rigid organizations (Newell et al., 2019).

Figure 2.1: Hierarchical organization structure (Morgan, 2015)

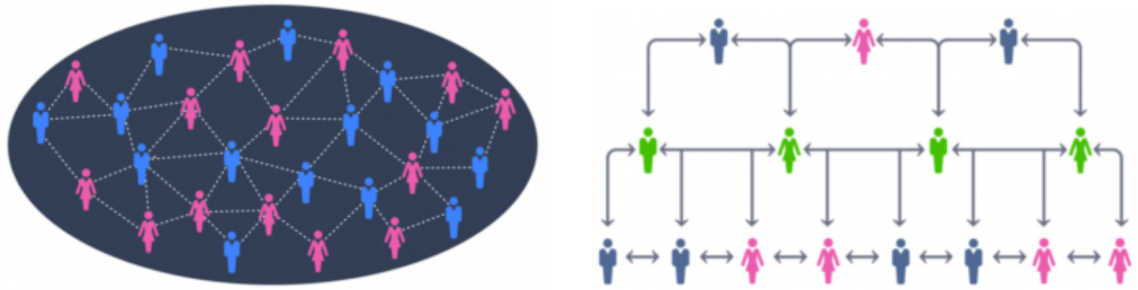
#### 2.1.1.2 Flat Organizational Structure

Organizations with a flat hierarchy have little to no layers in their organization chart. A flat organizational structure is often more decentralized, and more employees are involved in communication and

collaboration (Newell et al., 2019; Morgan, 2015). In flat organizations, employees stand on a more equal footing.

Flat organizational structures have an impact on innovation as well. Flat hierarchies are far more dynamic and adaptable than tall hierarchies and are considered better for innovation (Miles, Covin, & Heeley, 2000). Employees have more freedom in flat organizations and can contribute to inventions independently. (Newell et al., 2019) Employees can also collaborate more freely because communication channels and organizational processes are not standardized (Schilling & Shankar, 2019). One of the adverse effects of a flat organizational structure on innovation is a lack of structure, which can interfere with the coordination and alignment of creative processes. The organization becomes less efficient (Schilling & Shankar, 2019). Finally, making judgments rapidly has a disadvantage because fewer controls are available, which means more resources can be wasted. Another factor is that choices are not necessarily made faster, even though communication does not have to cross multiple layers. More opinions count in flat organizations, which can sometimes delay decisions.

Figure 2.2a illustrates a diagram of a flat organizational structure. An ambidextrous organization is illustrated in the figure next to it, combining the two. An ambidextrous organizational structure can have many forms; it can be a medium-tall hierarchy, or the organizational structure can have different divisions with different structures. In this case, one department could be organized in a tall hierarchical manner, and the other could be organized in a flat hierarchical manner (Schilling & Shankar, 2019). This has an interesting effect on an organization's innovativeness; the effects combine the advantages and disadvantages of the tall and flat hierarchy.



(a) Flat organization structure (b) Ambidextrous organization structure

Figure 2.2: Flat organizational structures (Morgan 2015)

#### 2.1.1.3 Matrix Organizational Structure

A matrix organization structure has a matrix-shaped structure. Not only is there a chain of command in a vertical, classical hierarchical direction, but there is a second chain of command for specific projects or products as well (Goś, 2015)(MBN, 2019). This means that in a matrix structure, an employee answers two managers. The philosophy behind this structure is that the different departments that need to cooperate on a project have standardized lines of communication and collaboration. In practice, it can be difficult for employees to answer to two managers (Newell et al., 2019).

The two distinct command chains impact how a corporation can innovate. Collaboration between departments is facilitated since communication is standardized in the hierarchy direction and with employees from other departments working on the same project. The formation of projects with employees with different functions makes the matrix structure innovative. This method allows for incorporating diverse points of view; it brings specialists from several departments together (Newell et al., 2019). Finally, a clear project owner is accountable for the project's flawless operation, which benefits innovation. The organizational structure is highly complex, which could be more conducive to innovation. Employees are held accountable to two bosses. This can lead to managers asking contradicting questions of their employees. Because of the complexity of the organizational structure, it is also more challenging to coordinate the many communication flows.

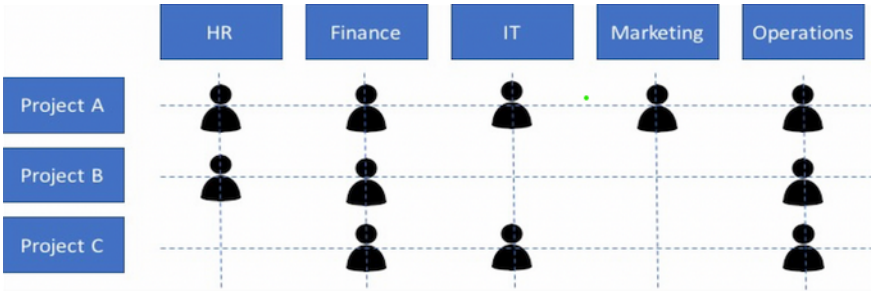



Figure 2.3: Matrix organization structure (MBN, 2019)

#### 2.1.1.4 Holacracy Organization Structures

The holacratic organization structure is, much like the flat structure, also very flat and does not have a hierarchy. The holacracy organization structure works with teams. Employees are responsible for their expertise; if needed in a project, they are invited to join the team (Savage, Franz, & Wasek, 2019). This structure's goal is for all employees with knowledge relevant to a project to get involved and have a say in the decisions being made (Krasulja, Radojević, & Janjušić, 2016).

The benefits and drawbacks of the organizational structure on innovation are similar to the benefits and drawbacks of the flat organizational structure. Because employees can get involved in initiatives, contribute, and decide, a very open culture where individuals collaborate and take responsibility is encouraged. Furthermore, the organization has minimal regulations that allow it to change swiftly and keep up with the times. The holacratic structure also has a detrimental impact on creativity because there is little structure to keep an overview of the innovative projects within the organization. Employees may be involved in too many projects, resulting in insufficient time spent on the projects, or employees may be absent from a project. Because there is minimal supervision, the less enjoyable duties could become neglected (Krasulja et al., 2016). Furthermore, as many equal employees have a say in decision-making, this could become an issue.

Figure 2.4: Hierarchical organization structure (Morgan, 2015)

### 2.1.2 Underlying Properties of the Different Structures

The different organizational structures that are described above have some things in common and something different. The hierarchy is essential in describing the tall hierarchical and matrix organization structures. The communication flows are standardized and are supposed to follow the set organization

structure. On the other hand, the flat organization structure and the holacracy structure emphasize the employees' equality and autonomy, giving the employees more freedom within an organization.

A more general term for hierarchical organizations is mechanical organizations; mechanical organizations describe all organizations with clear rules for communications, responsibilities, and line of command (Schilling & Shankar, 2019). Mechanistic structures are usually linked to higher operational efficiency. When regulations and procedures are strictly followed, and most actions are standardized, it creates an efficient machine that performs consistently and dependably (Schilling & Shankar, 2019). Mechanistic organizational structures, however, are frequently thought to be ineffective at stimulating creativity (Newell et al., 2019). Efficiency is achieved by mechanistic systems, which may stifle creativity inside the company, by maintaining strict adherence to standards and minimizing variation. Organization structures with low levels of standardization and formalization are organic structures (Schilling & Shankar, 2019). This is the general term for structures like the flat and the holacracy organization structures. Organic structures are frequently thought to be better for innovation and dynamic contexts since they are more fluid and have lower levels of formalization and standardization. Employees have far greater freedom regarding their duties and working methods in the organic structure. Organic structures are frequently regarded as superior for creativity despite their potential harm to efficiency since much innovation emerges from trial and improvisation.

Whether an organization is mechanistic or organic is based on two underlying properties: the standardization and the formalization of an organization's structure (Schilling & Shankar, 2019). The firm's formalization refers to the degree to which a firm uses policies, processes, and written documentation to shape the behavior of individuals or groups inside the organization. The level of standardization refers to how consistently an organization's functions are carried out. By establishing clear expectations for behavior and decision-making criteria, the formalization rules and procedures can standardize corporate operations and govern employee behavior. Formalization can replace some managerial control, allowing huge organizations to function effectively with fewer managers. The level of standardization and formalization is also mentioned in the summaries of the example organization structures. These are two important factors within organizational structures and could be used to differentiate structures from one another.

## 2.2 Organizational Culture

The previous section examines how organizational structures influence an organization's innovativeness. Culture plays a role in this relation, as the culture of an organization impacts how the structure of an organization is executed in practice. An innovative culture is an important factor for innovative capabilities in an organization (Škerlavaj, Song, & Lee, 2010; Akgün, Keskin, & Byrne, 2010). According to Iranmanesh, Kumar, Foroughi, Mavi, and Min (2021), innovative culture moderates the relationship between the organizational structure and innovativeness. For example, if an organization is hierarchical with a high level of formalization, employees could be less likely to participate in the innovation process. However, if the culture is innovative, employees are more likely to participate in the innovation process. In the research, the relationship between organizational structures and EDI is examined. To find the impact of organizational structures on EDI, it is essential to be mindful of the influence of the culture within the organization.

The fact that culture impacts innovation has already been mentioned earlier in this chapter. Constructing a culture-based description of how an organization's culture influences its innovation is more challenging. Culture encompasses many elements difficult to record, measure, or separate; therefore, it is difficult to state a clear relation between culture and innovation (Büschgens, Bausch, & Balkin, 2013). Culture is also subjective, and not everyone will have the same experience. As a result, the various aspects that constitute a company's culture and their impact on innovation will be discussed globally. Amundsen, Aasen, Gressgård, and Hansen (2014) specified nine organizational cultural features that align with EDI principles. These features are commitment, cooperative orientation, pride, trust, tolerance, the feeling of security, development orientation, openness, and autonomy. These nine features are directly or indirectly related to management practices. Hansen, Amundsen, Aasen, and Gressgård (2017) finds that four cultural features stand out for their implication on management practices. These features are cooperative orientation, trust, openness, and autonomy.

### 2.2.1 Cooperative Orientation

Cooperative orientation is the basic assumption of 'agreement to cooperate' between management and employees (Amundsen et al., 2014; Hansen et al., 2017). Employees and managers are open to cooperation within organizations with a cooperative orientation. A cooperative orientation is essential for EDI (Tkalich, Moe, & Sporsem, 2021).

### 2.2.2 Trust

Hansen et al. (2017) describes the cultural characteristic of trust as enterprises that are characterized by trustful relationships. Employees trust their managers, and managers trust their employees. Holmquist and Johansson (2019), Sorensen, Ussing, Wandahl, and Christensen (2018), and Voxted (2018) also stress the importance of trust. For EDI, employees must trust the managers to take them seriously.

### 2.2.3 Openness in Communication

Openness in communication, both internally and externally, is the third cultural characteristic (Hansen et al., 2017). For openness, the organization is open about its strategies and decisions with its employees. managers can, for example, show their openness to communicate with an 'open-door policy'. Another feature is that employees can disagree with their managers (Hansen et al., 2017). Vertical communication ensures that new ideas reach the people who have the power to make the concept more innovative. The easier this communication is, the more likely employees will share their thoughts with the boss or other lines. Horizontal communication ensures the integration of more information. It is also possible that numerous departments will encounter the same issue and come up with a solution. When communication could be better, both departments must do all the work themselves rather than having it done only once.

### 2.2.4 Autonomy and Entrepreneurship

Autonomy is defined as the high degree of influence employees have on the execution of various tasks (Hansen et al., 2017). If employees work autonomously, they have the freedom to make decisions and solve issues. This means managers are less in control but delegate responsibility instead. Autonomy is essential for EDI, as it gives employees the freedom to innovate (Tkalich et al., 2021; Smith, Ulhøi, & Kesting, 2012).

Entrepreneurship is related to the autonomy of employees. Entrepreneurship inside a corporation reflects how willing people are to take on projects independently (Opland, Jaccheri, Pappas, & Engesmo, 2020). Are they willing to solve a problem outside of their job description, or do they disregard it? This also relates to individual autonomy within an organization; how independently may employees work on their tasks? Are they free to address problems however they see fit, or must they adhere to predefined rules? These characteristics influence employees' innovativeness in the following ways: When employees are independent, they have more room to invent; when entrepreneurship is supported, it is evident to employees that they can use this flexibility to develop their ideas independently (Renkema, Meijerink, & Bondarouk, 2022; Hansen et al., 2017).

## 2.3 Current Theory on EDI

This section focuses on the literature on EDI. This section looks at the different ways in which EDI can be supported. This can happen in different ways. Firstly, EDI can be supported by including a "structure" as an organization. What is meant by this is not that the organizational structure must be adjusted but that a mechanism must be added alongside it. The idea box and time-off policy examples have already been mentioned earlier. Subsequently, other ways in which EDI can be supported are mentioned. Instead of adding a parallel structure, EDI can be supported from cultural aspects. In addition to culture, these aspects are also strongly related to the structure of an organization. After, the different ways in which EDI can be managed are examined. The degree to which initiative and responsibility lie with employees or managers can vary. How involved the managers are in the EDI process can be predetermined by the organization. The last paragraph describes that these choices may depend on why an organization involves its employees in the innovation process. When building a community is important, different considerations can be made than when the emphasis is on innovation. This information supports the thesis to determine how organizations can best support EDI.

### 2.3.1 EDI Support from the Organizational Structure

This section will describe how a structure can support EDI. The following section describes how cultural elements can support EDI within an organization. These two topics are related to one another and influence one another. One way to differentiate between the two topics is that the cultural supporting methods are implicit and are (only) codified in the values of an organization; they are based on informal communication and motivation; The structural supporting methods can be documented in more detail and are based on formal communication, routines, and practices. Both topics impact each other and what innovative practices that support EDI fit with an organization. That is why describing the cultural and structural supporting methods apart adds value to this research.

There are a lot of different practices an organization can implement to support EDI. These practices can vary a lot. To match the previous section, the practices can be on the job level by making training and education available or allotting time for employees to innovate. On the outcome level, organizations can reward employees by giving bonuses for implemented ideas, organizing events such as (dragons' den) or introducing ceremonies. Routines or teams can be introduced to encourage EDI on the organizational system level.

Lotz (2018) studied a case in which employees developed and innovated training practices. The paper describes how routines trigger EDI and iterative learning. The routine in the study is a system of leadership practices that encourage continuing development. Routines enhance EDI by enabling employees to collaborate and work towards a single goal, as well as support EDI by enabling employees to recognize document, and exchange information about the problems and solutions they experience about their job. Lastly, they allow employees to improve work practices continuously.

These are all very different examples of structures that can support EDI. One of the identifiable differences between these examples is based on how EDI is managed. EDI is not managed in the example of the time-off policy, just like 3M and Google, as mentioned in the introduction in chapter 1. Innovation, in this case, EDI, emerges spontaneously (Høyrup, 2010). The routines, however, take the form of a managed process, which means that EDI can also be a managed process (Tirabeni & Soderquist, 2019). This difference is further discussed in the next section.

### 2.3.2 EDI Support from Organization Culture

EDI can be supported in multiple manners to take place successfully. This section focuses on what cultural elements support EDI. For EDI to occur, different cultural elements must be present in the organization. These elements can be antecedents, circumstances, or conditions. The cultural elements have an impact on the functioning of employee-driven innovation. Thus, a lot of literature has been created on this matter. These elements influence employees' motivation to innovate. The cultural elements are described in different manners in literature; they are described as antecedents, circumstances, and conditions. They all describe how an employee becomes and stays motivated to help a company innovate, so these terms will be used interchangeably based on how the source calls the element.

Before the report delves into why an employee is motivated to help the company innovate, the antecedents of how an employee becomes and stays motivated for their job, in general, are described. Amar (2004) identifies three different groups of antecedents to motivate knowledge workers: job antecedents, outcome antecedents, and organizational system antecedents. Job antecedents focus on motivating employees on an individual level; employees must find their job motivating. The scope of job antecedents does not need to be individual. However, they can be company-wide, department-wide, or individual (Amar, 2004). An individual job antecedent would, for example, include a lot of job flexibility. Outcome antecedents are focused on rewards. All rewards fall under this, which can be extrinsic or intrinsic, real or potential. The third group of antecedents is the organizational system antecedents. This includes the work environment in an organization, the culture of the organization, and the policies of the organization.

These groups of antecedents are also relevant in antecedents that describe the motivation to innovate. Therefore the cultural antecedents that support EDI are mentioned following this structure. The first example of job antecedents that motivate employees to be involved in organizational innovation is job (and team) autonomy (Adams, Bessant, & Phelps, 2006). Echebiri (2020) states that job autonomy is not directly related to EDI but has an indirect relation. Echebiri (2020) found a positive relationship between job autonomy and self-leadership and a positive relationship between self-leadership and EDI.

Another example is perceived job autonomy (Lempiälä et al., 2018). The study describes two teams that work within a similar structure yet perceive the ability to engage in EDI very differently. Echebiri (2020) finds no link between perceived job autonomy and EDI with self-leadership. The last example of a job antecedent is the training and education of employees (Jimenez-Jimenez & Sanz-Valle, 2008).

The second group of antecedents is the outcome antecedents incentivizing employees to innovate. This can take many forms, from financial rewards to social ceremonial rewards. The monetary rewards can take the form of bonuses, for example. Social rewards can give people public recognition, and raise morale, and a culture of innovation is reiterated. Literature is not unanimous about this subject, however. Jimenez-Jimenez and Sanz-Valle (2008) states that HRM practices (that include rewarding employees) have a positive relationship with innovation. However, this literature is not explicit in that rewards have a direct link to EDI, Gupta (2023) found no direct relation.

The last group that keeps employees engaged in innovating is the organizational system antecedents. These antecedents include the work environment, culture, and an organization's policies. The first example of an antecedent is the general acknowledgment of employees (Kesting & Ulhøi, 2010; Tesluk, Farr, & Klein, 1997); this relates to employees feeling regarded and respected by an organization instead of inferior. Kesting and Ulhøi (2010) and Tesluk et al. (1997) describe another antecedent called the power game. Managers' involvement in employees' ideas can be seen as a loss of power. To support EDI, this should not be the case so that employees are given the space to develop their innovative ideas. The third property Kesting and Ulhøi (2010) and Tesluk et al. (1997) mention is that there should be no failure culture. When employees are punished for failures, they are not encouraged to come forward with their ideas. Failures should be seen as a step toward potential innovation.

These different cultural elements already show how interrelated an organization's structure and culture are. Especially the outcome antecedents rely on an organizational structure. A structural practice must be in place to give a financial or social reward.

### 2.3.3 Management of EDI

The previous paragraph investigates different EDI structural practices that can be used by an organization to support EDI and finds that the levels of management of the different practices can differ. In some practices, employees are encouraged to develop their idea independently and only present it after it has been further developed. In other practices, (innovation) managers are introduced to innovation earlier and take a more prominent role in developing the innovative idea. Høyrup (2012) identifies three overarching processes. The first process is called the 'bottom-up' process; employees have the main initiative. this approach views the EDI process as unplanned by workers who recognize an inventive possibility.

The second approach is the top-down approach; this process is managed. Managing EDI is a challenging process. However, many methods and mechanisms have been developed to support the management of EDI. Designing job autonomy, decentralizing decision-making, introducing financial incentives, facilitating communication and knowledge flows, and enabling participation mechanisms can be used (Bäckström & Bengtsson, 2019). The third approach combines the former and contains characteristics of both the top-down and bottom-up approaches.

An alternative look at how EDI is managed is presented by Flocco et al. (2022). Flocco et al. (2022) noted that organizations navigate EDI practices based on whether they are closed, open, or hybrid structures. When an organization looks to build a community while applying EDI, open structures are a better fit for the organization, as in open structures, employees are involved in the topic definition, team creation, and the prioritizing of ideas. In a closed structure, the opposite is the case; not the employees but solely the managers are involved in the topic definition, team creation, and the prioritizing of ideas. A closed structure is a better fit for a company mainly looking to innovate using EDI rather than building a community. In the last hybrid structure, employees are involved in the topic definition and team creation but not in the idea transfer and prioritization.

Another managerial choice is in what phases of the innovation development to involve employees. Soerensen and Wandahl (2013) describe that innovation work behavior can be separated into four groups: problem recognition, idea generation, idea promotion, and idea realization. These groups are all important for an innovation to succeed. The definition states that employees are involved with the definition and generation of the idea; however, involving employees in the promotion and realization phase might be

interesting for organizations. Involving employees in these processes could help create a support base for the idea and have a smoother implementation process. This idea is very interesting and close to the topic. However, it is just outside the scope, so it will not be delved into further.

### 2.3.4 Desired Outcomes for Employee-Driven Innovation

EDI can be used to achieve different outcomes. EDI can be used to innovate better and build a community as well (Kesting & Ulhøi, 2010; Flocco et al., 2022; Teglborg-Lefèvre, 2010). The difference in goal translates to a difference in the application of EDI (Flocco et al., 2022). The article of Flocco et al. (2022) looks into how managers choose and navigate design choices to encourage and organize EDI. In this paper, the goal of the EDI practices is identified, and subsequently, the relation to what type of methodology the manager decided to implement is concluded. Considering that the goal of EDI can change the navigation of what EDI practices to choose, the goal of EDI might influence what EDI-supporting practices should also be recommended to an organization.

## 2.4 Conceptual Framework

The literature search yielded a large amount of data. This knowledge can be used to create a conceptual framework. The section on employee-driven innovation provides information on how EDI can be supported, what forms EDI can take, and what the various EDI aims are. One of the most essential insights is that EDI-supporting practices can be bottom-up or top-down. When EDI is implemented from the top down, it is more governed by the company, and the organizational structures must allow clear avenues for innovation. Bottom-up EDI gives employees more freedom to create it themselves, and employees primarily need to be given space to do so. Something similar can be seen in how organizational structures can foster innovation. Organizational structures can be closely managed with high formalization and standardization; by formalizing these procedures, these companies foster innovation. Employees are allowed the flexibility to do anything under organizational systems with little formalization and standardization. When these two sections are combined, organizations with a high formalization and standardization have a controlled innovation process and a regulated EDI process, implying that they are structured 'top-down'. This is also in line with the findings of Renkema et al. (2022). Companies with little formalization and standardization, where people can innovate flexibly, should also use the bottom-up strategy for EDI.

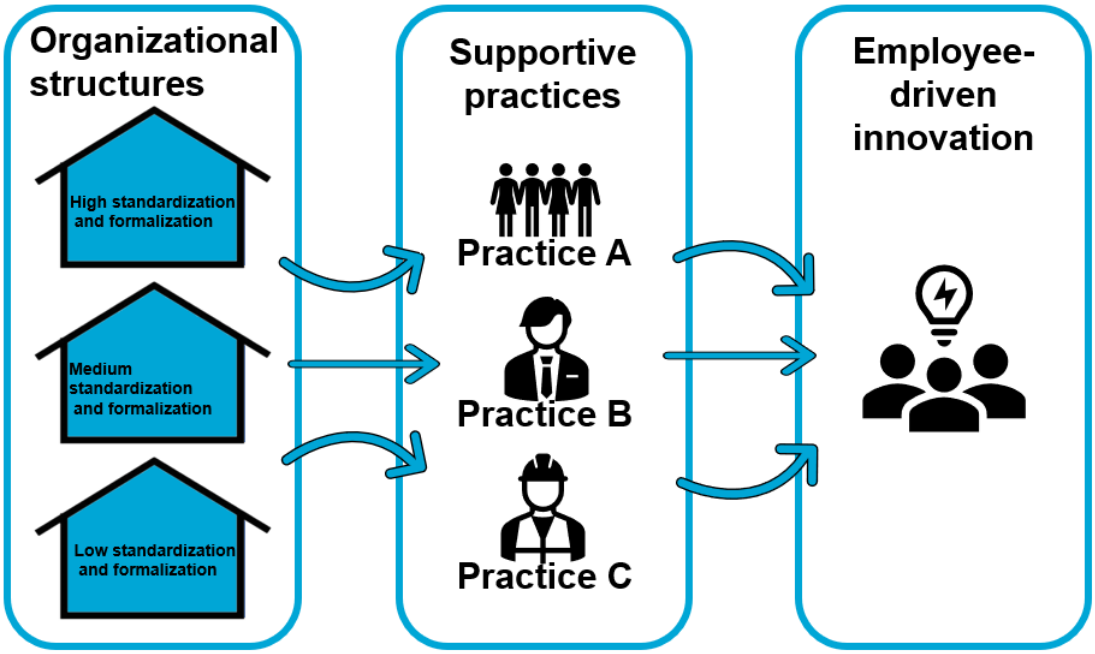



Figure 2.5: Conceptual framework

The literature describes how the structure supports EDI and how the culture promotes EDI. The section on how culture promotes innovation and how culture supports EDI appears to imply that this is especially crucial in the bottom-up support of EDI. When EDI is supported from the top down, culture is still crucial since these practices encourage people to work with top-down frameworks. Bottom-up techniques, on the other hand, place a greater focus on employees' independence in developing creative ideas on their own. The structure is more significant in top-down firms because it pulls individuals together and allows them to innovate in a formalized manner.

# Chapter 3

# Research Methodology

This chapter outlines the research methodology to answer the main research question, 'How do organization structures impact the implementation of EDI?', and substantiates why this methodology was chosen. First, the reasons for using a qualitative technique in this study are outlined. Following this, it is argued why semi-structured interviews were chosen above other types of interviews. Subsequently, the question of what people should be interviewed to obtain a clear and thorough image of the subject is considered. After that, the analysis of the information from the interview is described, including how the data is processed using coding. Lastly, the plan for managing and keeping the data safe is laid out, and the ethics behind this is discussed.

## 3.1 Research Approach

As there is very little literature on navigating EDI practices and literature that looks at the relationship between organizations and EDI practices, this thesis is primarily an exploratory study. The research method that is the best fit for this is qualitative research, as this type of research is ideal for discovering connections between concepts and behaviors, interpreting phenomena in their context, and developing and refining theory (Quinn, 2005; Patton, 2014; Campbell & Gregor, 2002; Bradley, Curry, & Devers, 2007). Qualitative research seems the best fit as the research goal is to find the relation between organizational structures and what EDI-supporting practices are the best fit for different organizations. Quantitative research aims to establish statistical relationships between variables to quantify occurrences.

Various qualitative research methodologies include case studies, comparative historical analysis, and focus groups. For this study, an in-depth interview was chosen. This was chosen to obtain a general picture of how people experience EDI inside a business and determine which organizations match well with which EDI-supporting practices. As a result, semi-structured interviews were also chosen because I am looking for precise information while allowing interviewees to build on their knowledge.

## 3.2 Research Design and Data Sampling

The information I seek from the interviews can be gathered from figure 2.5, the main research question, and the sub-questions in the introduction in chapter 1. There are four pieces of information necessary to create a framework. The first piece of information is that a distinction or taxonomy must be established between the EDI-supporting practices found in the literature based on the interviews. The second identified information that needs investigation is the relationships between organizations and EDI-supporting practices. This information might also construct a taxonomy between various organization types based on this research. These connections are further investigated to determine why the EDI supporting practices match well with a certain organization and whether structural or cultural elements cause this. Lastly, the organization type most suitable for EDI is also selected based on the uncovered knowledge.

Different groups of people need to be interviewed to determine the research's different parts and facets

of the framework. Innovation consultants are the most important target group for the first two aspects. Because consultants are assigned to different companies, they experience different organizations requiring different approaches. Consultants who visit different organizations intending to make them more innovative or visit other companies to assist in implementing innovations observe how different organizations influence the innovation process. As a result, this target group knows what distinguishes different companies and has insight into how to change their approach to the different organizations. Consultants can discern a taxonomy.

The second and third target groups are innovation managers and employees. These two target groups contain knowledge about how things are done within an organization. They can recognize the organization in which they work, what EDI enabling practices are in place in a company, and, most importantly, share their experience with what works and what does not work within a company. The innovation managers can share their knowledge on how effectively new approaches work and where they fail. Employees can express what they think is excellent or bad about the innovation support methods and share their experiences with why they are or are not implemented. Combined, these two points provide a comprehensive picture of how innovative behaviors are experienced and how the organization influences them.

Five consultants, eight employees, and four innovation managers were interviewed for the qualitative study. The interviews were conducted in Dutch, as all of the interviewees come from the Netherlands, and the interviews took place in the native language of the interviewees. The interviews were conducted in a semi-structured fashion, using prepared questions that are mentioned in Appendix A. Most interviews were conducted online using Microsoft Teams; however, some were conducted in real life. Using the functions of Microsoft Teams, the interviews were recorded and transcribed. The steps taken to ensure the safety of the information are described in 3.5.

The right participants must be selected to ensure a good representation of the information; thus, qualifying criteria are established. As there are qualifying criteria to find the right people to interview, the sampling method is purposeful sampling. To obtain a broad dataset, it is important to speak to employees and innovation managers from different organizations. Participants are therefore sought at different organizations, and not within an organization. As the thesis seeks a general overview, it is also essential that there is variation in the organizational structures. For this reason, participants are sought from multiple organizations working in different industries. Consultants do not necessarily have to be from different organizations, as their expertise lies in having gone to multiple other organizations and recognizing their differences and the different methods they need to apply to innovate. However, a little variation is desired as the different consultancies might train their employees differently, resulting in different perceptions and solutions.

| Participant ID | Job Role | Organization ID |
|---|---|---|
| Em1 | Employee | Org4 |
| Em2 | Employee | Org5 |
| Em3 | Employee | Org7 |
| Em4 | Employee | Org4 |
| Em5 | Employee | Org2 |
| Em6 | Employee | Org2 |
| Em7 | Employee | Org2 |
| Em8 | Employee | Org2 |
| Im1 | Innovation Manager | Org7 |
| Im2 | Innovation Manager | Org1 |
| Im3 | Innovation Manager | Org3 |
| Im4 | Innovation Manager | Org6 |
| Im5 | CEO | Org7 |

Table 3.1: Participant list (employees and innovation managers)

| Participant ID | Job Role | Organization ID |
|---|---|---|
| C1 | Consultant | Org 8 |
| C2 | Consultant | Org8 |
| C3 | Consultant | Org8 |
| C4 | Consultant | Org9 |

Table 3.2: Participant list (consultants)

The employees, innovation managers, and consultants work for different organizations. The various organizations are essential when analyzing the participant interviews. The types of organizational structures and EDI-supporting practices in an organization are essential factors for this research. As a result, having an overview of the companies and an overview of the participants is beneficial. Another table has been constructed to add clarity.

| Organization ID | Employee | Innovation manager | Consultant | Industry | Company size |
|---|---|---|---|---|---|
| Org1 | - | Im2 | - | Manufacturing Engineering | +10.000 |
| Org2 | Em5, Em6, Em7 & Em8 | Im5 | - | Car industry | 600 |
| Org3 | - | Im3 | - | Food Industry | 1000 - 5000 |
| Org4 | Em1 & Em4 | - | - | Food Industry | +10.000 |
| Org5 | Em2 | - | - | Agricultural Machinery Industry | 1000 - 5000 |
| Org6 | - | Im4 | - | Pharmaceutical Industry | +10.000 |
| Org7 | Em3 | Im1 | - | Energy Grid Management Industry | 1000 - 5000 |
| Org8 | - | - | C1, C2 & C3 | Consultancy | +10.000 |
| Org9 | - | - | C4 | Consultancy | +10.000 |

Table 3.3: List of organizations of the interviewees

## 3.3 Data Collection

To gain information from the participants, interviews are conducted. The participants are asked open-ended questions so that they can elaborate on their knowledge. The interviews are semi-structured to have the freedom to clarify the interviewees' experiences and knowledge further. This could help uncover new information that is relevant to the study. The semi-structured interviews take place face-to-face when possible or otherwise on Microsoft Teams. The interviews take about half an hour, during which the introduction of the topic takes place; the data management plan is shortly discussed, including the freedom to retract information during or after the interview and the time for the interviewee to add more information. The questions are built around four themes: whether the interviewees know and have seen EDI before. This includes what EDI looks like within their organization or in their experience. The second theme is what the organization looks like and what organizational structures and culture are present. The third theme is the relationship between the two. The questions regarding this theme will ask how employee participation in innovation is affected by the organization's structure and culture and gives more insight into how the interviewee views the EDI practices within the organization. Lastly, the interviewees are asked about potential organizational improvements to support EDI. This speaks not only about what EDI supporting practices do not work within the organization but to what the ideal EDI practices would be within the organization, as well as what organizational structure and culture most suitable for EDI.

## 3.4 Data Analysis

To analyze the information from the interviews, the interviews are both summarized and codified. The emergent themes can be analyzed within their context by summarizing the interviews first. Coding the interviews is a way to analyze the information in a systematic approach and find themes this way.

The coding will happen in AtlasTI; words or sentences are selected and tagged. These tags will indicate what information is in the text and how it relates to the research. Information that is not relevant to the research will not be tagged. The interviews are analyzed on four types of information. It looks at what the interviewees say about the structure of an organization and how this influences innovation, the culture of an organization and how this influences innovation, current practices within an organization that supports EDI, and how the organization can improve to give more room for EDI or by using EDI. The codes that are generated will be structured this way. Within these structures, themes will come forward, for example, whether an organization is mainly looking to innovate or to build a community in the improvement.

## 3.5 Ethical Data Management

The information collected from the interviews falls under Personally Identifiable Information (PII) and Personally Identifiable Research Data (PIRD). This information must be handled with care to protect the privacy of participants. To protect privacy, sensitive information that could negatively affect people is requested as little as possible to avoid unnecessary risk. Participants are informed of the type of information requested and how it will be recorded before the interview begins. Consequently, the participants' consent is sought. Furthermore, all information is anonymized as soon as possible, and the data is kept behind the university's security for up to 2 months after the thesis. Additionally, the interviewees can always indicate in advance or afterward whether information should be censored or whether they want to withdraw the entire interview.

## 3.6 Obstacles within the Data Collection

The information was collected through Microsoft Teams. However, during some interviews, the recording function malfunctioned and either did not work or stopped recording after thirty seconds. Therefore some transcripts are not corrected. Another issue is that English words were not recognized because the setting was Dutch. Of some of the interviews, no transcript could be developed. These interviews have been summarized and added to the result in this manner.

Initially, the aim was to interview employees and innovation managers from different organizations and interview an employee and innovation manager from each company to get the perspective of both sides within the same organization. Because of cancellations, this was not possible, and only twelve participants were successfully interviewed

Seventeen participants were interviewed, but it was impossible to interview more people due to time constraints. Because of the time constraints, finding participants in a more diverse industry or organization was not manageable. Lastly, of some organizations, only one participant was interviewed. This might result in unreliable information, as opinions and general sentiments, for example, can not be distinguished.

# Chapter 4

# Results

Results are based on the study as described in chapter 3. Seventeen interviews have been conducted and are analyzed in this chapter. These findings are reported in the order of the previously formulated research sub-questions, to answer how organizational structures impact EDI finally.

First, how various organizations promote EDI in different ways is examined. For that aim, organizations are differentiated, and the links between the various organizations and the EDI procedures are examined. Consultant interviews are interesting for a broad understanding of the distinction between firms because they visit numerous organizations and are thus better able to compare different organizations. Because they have visited several organizations, the consultants have a clearer view of how these organizations inspire people to contribute to innovation. Employees' and innovation managers' input is also considered. Rather than the broad knowledge perceived by consultants, these target groups have an in-depth understanding of their organization. As a result, they do not notice how other organizations support EDI, but they do see how the organization itself supports EDI. The organizations within this section are grouped based on their organizational structure, and the different EDI-supporting methods used in these groups are examined. The findings of this section show that organizations support EDI in different ways.

The second sub-question requests an EDI-supporting practices taxonomy. There are many distinct EDI-supporting methods and divisions of these ways in theory and practice, as discussed in the chapter 2. What is investigated here is which praxis divisions are significant and which EDI-supporting procedures come within this. The methods are classified based on their similarities and differences. The goal of EDI methods is relevant for this, as is what is required to arrange EDI and how much information flow is used and handled. The previous sub-question's responses are also applied, and the relationships discovered are used to construct a taxonomy of EDI-supporting practices.

The final sub-question examines several organizational structures and analyzes which organizational structure is most suited for EDI. In sub-question 1, a distinction is made between the various organizations, which is briefly repeated to determine which organization is most suited for EDI. The consultants' perspectives are analyzed to find the best organizational structure for EDI. The information employees and innovation managers can give only regards the organization they work for, thus is not informative for this question.

## 4.1 Different Practices for Different Organizations

As previously stated, this section will examine the various organizations and how they deal with and support EDI in various ways. The observed relations are analyzed to answer the first sub-question, 'What are the relations between different organizational structures and the way employee-driven innovation is supported?'. First, the four consultant interviews are examined. The broad relations the consultants observe in how these various organizations interact with EDI are investigated. These interviews show that the consultants don't separate an organization's structure and culture from one another but look at the organization's overall 'rigidness' or 'looseness'. The observed relations are that how EDI-supporting

practices must be managed differs; when an organization is rigid, more management is necessary than loose organizations. After the interviews with the consultants, the interviews with employees and innovation managers are analyzed. These groups are mixed since their specialized knowledge consists of where they operate and have insight into how the organization looks and which EDI methods exist. Organizations that share a common structure are grouped instead. The information is presented per organization group, with the organization's order comparable to the observations made during the consultant interviews. Finally, the observations and findings are described to address the first sub-question.

### 4.1.1 Different Relations According to the Consultants

This section analyzes the information that consultants gave regarding the relations between different organizations and different EDI-supporting practices. Consultants C1, C3, and C4 all visited multiple organizations and can compare these organizations and their experiences on the different assignments to one another. C2 has been on one large assignment and has experience with different partners and departments with different organizational structures.

One of the first observations that stood out in all four of the interviews with the consultants is that structure and culture are used interchangeably. Terms like "hierarchical" are used to characterize not only the organizational structure but sometimes also the culture. They were set apart only after they were particularly asked about the distinguished effects of the two components. Consultant C4 even described the distinction between structure and culture and formal and informal communication. This sentiment is mirrored in the taxonomy developed by the consultants.

One thing the consultants were not unanimous on was how to differentiate organizations from one another. Consultants C2 and C3 describe different types of organizations, which consultant C2 termed Caluwé's theory, and consultant C3 claims that these categories can be identified primarily by the industry and size of the firm. Consultants C1 and C4 differentiate organizations by the level of standardization and formalization. Consultant C1 differentiated the businesses by categorizing them as rigid and loose. In this regard, rigid organizations have been standardized, whereas loose organizations have more freedom. Consultant C4 used the phrases "hierarchical" and "loose" to describe both structure and culture. For example, C4 defined Org9 as having a hierarchical structure and a flexible culture. All of these instances show that the consultants find that structure and culture in an organization are not distinct.

#### 4.1.1.1 Rigid and Loose

As has been introduced, consultants explain an organization's taxonomy in several ways. C1 and C4 descriptions are more similar in describing the organizations as stiff or loose, closed or open. Both serve as a scale against which organizations can differentiate. These two descriptions will be expanded on first. Consultant C1 classifies structures by evaluating whether they are rigid or loose. The organizational structure and culture are indistinguishable, but combined, they determine whether the organization is loose or rigid. C1 defines loose organizations as more flexible organizations where employees have more opportunities to research and provide input. Rigid organizations, on the other hand, are those in which personnel must stay within their boundaries. 'Box thinking' is more fostered in inflexible organizations.

> *"In a rigid organization, you have to make people think because it does not come naturally; it is part of their culture to think in boxes."* - C1

The distinction between freedom and thinking in boxes was also designated as consultant C2. For example, the consultancy Org8 recently underwent restructuring, and the staff requested advice. C2 has also worked with military police, where an employee could not answer a question once it fell outside the scope of authority. It had to be addressed to someone higher up who could say something about the scope.

> *"Org8 is a fairly flat organization with many resistant consultants and project managers that want to think along with broader changes and do not want to be changed from above." (...) "When I confer with military police personnel, I realize that they are not permitted to say anything. They have their scope within which they can say things, and they do not provide feedback on anything outside that limit."* - C2

Another distinction consultant C1 notices in businesses is how an organization handles personnel in an innovation project. C1 discovered a pattern in which firms that place less emphasis on innovation

frequently need to provide employees with more time to engage with innovations. As a result, staff are rarely seen developing ideas. Even when these employees are given time to innovate, it is unsuccessful because other employees do not take over the existing task. Employees are often given more freedom to innovate in businesses where innovation is valued. They truly obtain the necessary resources, allowing staff to devote sufficient time and effort to developing innovative ideas.

> *"I've noticed that in more traditional organizations, people are expected to contribute to innovation on top of everything else they do; whereas in more progressive organizations, there is more freedom to work on innovations for a long period."* - C1

The way Consultant C1 communicates with employees when working with an organization to support an innovation demonstrates the contrast between rigid and loose organizations. Employees must be directed in a completely different manner. Employees in rigid organizations need guidance. C1 recounts how she realized she must give more attention to the employees when she enters a rigid organization. In a loose organization, C1 can better deal with the employees differently. It is preferable to give the personnel more space to do their research and provide ideas. According to C1, it is preferable to direct choices but let the employees decide rather than make all the decisions in management.

> *"To engage employees in more rigid organizations, it's necessary to give them a lot of time and attention; in somewhat looser organizations, employees get motivated by allowing them to make the choices, or at least giving them the impression that they make the decisions."* - C1

Consultant C4 similarly differentiates organizations. C4 characterizes the various organizational structures as being arranged in the traditional method when the project approach is water-fall, and there is a hierarchical structure with top-down information flow. When an organization takes a more agile approach to projects, employees are empowered, and there is a lot of teamwork; it is considered modern. The structure and culture of a company influence how C4 steers an organization through innovation.

> *"When I go to an organization, I look at how hierarchical the organization is. A strongly hierarchical organization with an old-school culture will not be very innovative. (...) Agile working is a fairly standard example of a more modern organization; there is a lot of iteration in the process, rather than a waterfall process."* - C4

C4 describes the influence of different organizations on how innovation is done more straightforwardly than before. Instead of old-fashioned and modern, the structure is described as hierarchical and loose; the culture is closed and open, but C4 also uses hierarchical and loose for this division. The following are the categories into which organizations can be classified:

1. Structure: Hierarchical Culture: Closed
2. Structure: Loose Culture: Closed
3. Structure: Hierarchical Culture: Open
4. Structure: Loose Culture: Open

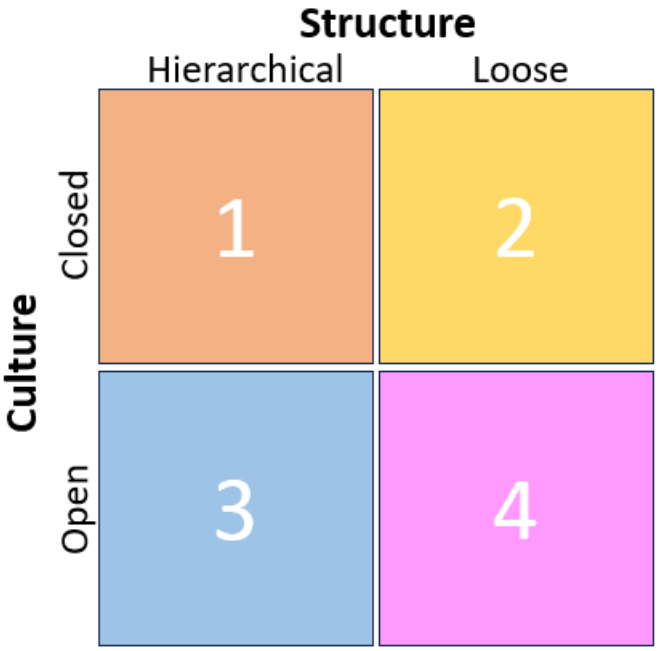



Figure 4.1: Four categories of different organizational structures and cultures

Organizations in the four main categories integrate their employees into the innovation process in various ways, such that the diverse approaches are consistent with the organizations. Employees in the first category have little autonomy, and ideas mostly flow through the current organization. According to C4, the second group does not exist; if this is the case, innovation managers or employees who embrace the closed culture have been assumed incorrectly. In the third category of figure 4.1, a structure that encourages idea-sharing could be included to make the organization more innovative. Lastly, category 4 should be very innovative and not need more support.

C4 implies here that the emphasis in categories 1 and 3 is on introducing structure. Communication channels are being standardized so that employees can better contribute to innovation. The emphasis in categories 2 and 4 is on culture. Because the lines of communication are already open, employees must be supported to participate in the innovation process, such as through fostering entrepreneurship.

To summarize, organizations can be differentiated by analyzing how rigid or loose they are. In these organizations, how the consultants manage EDI changes. C1 and C4 adapt how much they expect employees to work autonomously. C1 pays more attention to employees in rigid organizations, and C4 adapts its methods to how much autonomy the employees are given.

#### 4.1.1.2 Types of Organizations

Consultants C2 and C3 characterize the various organizations as types of organizations. C2 views the various organizations through the lens of change management, whereas C3 considers the typical organizations in an industry and the organization's size.

C2 sees a lot of theory connected to change management in aiding organizations to innovate. Change management strives to enhance an organization in the long run; therefore, the theory of change management can be applied when an organization can be innovatively improved in the long run. Caluwé's color model is one of the theories stated by C2. This concept distinguishes five sorts of organizations. The model's output, like the premise, is that organizations with diverse mindsets do not take the same strategy but that the method depends on the organization.

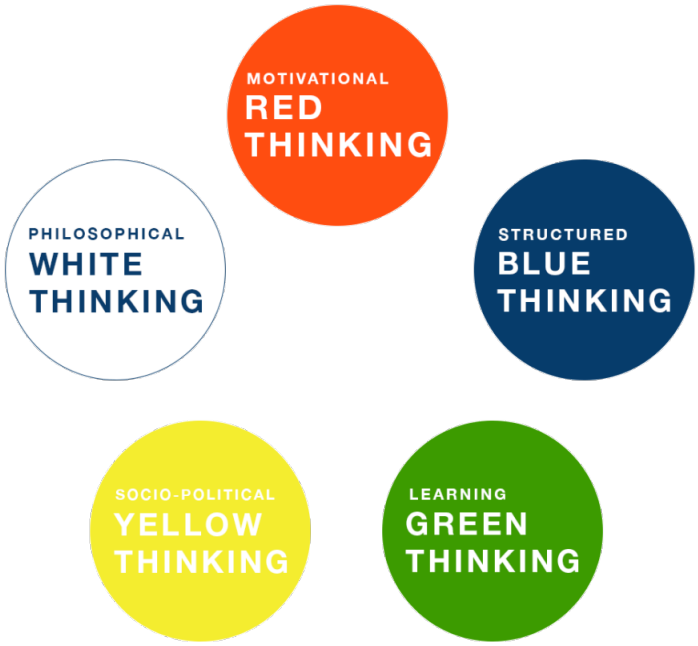



Figure 4.2: Colors of Caluwé Model

C2 spent a long time working on an assignment that involved incorporating a highly hierarchical organization into an innovation. According to C2, many employees opposed the change and became concerned about their careers. Building trust was thus a top goal. This was accomplished by involving employees who were more open to innovation in the innovation initiative, allowing them to inspire others. As mentioned for blue organizations, involving employees in innovation systematically involves people in the innovation process.

Consultant C3 categorizes organizations in another way. C3 observes that groups throughout industries share comparable qualities. Organizations differ from one another, yet they frequently share qualities, and they approach innovation in the same way. Manufacturing firms, for example, are frequently quite conservative. These are not very open to bottom-up ideas, which is where the idea boxes come in; however, C3 does not see these ideas employed. On the other hand, in the IT industry, innovation is tremendously crucial, and firms are considerably more open to employee input. Moving flexibly and fast with the industry is critical for firms to stay relevant. Organizations in consumer-facing businesses are frequently focused on customer service feedback, and change in healthcare is typically very slow. The different sectors have different interests and characteristics that must be considered.

*"I consider the type of business, its size, and the industry in which it operates."* - C3

According to C3, the organization's size also matters; small, medium, and large organizations differ substantially in terms of organization and are arranged in different ways. Informal communication is significantly more prevalent in small firms but less obvious in large organizations. Organizational flexibility is also frequently variable. C3 argues that an organization's structure and culture are difficult to describe since it is a complex partnership of many aspects. For this reason, C3 frequently divides organizations into categories. According to C3's observations, how things are arranged and how much involvement from employees is necessary is roughly comparable across industries and sizes.

The types of organizations that C3 describes are typical organizations in different industries. Once asked to elaborate, the differences came down to the relevance of innovation and the structure of an organization. As C2 and C3 are comfortable describing organizations as loose and rigid, these terms are used moving forward rather than types of organizations. The relations found by the consultants between the organizational structures and EDI-supporting methods is how EDI is managed. In rigid organizations, EDI should be managed more than in loose organizations. Also, all consultants agree that a structure should be in place to encourage EDI and ensure someone is responsible for the innovation process.

### 4.1.2 Different Relations within Organizations

This section analyzes the information employees and innovation managers give on the relations between organizational structures and EDI-supporting practices. The organizations are divided into three groups. The first group is the small production organization. There is only one organization in this group; however, this organization is an interesting case study as three different situations are described in these interviews. Org2 shows the relevance of the organization's goal for EDI when choosing EDI-supporting methods and the importance of selecting a suitable plan for the organization. The second group comprises three large organizations with multiple production locations and an over-arching management. These organizations all have a different organizational structure on the production level compared to the management level. The third group consists of large organizations with independent departments. There are another three organizations in this group. These organizations all have very little communication between the departments.

#### 4.1.2.1 Small Production Organization

Org2 is a production organization that used to be family-owned. Like many other factories and manufacturing organizations, it comprises a single large hierarchically arranged factory. Org2 is an intriguing organization because they began EDI-supporting practices a while ago and then switched EDI-supporting practices after a few months because the goal of the EDI Support Practices changed. Previously, innovation initiatives were developed, but they never progressed to developing and elaborating the idea. Investments were made in each department so that personnel may innovate within their departments. Many suggestions were also generated within the departments, although they were rarely implemented. In the organization, two issues that hampered innovation have been discovered. The first issue is that the various departments did not collaborate. Progress slowed as soon as an innovative plan required input from another department. This was a problem that hindered both invention and collaboration in other work processes. There was a lot of friction between the departments, which made communication and cooperation difficult. The second noted issue was a lack of prioritization among the various innovation ideas. As a result, time and energy were invested in all new ideas, while older ideas received less and less attention and died gradually. This goes hand in hand with the first issue. Outside initiatives are given low priority because the department already has a lot of ideas, and the department where the initiative comes from does not follow suit because they have more ideas.

> *"In the former environment, there was little investment in the workforce. (...) There were many ideas on the shop floor to improve things, but getting people involved was tough, so the ideas were not executed."* - Em5

> *"The culture was very hierarchical, and people were selected for this in the hiring process." (...) "Employee innovation did not work. Employee suggestions were not taken seriously." (...) "Employees no longer have faith in management. When modifications were implemented, they were met with strong opposition."* - Em6

> *Because the former CEO was not forthcoming about his objectives, there was considerable confusion in the workplace, and there appeared to be no goal or strategy. The ideas were imposed from on high, resulting in an uneven organization. There has also been a lot of turnover in the management team, and the young managers with fresh ideas have left swiftly; thus, there is little trust in the management.* - Em7

> *"Because there was no economic incentive to innovate, it was treated carelessly. Furthermore, the initiatives did not get off the ground because they were too large, and no one was in charge." (...) "The employees were quite distrustful after a lot of turnover in the management team. People were more pessimistic toward the bottom of the hierarchy. Employees will follow you more easily if you achieve tiny visible successes."* - Em8

Since then, a project has been established in which personnel from all departments, who previously exclusively worked on innovation inside their departments, have been brought together for half a day each week to collaborate on innovation initiatives. The goal is for departments to communicate better, for people to have more faith in innovation, and for innovation to come second. This project considers all initiatives collectively, priorities are established using a business case, and initiatives are produced collaboratively. After half a year, the outcomes are obvious in the form of inventions, more understanding and communication within departments, and a beginning of confidence in management that the ideas

are taken seriously. To foster community development, EDI and EDI support activities to develop a community can influence an organization's culture.

> *"There is a breakdown in communication between the production, logistics, and purchasing departments. The production department cannot always carry out the logistics department plans. Because communication is lacking, there is even more misunderstanding, and departments do not share much." (...) "I am pleased that the many departments are now communicating with one another. Daily work meetings are also common, with managers from various departments gathering and conversing with one another."* - Im5

> *"I address all staff regularly to discuss where we are and where we need to go. In my opinion, everyone will want to cooperate if you talk openly."* - Im5

> *"People are a lot more open to suggestions from other areas now that there is considerably more communication. The involvement of numerous departments in the innovation directly affects the project." (...) "The 'I'm not being taken seriously' culture still exists in the workplace, but with the first reforms implemented, there is undoubtedly more optimism for development."* - Em5

> *"Many more people are behind the developments now that ideas are being executed."(...) "The departments understand each other considerably better when they look at challenges and ideas with all departments and are jointly responsible for all initiatives."* - Em6

> *"Communication may be improved by being straightforward and transparent, and greater support can be generated. This also makes it easier for staff to accept new ideas. A plan that matches the company can be created by looking for and combining ideas from the top and the work floor."* - Em7

> *"At the managerial level, ideas are now prioritized. A person is in charge of the innovations, and the concepts are defined. This gives you enough time to develop the concept."* - Em8

Following the completion of this initiative, the company enters a new phase in which the primary purpose is to develop rather than build a community. As a result, Org2's strategy to utilize employee ideas is evolving. EDI will resume within departments but will be overseen by managers overseeing all departments' innovation activities. The innovation processes, for example, will be supported and supervised, a manager will prioritize the ideas, and communication with other departments will be offered, but the focus will be on innovation. In this way, innovation can continue on a modest scale while keeping an overview of all projects.

> *"A few present manufacturing engineers must become project managers to guide innovation, prioritize ideas, and discover specialized personnel for knowledge and abilities."* - Em5

> *"We will acquire faith in management as we observe good improvements and celebrate victories."* - Em6

> *"Employees are still hesitant to share their views. Giving positive feedback and recognizing victories will help."* - Em7

> *"In the future, a structure must allow constant innovation by constructing a mouthpiece upwards. This can be a framework in which each department has a point of contact who meets regularly."* - Em8

As a result, the organization goes through two stages. The primary purpose of the first stage is to promote communication between departments. The EDI supporting practice adopted is to form a team of employees from other departments who are also receptive to this. The result of this EDI practice is improved communication across the various departments. As a result, there is significantly less frustration across departments. Communication is improved, and there is greater mutual understanding. Employees have also witnessed the types of issues that other departments face. Furthermore, collaborative progress has been made, and a significant innovation initiative has been implemented. Furthermore, collaborative progress has been made, and a significant innovation initiative has been implemented. This increases employees' confidence in the organization's management; however, the confidence has to continue to improve. Because of the inconsistency of management over the years, there is still a lot of skepticism

toward management, which can only diminish with time. The team has little impact on the organizational structure, but it significantly impacts the culture. There is improved communication and a lot of trust in the other departments. The following stage focuses on constant improvement in innovation. The goal is for ideas from the shop floor to be taken seriously and many of them to be developed within the department but under the supervision of managers outside the department. This will not have the same impact on organizational culture as the first phase's EDI support practice, but offering feedback and recognizing wins will build employees' faith in the organization's management.

To summarize, Org2 went through three stages. In the first stage, the EDI-supporting method did not fit the organization well and did not result in innovations being developed. In this situation, employees received a budget to use on innovation. Still, there was no manager involved, and the lack of communication between departments caused a lot of ideas to get stuck. In the second stage, the goal was to build community first and innovate second. The EDI-supporting practice applied in this stage, is to create one team of employees from all departments that a manager guides. This EDI-supporting practice did result in innovations being developed within a couple of months. In the third and last stage, the goal is to innovate rather than build a community. The new EDI-supporting practice is that the employees will innovate within their own departments again, like in the first stage, but add innovation managers to help guide and prioritize the innovation processes.

#### 4.1.2.2 Multiple Production Locations with an Overarching Management

In this section, three organizations are analyzed together. As the title suggests, these organizations have multiple production locations with an overarching management team. The organizations are similar in this regard; Org1, Org4, and Org7 all comprise smaller companies that merged. The management teams are relatively new compared to the older operational departments. The difference in structure and culture can create a divide within these organizations. There are different ways for organizations to deal with this while encouraging EDI. The first option is to bridge this divide by creating a team. In this case, the goal of EDI is to build a community. This is the case for Org4, as will be further elaborated below. Org7 tries to connect the operational employees with the innovation department to enable EDI but has not yet succeeded in this. The second option is to focus on EDI within the departments. All three organizations (Org1, Org4, and Org7) use EDI in this capacity.

As mentioned above, Org4 has an ambidextrous structure; the managerial layer is more adaptable and less hierarchical than the operational layer, which has a more rigid structure. Within Org4, the operational employees have little faith that management will listen to employee feedback; therefore, little effort is displayed. Org4 has a structure to support employee participation despite the difference in structure. Org4 involves employees by inviting them to serve on improvement committees. These are overseen by supporting staff but otherwise comprise employees with various positions involved in the situation.

> *"Employees are afraid that if they come forward with an idea, they will have to work on it outside of working hours, even if this is not the case. When they participate in a focus group and can tell their observations in person, they have much more confidence in the organization."* - Em1

When the focus group is formed, personal contact is made with the supporting staff so the employees feel heard. According to Em1, employees frequently complain about other difficulties and processes before they can begin working. So, personal human interaction works well and appears necessary for building trust and moving forward. The culture is gradually improving.

> *"The focus group works quite well; everyone feels heard and significant. People value being taken seriously."* - Em1

The EDI-supporting practice successfully builds up the community in Org4 and supports EDI through better communication between the operational employees and supporting staff.

Org1, Org4, and Org7 all have an EDI-supporting practice that is not focused on improving communication between the operational and managerial employees.

Org1 is a large organization comprised of numerous production firms that have a rigid structure. The organizational layer, on the other hand, is organized more loosely, the HR department (which is also in charge of sales) even works in an agile manner, but they are the only department that does so. Employees

in this department have a lot of space and freedom to take on and carry out projects independently, especially in the organizational layer that covers production organizations. Autonomy and entrepreneurship are extremely important at Org1, thanks partly to this independence and the fact that much remains to be created. The HR department is not very advanced yet in Org1.

> *"I believe that at Org1, we have a culture of liberty and entrepreneurship that is crucial. So, we also try to persuade you to notice anything, or do you believe something could be improved? Feel free to pick it up and sort it out without waiting for someone else to do so. We attempt to provide freedom in this area as well."* - Im2

Entrepreneurship is promoted throughout the firm, although it is portrayed differently for production workers versus management. According to the interview between the lines, this occurs mostly on the organizational layer and less so in the operational layer. Org1 encourages employee participation by encouraging entrepreneurship. This is therefore considered while employing new employees. Furthermore, the culture encourages people to undertake tasks on their own initiative.

> *"So what you want is a group dynamic, as I mentioned before, in which they address each other but also say, well, you had a wonderful idea, how did it work out, and can I say copy paste, and then you see that you are going to run."* - Im2

The projects are supported, and management is in charge of prioritizing them. They will need to assess what time is and is not available and then figure out what is further elaborate. The initiatives will be further developed locally and decentralized, and if successful, will be replicated throughout Org1.

Org4 has an entirely different structure to support EDI within the managerial layer. One structure in place is youth committees that can discuss together and have contact with the director of Global Corporate Sensibility to present their ideas. In this way, employees who do not yet have much power in the organization get the chance to think along in the organization. By organizing the committees, Org4 can indicate what type of innovations they are interested in.

> *"Young Green Minds is a committee that meets with the director of Global Corporate Sensibility to discuss and hopefully implement their ideas."* - Em4

In Org7 the same problem of lacking communication between the operational and managerial employees as described above is an issue.

> *"[In the office] Employees are very open for others to seek them out. Everyone can approach their own manager, and other departments are also OK. (...) The executive branches are slightly different; they are used to their own tiny organization and now fall under Org7. They have no idea how to find us."* - Em3

Org7 has no solution for this issue yet; however, Org7's numerous departments have an R&D budget for modest developments and a central R&D department. Only one department has a system in place to collect staff ideas. This is organized with a dragon's den-themed event. Because of their success, other departments are occasionally invited to participate.

> *"The Dragons' Den is held once a quarter; however, staff from other departments are welcome to attend once every six months. Employees can then propose their concept to a jury, who will vote on the best ideas."* - Em3

The other departments do not have such a clear organization. Innovative ideas from these departments must make their way to R&D in an informal manner, which rarely occurs. Finding contact is especially challenging for individuals who work outside a lot. Em3 says the R&D department is receptive to ideas from outside the department, but she believes many staff are unsure how to submit ideas. According to Em3, to collect ideas, something must be arranged. In Org7 there are no clear structures to collect ideas, which leads to confusion among employees.

> *"Above all, Org7 must help employees identify the correct individuals in a counter or point of contact so that ideas can reach us."* - Em3

In conclusion, all three organizations face the same issue and have a 'horizontal' communication barrier. Only one of the organizations uses EDI-supporting practices to improve communication, and involve op-

erational employees with the innovation process. The other two organizations have no practice in place to help operational and managerial departments communicate, they do however have other EDI-supporting practices. Org1 has a very flexible managerial layer, and supports this by promoting entrepreneurship. Org7 gives departments the budget to organize EDI-supporting practices themselves. These are three very different EDI-supporting structures. The two main dividers are the goal for what organizations support EDI, and the flexibility of the departments.

### 4.1.3 Large Organizations with Independent Departments

In this section, three organizations are grouped that are organized to have large divides between the departments of the organization. Org3, Org5, and Org6 all are large organizations that have departments that are organized to operate independently from one another. The different departments can be organized differently, some departments can be organized in a rigid manner while other departments are organized very loosely. What characterizes these organizations best is that there is little communication between the departments. The communication barrier, in this case, is not 'horizontal' like in the previous section, but 'vertical'. Im3 describes the different departments as their own kingdoms.

> *"We are attempting to bring about further reforms and a greater intertwining of those corporate groups. Only, it's quite difficult to break through those walls and into that Kingdom. But, as you can see, we also routinely host several events where we seek contributions from various business organizations on a specific issue."* - Im3

Em2 explains that the divide is also caused by necessity as some departments require a stricter NDA than other departments. The organizations organize EDI in different manners, but the practices are more alike than in the previous section.

According to Im3, Org3 is a flat organization with a structure mostly for maintaining an overview within the company and not to hinder information flow. The departments have very little contact with one another, yet communication between each department and the R&D department is in better form. Org3 strives to bring the departments closer by organizing activities.

> *"It has happened that different business groups faced the same issues and worked on solutions independently in different ways. Both the business groups were still facing issues, and by bringing them together, they can communicate and create a better solution."* - Im3

EDI is organized under an overarching R&D department in Org3. This is accomplished, for example, by establishing challenges inside the firm in which all employees are allowed to come up with a solution, and hours are allotted for this, as well as a bonus for the winner.

> *"Our organization is experiencing a technological push. The market thinks in one direction, but other ideas are experimented with due to the push. That is why we set challenges."* - Im3

Org3 supports other EDI methods as well. For example, every six months, there is an event where employees can discuss concerns and offer solutions. Innovation managers then prioritize and pick these concepts. This also prevents too many concepts from being launched, resulting in inadequate development attention.

> *"A board comprising the top innovation managers pass by and selects on average two concepts for further development."* - Im3

Finally, Org3 incorporates employee knowledge into innovations by involving them in 'expertise centers'. So there are two distinct systems where employees can occasionally submit their ideas. In these otherwise closed systems, employees deliver ideas to the R&D department, which decides what to do with them. As a result, it is focused on innovation rather than community building. Employees are only active in developing innovations when they are involved through expertise centers.

> *"We have specialized centers to ensure that research and development go efficiently. When a project requires it, two or three specialists from each field participate in innovation projects."* - Im3

In short, Org3 organizes multiple events in which employees can participate and insert their ideas. Org3 also tries to involve employees in their innovation process to give input as specialists.

Org5 is an engineering firm, the organization is focused on innovating existing goods and developing new ones. The departments are divided primarily by the sort of product for which they are responsible, whether a completely new product is being developed or an old product is being upgraded. Furthermore, staff are free to solve problems however they see fit, which is not standardized. While Em2 claims that the organizational structure is flat, some remarks indicate that it is not. There is a recognized hierarchy in place; an employee with an innovative idea cannot simply approach the accountable person but must first approach the immediate manager.

> *"The lines are relatively short, and the structure is fairly horizontal. I can approach upper management if I have a good narrative and 'they' believe it's a good idea. I can't just walk up to high management and say, "This is my idea; let's talk about it." That is not a possibility. You must mind the structure."* - Em2

There is a workspace for these ideas that staff can use for their projects. Machines such as a lathe and milling machines are available for staff to test ideas or produce prototypes. This, paired with the freedom to address engineering challenges, demonstrates that employees can work and develop autonomously. There are also company-wide events where staff are encouraged to generate new ideas and can share their own. Em2 expresses his dissatisfaction with this. Because it is an engineering firm, and most employees are focused on improving existing products, the input of employees who are not engineers is less important. This could be a personal preference, a cultural norm, or a result of the organization's size.

> *"The events give employees a voice, which is very important. I only have my doubts about the added value of the ideas."* - Em2

It is important to be inventive for Org6. This is also required in the sector, which is very competitive, and organizations that are not inventive soon fall behind. As a result, Org6 is also putting pressure on staff to be flexible and innovative. As a result, despite the standardizations, communication is relatively open. However, the Org6 hierarchy must be observed, and employees must obey the chain of command.

> *"There is fierce competition in the pharmaceutical industry. If you are not innovative, then you will quickly fall behind. (...) It is encouraged from the organization's top to think innovatively and remain flexible."* - Im4

The various departments inside Org6 communicate poorly with one another. Im4 refers to the departments as distinct silos. It is not uncommon for various departments to get in each other's way or invest in the same inventions without being aware of each other. Im4 also states that there is a significant delay when separate departments attempt to collaborate. Even though communication between employees from other departments is poor, Org6's goal with EDI practices is to focus on innovation rather than community.

> *"The fact that so much work is done within silos is a disadvantage. Many teams have no idea what the others are doing and stand in each other's way; they reinvent the wheel twice."* - Im4

Org6 collects innovative ideas using two different methods. The first method is that there is an innovation budget available for employees to spend after pitching their concept to a board that has been established for this reason. The second method for gathering ideas is through an innovation team. Team members actively seek faults in production operations. In both circumstances, the innovation managers decide which ideas are more significant than others and hence give priority to development. It investigates, among other things, the extent to which this problem happens globally. Employees or innovation managers can thus take the initiative. Still, both must produce a business case and demonstrate that the problem is large enough and how it can be addressed before a budget is released. This is known as demand-driven innovation in Org6.

> *"Together with the innovation team, we actively look for problems in the factory process."* - Im4

In all three interviews, the participants mentioned lacking communication between the departments. However, none of the organizations insert a structure to overcome this. All three of the organizations organize events where employees can participate and share their ideas. In Org5 EDI is also supported

by making resources available, so employees are better supported to develop innovations themselves. Thus, for organizations that are looking for ideas that are spread among employees, and have no strategy for bringing the employees together, events are a frequent EDI-supporting practice. Once the ideas are presented and chosen, the idea can be further developed under the guidance of the R&D department.

The findings are further analyzed in the next section, which summarizes the relations between the organizations and what EDI-supporting method they use.

### 4.1.4 The Relations between Organizations and EDI Practices

In this section, various organizations that support EDI in various ways have been mentioned. According to the consultants' interviews, a company's structure and culture determine the fundamental qualities for how it innovates. C2 and C3 refer to the organizations as a sort of organization. There is much to be said for this, but an organization's structure and culture are also important. To keep the research broad, it was decided to continue looking at culture and structure. According to the consultants, the organizational structure impacts how an organization may involve people in the innovation process. When the structure is flat (or loose), it is obvious that employees can share ideas and thereby initiate innovations. As a result, there is no need for an additional framework to enable EDI, and the emphasis can be centered on intrinsic motivation. When an organization has a tall hierarchy and is thus rigid, it is necessary to develop a system to promote communication lines via which employees can communicate their ideas with innovation managers. This can range from adding a meeting place to an existing work meeting to developing an entirely new structure that allows employees to access innovation managers.

In Org2, the small production organization clearly illustrates the different relations between the EDI-supporting methods and the goal by which the organization innovates. When emphasizing community building, bringing many individuals together and forcing them to collaborate is critical. When the emphasis is on innovation, the emphasis is on the ideas rather than the individuals. The most important aspect of the innovation process is not that people collaborate but that the invention is well-developed. This can be aided by innovation managers who oversee the process.

Other relationships have been found in larger organizations with multiple production locations. Org1 is an organization where employees in the management layer have a lot of freedom to work autonomously on projects. In Org4, EDI focuses on the shop floor in the operational part of the organization. Focus groups involve employees in the organization's innovation process. Org 7 is still figuring out how to get people's opinions on the operational layer, but in the control layer, they are very flexible and open to collaboration, and a dragons' den event is being organized within one of the departments. These are 3 very different ways how the organizations support EDI. In Org1, the emphasis is on intrinsic motivation, entrepreneurship, and flexibility are encouraged. In Org4, people from the operational layer are involved in the innovation process; finally, in Org7, the employees in the office are involved in the innovation process.

In the third group of organizations of, Org3, Org5, and Org6, the organizations consist of large departments that do not communicate much. Im3 and Im4 see the separation between the departments in Org3 and Org6 as a problem that limits innovation for the larger innovations where the different departments have to work together. The organizations dodge this problem in different ways, but both organize events, Org3 does this by organizing events where employees from different departments can get involved in the innovation process. These events are challenges and information markets. Org6 also organizes events where employees from different departments come together. An innovation team also actively looks for ways to innovate among employees. Org5 takes a different approach; the departments are separated into major new and smaller improving innovations. Em2 does not see the distance between the departments as a problem for the organization. Org5 also hosts events to gather ideas from all employees.

With this knowledge, the question of how organizational structures impact EDI can be answered. When looking at the organizations, the consultants' conclusion seems correct. If the organizations want to involve employees in innovation, this must be possible in the current structure. If this is not the case, the organization must first create a structure. In Org2, Org3, Org5, and Org6 from the first and third organization group, it can be seen that the lack of communication between departments hinders innovation. In response, structures are put in place so that innovation can be done around this problem. In Org2, the emphasis is on building community so the employees are brought together. In the organizations of the

third group, the emphasis is on collecting ideas, so events are organized that employees can participate in regardless of the department. There is more variation in the second organization group. In Org1, employees can easily find each other, so no structure is needed to support the exchange of ideas. What is supported here is intrinsic motivation. In Org4 and Org7, there is a structure to support the communication of ideas. In Org4, this is a continuous process, just like in Org2. In these organizations, personal contact is important to create trust in the organization, that it takes the employees' ideas seriously. In Org7, there are events where they seek ideas from other office staff. There is interest in a continuous process, but it does not yet exist.

## 4.2 Taxonomy of EDI-Supporting Practices

Now that the differences between the organizations and their characteristics have been identified, and it has been examined how these various organizations view employee input and employee involvement in innovation differently, a taxonomy that describes how the various EDI supporting practices can be distinguished from one another can be developed. The taxonomy is developed using information from interviews, although the results of the first sub-question are also considered.

The first sub-question revealed, among other things, that the goal for organizations to involve employees in the innovation process determines the methods used. This will help to recognize EDI-supporting activities. This section delves deeper into the various types of EDI support. The interviews are once again the guiding concept of the discovered results. Consultants are asked what practices they have observed in organizations or which practices they have advised. Employees and innovation managers have more knowledge in this sub-question because they know more about their own organizations and how employees can contribute to innovation within a business. Employees and innovation managers are questioned if structures exist inside the organization, which structures exist, and why they function or do not work well. The final question is critical in determining whether the combination is effective or the organization's EDI assistance is ineffective. The findings are addressed in the same order as in the previous section, with the consultants being treated first to generate an overall picture of the taxonomy, followed by the findings of the employees and innovation managers being combined and grouped by EDI-supportive activities.

### 4.2.1 Dimensions for the Taxonomy

From the interviews with the consultants, a couple of dimensions came forward. these dimensions consist of characteristics on which organizations can base what kind of EDI-supporting practices are fitting for an organization.

#### 4.2.1.1 Autonomy or Control

Consultants observe many different methods of how EDI can be supported, and in some circumstances, they also work in enterprises to assist an innovation process. As mentioned in the previous section, consultant C1 compares methods regarding how much attention and energy must be focused on employees to engage them in an innovative process. In certain firms, it is best to let people do their own thing; however, in others, it should explicitly specify what the employees should do and for what purpose. C1 distinguishes between independent EDI processes and guided EDI processes in the various EDI support methods. Another similarity highlighted by C1 is that decisions are taken in some circumstances by employees and in others by innovation managers. This feeling of where responsibility falls adds to the prior discovery that autonomy and direction are two differentiating features.

#### 4.2.1.2 Community or Innovation

C2 also observes the impact of the reason employees are involved. The idea is mostly supported by incorporating employees in the innovation process to innovate better using the employees' knowledge and understanding of where organizational procedures may be improved. Employee involvement can also inspire involvement in the organization, build support for the innovation, or successfully implement the innovation. Employees must be supported in these situations. C3's observations support this. So, in some circumstances, the emphasis is on supporting ideas and promoting their development as much as possible, while in others, the emphasis is on supporting people and involving employees even if it is not necessary or efficient for the innovation process.

*"Involving employees in the innovation process is an excellent way to get them excited about it."*

#### 4.2.1.3 Need for Structures

C3 argues that the organization should establish channels for receiving feedback for improvements. Whether at department meetings, an event, or a special group with personnel from all departments. The prospects of implementing modifications are limited if they are not organized. According to C3, suggestions for improvement can originate from various sources, including employees, consumers, the top of an organization, new legislation proposals, and the industry. The pathways via which ideas are acquired and developed divide the flow of information from employees. What always happens is that the person in charge of the budget needs to be convinced of the proposal, which is best accomplished with a business case. The many paths have already been mentioned, and they can be separated by how explicitly the route is defined. Is this an extra meeting moment or a new meeting focused on innovation?

*"It is best to organize something for changes brought about by employees since if you don't, nothing will happen."* - C3

C4 also offers various methods for gathering employee ideas to foster employee innovation. staff can, for example, convene monthly, a bonus can be promised for new ideas, an innovation team can be formed, or staff might be given autonomy to work on inventions. C4 distinguishes the ideas like the categories in figure 4.1. Fixed structures are recommended in hierarchical organizations by C4. Depending on the culture, these arrangements assign employees more or less responsibility. In the case of limited responsibility, this can be discussed in a meeting; however, if the employee has a lot of personal responsibility, he or she can be a part of an innovation team. The emphasis is on implicit motivation in non-hierarchical organizations. These include, for example, bonuses or a hiring policy that encourages entrepreneurship. According to C4, the taxonomy of EDI-supporting practices is thus determined by the flexibility allowed to people within a company and the expected level of responsibility.

According to the consultants, the three topics mentioned above are essential when looking at which EDI support practice suits an organization. Based on these dimensions, an organization must first determine for itself what kind of description fits it. The dimensions do have an overlap, for example, when there is a need for structures, the EDI process will also be managed more. Even when there is a need to build community, working autonomously will not be a good fit.

### 4.2.2 EDI Taxonomy in Organizations

Various EDI support measures and procedures have been identified in various enterprises. They are classified as formal or informal practices. In the case of formal practices, a differentiation is formed depending on how frequently they occur. Is it a continual process in which new ideas from staff outside of R&D are constantly welcome, or are there one-time events? It is also investigated whether employees are participating in the creation of the invention or if this is a lower priority. Organizations can assist EDI in various ways; thus, they are not limited to one EDI-supporting practice.

#### 4.2.2.1 Informal EDI-Supporting

EDI is supported informally in Org1 and Org5. This is mostly done at Org1 to encourage entrepreneurship; employees can attempt new ideas independently and call out to coworkers if they require assistance. Having entrepreneurship as a fundamental principle and recruiting people based on it helps to foster this. It is unclear whether the goal is to foster community or innovate; yet, the mentality appears to result from quick expansion with few coworkers. Employees are encouraged to innovate because they are encouraged to innovate, not because the invention is better overseen.

*"Entrepreneurship is deeply embedded in our society. People, particularly those in upper management, regard Org1 as their own organization."* - Im2

Org5 informal supports EDI by allowing employees to operate alone and offering resources where employees may independently test ideas. Em2 gives an example of autonomous working, indicating that people might have their own design philosophy and handle problems differently. They are also given resources to innovate. There is a specific workstation with machines for quickly creating models, such as lathes and a 3D printer. Employees can use this, facilitating their invention process.

> *"My job revolves around applying and implementing small yet significant new advances. We are given the flexibility to choose our own ways, which is part of the design, and the ideologies we will take with us."* - Em2

#### 4.2.2.2 Formal Repeated EDI Practices

Organizations can also help EDI by hosting events where employees can demonstrate creative ideas.

Every six months, Org3 has an 'ideas market'. Employees create a proposal and, in certain cases, a prototype for this idea market. As a result, they must present something in advance and are given a small budget to do so. In the innovation market, a board of the most senior innovation managers selects a handful of the most intriguing concepts, which are subsequently budgeted for further development. The information economy has been transformed into a spectacular spectacle. Im3 emphasizes the importance of selecting a small number of ideas in order to avoid devoting too much time and effort to concepts that are less likely to be implemented.

> *"So we try to continue by working from Challenges and such a scout box so that the innovation funnel is well fed, but not completely flooded with ideas that are okay, but where you even if a little doubtful."* - Im3

An EDI support practice in Org7 is akin to Dragons' Den. Employees can propose their ideas in front of a jury. The jury then provides feedback, and the top concepts are supported for future development. This jury frequently includes members of the department's administration; thus, this backing can help the invention progress.

Events are scheduled in Org 5 to provide staff with room for EDI, although this does not appear to be the intention or expectation. Org5 hosts events in which an uplifting and occasionally informative tale is recounted, followed by an opportunity for employees to offer their views. Em2 says these events are minor, and Em2 does not expect them to result in meaningful innovation. The fact that it still exists and that employees attend it may imply that the inspiring stories and consultations together are the only aim of the evening and that the emphasis may be more on personal growth and network building.

In addition, Org3 organizes challenges. Challenges allow organizations to present a clearly defined problem and obtain responses from a diverse audience. Employees from all departments can respond, as well as people from outside of the organization.

#### 4.2.2.3 Formal Continuous EDI

This section is divided into three sections. Employees and innovation managers follow a pattern of constant collaboration in the first group. This could be because projects requiring collaboration are constantly being established. The second category describes the constant mechanisms employees can use to innovation managers with their ideas. The final section outlines how R&D employees might contact other employees to uncover challenges and unique ideas.

##### 4.2.2.3.1 Projects

A 'focus group' is used by Org7. When an issue is recognized, multiple employees affected by the problem are invited to work on the project to tackle the problem on a project basis. The group of employees is directed by an employee of support staff who supervises them. Employee observations are taken seriously, and employees are included in the entire problem solving process, thereby strengthening the business.

> *The team consists of mechanics and line operators. They provide a wealth of information and solutions. As a team leader, I use that information to organize a solution to the problem in partnership with the team.* - Em1

C3 claims to be using this strategy to organize his current assignment. He meets with numerous department staff every other week to discuss new ideas and advances. For example, updates from various departments are discussed, and employees' new ideas are shared.

> *"In [customers' organization], we have established a 'change team,' which meets biweekly to determine desired improvements. Each team has a representative that can provide information from their squad."* - C3

This is comparable to the existing scenario in Org2. An innovation team of personnel from several departments has been formed within the organization. These employees share their growth ideas and collaborate to define priorities and make progress. Several conditions, including the intended future situation, are mentioned in Org2. Only individuals within departments collaborate in teams in this circumstance, while dedicated innovation managers oversee larger initiatives. These innovation managers then foster collaboration across departments. So there are still employee teams managed by an innovation manager, but the teams do not include individuals from multiple departments and do not increase departmental collaboration.

The emphasis of these strategies is on community building. These strategies incorporate employee ideas and include employees in executing these ideas and sharing responsibility for the innovation's development. Employees are engaged in the company, heard, and feel heard.

#### 4.2.2.3.2 Employees Contact the R&D Department

Employees can contact the R&D department in various ways, including filling out a business case or improvement proposal document. Employees must describe what the invention comprises, its cost, and the estimated profit. This form lists the benefits and drawbacks. Em1 says this form discourages many employees from sharing ideas because they lack the incentive to commit time and effort and are scared that if the concept is liked, they will have to work overtime to develop the proposal. They would rather individually share their views with those who can benefit from them.

> *"I believe it is too much labor for many people who do not want to do it. They are directed to a team leader or manager, who may draft an improvement proposal in their stead."* - Em1

According to Im5 and C3, all innovative ventures must begin with creating a business case. According to C3, the organization he works for prioritizes initiatives based on the business case. A business case must first be created for any improvement proposals, whether from employees, customers, the R&D department, or management, and then all ideas are prioritized. According to Im5, a business case is required to frame an improvement proposition. When a project is launched solely based on a concept, there are no defined boundaries, and the project swiftly spirals out of control. By defining the project's scope and the resources required in advance, you may operate more focused, and the innovation process will go more smoothly.

> *"Creating a business case is one tool for transforming words into actions. It considers its value, what it provides, and how much it costs. The priority is set based on this."* - C3

> *"We won't start a new project without a business case." A defined scope is required to study the problem and devise a solution. If this does not occur, you will continue encountering innumerable problems."* - Im5

Similar to the idea box, other solutions include structured mechanisms for employees to submit their ideas to the R&D department. Em3 argues that this is an important step in Org7 that requires more investment to run smoothly. Em3 says the R&D staff is very receptive to outside ideas and would want to receive them, although this rarely occurs. Em3 suggests initiatives such as assisting operational layer team leaders in offering ideas so that employees have a point of contact or an email address that serves the same role as an innovation box.

Several organizations have an idea box. However, this is rarely used, so few ideas are sent that they are no longer examined. Em1 claims that there are idea boxes in Org4, but never empty. Employees do not use the idea box and hence do not communicate their thoughts, even though the boxes are still checked. Im5 also says there are multiple idea boxes on the work floor in Org2, but they are never used and contain any ideas.

> *"We also have an idea box but haven't done anything with it. It is examined, but it has no ideas. I'm not sure why because when you ask people for suggestions, you get an entire story full of options"* - Em1

#### 4.2.2.3.3 Innovation Managers Find Employees

Instead of employees working in a team under the supervision of an innovation manager, the R&D department might actively seek out new ideas from employees and then develop these ideas internally without involving employees substantially. The previously stated events demonstrate that thoughts can be retrieved in various ways. This section describes the ongoing processes through which employees might approach the R&D department or the R&D department approaches employees.

Another alternative was for innovation managers to visit the employees to find out what needs to be altered and improved in an organization. Org6 has an innovation team that aggressively seeks out difficulties in the manufacturing process. The innovation team examines data and communicates with operators, supervisors, and managers. The innovation team makes personal contact with employees and inquires about any issues they have at work. The innovation team then studies the scope of the problem and develops a business case.

### 4.2.3 Established EDI Taxonomies

According to the findings, consultants make trade-offs in EDI support techniques based on three factors. One of the factors is whether an EDI support structure should be implemented or not. The second factor is whether the focus in promoting EDI is to bring people together or improve innovation. Lastly, consultants mention whether employees work autonomously on their innovation or whether managers direct the innovation process.

Employees and innovation managers identify a wide range of EDI support techniques. Employees' and innovation managers' priorities align with the consultants' recommendations. No structure is required to support the first group of EDI practices presented. This is accomplished by increasing employees' intrinsic motivation. Employees in this group work independently on inventions. Additionally, this is not utilized to bring people together, but the employees must already communicate with one another. Employees already have short communication connections.

The second type of EDI-supporting practice is standardized processes that occur only once each period. These are gatherings of employees that occur on occasion but not frequently. This is frequently described; there is a clear structure for how events unfold. The goal of these types of events is not to bring people together but to efficiently collect a large number of ideas. Finally, ideas are frequently formed autonomously before the event, but the concept can be taken over afterward.

Third, there are commonly used standardized EDI supporting procedures. This was classified into three categories. The first section covered practices such as inviting employees to collaborate on projects with innovation managers. The invention process is supervised by someone from the innovation team in this framework, and a community is formed. This is not the case in the system that allows employees to share their ideas with innovation managers. Development is autonomous until the point of submission, and no community is established. The third group is also not brought together, but the emphasis is on innovation. Employees are anticipated to have even less autonomy in this setting, as they do not need to be heavily involved in the creative process.

## 4.3 Ideal Organizational Structure for EDI

Finally, we are looking for the optimum EDI structure. Consultants have a strong understanding of this since they have studied and seen how employee interference is used in various firms. The knowledge of employees and innovation managers is not used to determine the characteristics of organizations ripe for EDI. Employees and innovation managers are asked how the organization can best improve to gain a clear image of this; however, they cannot compare different organizational structures. The consultants have worked with organizations with different organizational structures and innovation processes. Therefore, only the consultants' knowledge is used to answer the third sub-question: "Which organizational structure best suits EDI?"

### 4.3.1 Different Perspectives

The consultants' opinions are aligned with what the literature suggests. They imply that in a flat organization, employees are often more autonomous and better listened to. This means that flat organizations

are more naturally more suitable for EDI. According to C1, a flatter structure is most suited to EDI if a culture of rewarded innovation and time and space are available to innovate.

> *"I believe in a somewhat flatter structure, with a culture in which space is truly created, time is created to experiment, and innovation is founded on value."* - C1

According to the interview with consultant C2, if an organization is less formally regulated, individuals are more likely to venture outside their scope and become involved with organizational innovations. The extent of the change that can be accomplished with EDI grows as an organization's formality decreases. When an organization is more flexible, which usually means it has a flat structure, it is more susceptible to employee influence. According to the consultant's examples, employees at C3's workplace had a say in the business's vision, whereas employees at a hierarchical organization where C3 had a project had a say primarily on the aspects that affect usability.

C4 is quite clear about which organizational structure is most suited for EDI: the holacratic organizational structure. This organizational structure is designed to keep communication lines short. When someone is relevant to a theme, the team C4 describes instantly invites them to participate.

> *"If you simply consider innovativeness, I believe a holacratic organization is the best choice."* - C4

However, this does not mean that the flat organizational structure is the only possible structure suitable to support EDI. More hierarchical organizations are competent as well to support EDI. These organizations might not be the best fit naturally, but by adding an EDI-supporting structure, communication can be provided in another manner. Furthermore, C4 is not convinced that this is the ideal method for this organization to run, let alone innovate. Organizations are frequently ineffective because everyone is equal and collectively responsible. Because there are no specialized departments, the organizations need to be more focused and efficient. The holacratic organizational structure, on the other hand, is better for involving employees in the creative process.

> *"Just because an organization has a hierarchical structure doesn't mean it can't innovate. (. . . ) As a result, the hierarchical company can be very innovative, but the speed is slightly slower due to the stage gates. As a result, there is no judgment as to whether anything is helpful for innovation; you must recognize that the method is different."* - C4

This sentiment is also mentioned in C1 and C3. C1 argues that 'strict' firms with an open culture can also innovate effectively.

> *"I don't know if the best thing that comes to mind off the top of my head is an open culture per se because I know that often those stiffer operators, they do have very good ideas, I think, and they need a culture where they are very much supported, and people who are innovative in themselves need a culture where they are allowed to do their thing."* - C1

#### 4.3.1.1 Mitigating Factor

C4 describes that the structure is leading, and the culture is a mitigating factor. C4 defines the distinction between structure and culture as formal and informal communication. The structure of an organization demonstrates how communication should occur, and an organization's culture determines how informal communication occurs. Relationships can be formed relatively quickly if only the organizational structure is examined. It is 'built in' to flat organizational structures where employee feedback quickly reaches the proper individuals, and these employees are further involved in the innovation. Everyone is just responsible for their component in hierarchical frameworks, and not much is expected beyond that. For hierarchical organizations to incorporate employees in company innovations, a structure must be built to involve individuals outside their scope and utilize their ideas. Culture acts as a buffer because it blurs the line. When the culture is highly flat, communication occurs in an informal, outside-the-structure manner.

> *"A flat organization is more suited to innovation, while a hierarchical organization is slower and more difficult to innovate in; however, culture is a significant mitigating element."* - C4

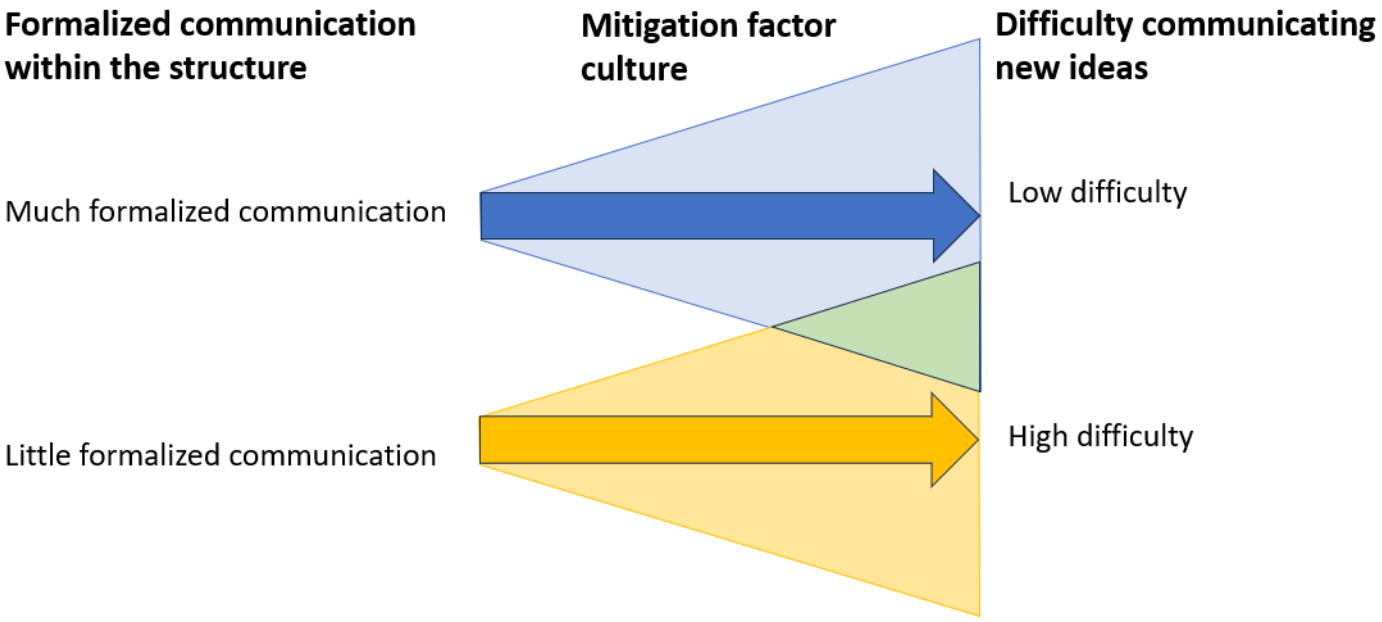



Figure 4.3: Mitigating Factor

This is consistent with the findings of the other consultants. According to C1, when the top of an organization is not open to changes and innovations, but the employees are, employees implement several workarounds and thus still execute tiny improvements in praxis. The opposite is also true. When C1 observes tiny innovations being adopted with stagnant top and progressive employees, the top of an organization may be progressive, but the employees are not. C1 then sees that significant investments are made in big advances, which are poorly implemented and fail. Thus, organizations can also be held back by culture.

### 4.3.2 Answer to the Ideal Organization

The sentiment shared by all innovation managers is that EDI works best in a flat, loose organization. Employees in these firms are expected to be equal and to work on their own initiative, which is typical and 'baked in'. Employee ideas and proposals have more weight and are respected in a flat-hierarchy organization. The holacratic organizational structure is not just flat, but team formation is also emphasized. This provides the benefits of team building and specialization. As a result, the holacratic organizational structure is the solution to the question of which organizational structure is most suited for EDI. Other organizations with a flat hierarchy follow suit. This is not to say that organizations with a tall hierarchy cannot employ EDI. More emphasis should be placed on these organizations to elicit new ideas from their staff, as this does not happen as naturally as in flat hierarchies.

## 4.4 The Impact of Organizational Structures on EDI

The ideal organizational structure to support EDI is a flat organizational structure with a loose culture. That is because, in these organizational structures, the lines of communication are very short; employees can take on projects autonomously and involve other employees in the innovation process. Organizations with this structure can further engage employees by encouraging intrinsic motivation. An organization can do this by encouraging their values in their employees, paying attention to elements such as creativity and entrepreneurship during the hiring process, and providing the resources employees need to innovate.

When an organizational structure has a tall hierarchy where employees can no longer easily take on a project autonomously or approach other employees, an organization can choose to include a structure so that employees can do this. When an organization's priority is to innovate as well as possible, the R&D department must be involved in developing the innovation. EDI supporting practices, in this case, are structures through which innovative ideas can be brought into contact with an innovation team.

Structures that support this are structures where the organization organizes an event where employees can share their ideas. This can be a challenge, where the innovation team gives employees a scope they have to meet in advance, or this can be a large event where employees can present their ideas. These structures can also take the form of managers looking for innovation opportunities within the company by contacting employees. This structure works well for smaller organizations or with an EDI support structure within departments. In the second case, the innovation managers can take on the larger innovation projects, while the small innovation projects are taken up by the employees within the department.

When, in addition to innovation, an organization also wants to involve employees more in the organization and support a community, innovation managers are still important, but employees play a greater role in the innovation process. A structure that suits organizations that want employees to work together and bridge the boundaries between departments allows employees to come together regularly. This could be an innovation project where employees from different departments and roles meet regularly to discuss ideas. These teams improve department communication, strengthen employees' trust in management, and increase support for implementing new innovations.

# Chapter 5

# Discussion

## 5.1 Validity of Results

A lot of information was given in the interviews. However, the information is still incomplete. In many organizations, only one employee or innovation manager was interviewed. Most organizations were ambidextrous, so the participant's point of view played a major role. Furthermore, the interviews were analyzed by coding. Because the codes are used, information is lost. Encoding the relationships has been counteracted as much as possible, but some information will be lost.

The conclusion of the results is general; they can be generalized. The reliability of the information can only be questioned because not many different organizations were interviewed. Many organizations still have a completely different structure in which no employees have been interviewed. More employees from completely different organizational structures should have been interviewed to ensure the overall results. More about this will be described in the chapter limitations.

## 5.2 Relation to Other Literature

The results are consistent with the literature from Chapter 2. Much literature describes how elements such as autonomy and creativity support EDI, and the results show that this is mainly the case in organizations with a flat hierarchy. The theory also describes how hierarchical organizations innovate and how other structures can be applied to support EDI.

It can also be seen that the goal with which innovation takes place plays a role in what kind of EDI support structures suit an organization well. In the theory of Flocco et al. (2022), it was found that when the goal of an organization is to innovate, open EDI structures should be applied, and when the emphasis is on innovation, closed EDI structures should be applied. That is also what was found in the results.

## 5.3 Personal Experience

The research process was more iterative than how it is documented. The interviews with Org2 were conducted some time before the other interviews, and the importance of culture, for example, came up. This was followed by a small additional literature review into how the culture of an organization plays a role in the relationship between the organizational structure and which EDI supporting methods are most suitable. The culture was then only used as an additional context. How this can be seen in the relationships is, for example, that building a community can also be a goal for applying EDI. If the culture is already open and innovative, this is less important.

Another experience is that it was difficult to interview several people from an organization. This has been successful for some organizations, but not for others, resulting in a less credible story. Furthermore, it turned out a few times during the interview that I might not have the right person in front of me.

The contestant that stands out in particular is Em4. This participant was originally interviewed as an innovation manager. I was told beforehand that this was an employee of the HR department and that innovation was organized here. However, Em4's responsibility was campus recruiting, so during the interview I found myself having to adapt the interview to employee questions.

Finally, I analyzed the results with AtlasTI. However, in hindsight this may not have been the most suitable program. AtlasTI is great for relationship finding and qualitative research, but because I was looking at multiple types of organizations with different goals, the relationships were hard to tell apart.

# Chapter 6

# Practical Implications

This research has implications in theory and practice. For your information, this research is a necessary background for further research. When the effect of a certain element is examined, this framework can be looked at to see whether the type of organization is suitable. For example, when the effect of creativity or autonomy is examined, the results will be influenced by the type of organization. Whether or not an organization needs structure to support EDI will have a major impact. Follow-up research can adjust the scope within an organization group or compare organization groups with each other. Furthermore, different EDI support practices in different organizations may have different effects. When an organization first has to involve employees more in the innovation process, the closed EDI-supporting practices will have a different effect than when this is not the case.

The findings will also have practical implications. Based on the results, organizations have a better idea of the possible EDI-supporting practices and which EDI-supporting practices will better suit the organization. Key elements within the organization are identified, making it easier for organizations to navigate which EDI support practices will better suit and resonate with the organization. It is also clearly stated that even when an organization does not have the ideal organizational structure for EDI, there are still ways to involve employees in the innovation process.

If this study's findings are not considered, more studies will likely appear with conflicting results. Previously, two studies have already been described, where contradictory conclusions have been drawn about whether perceived autonomy affects EDI in an organization. If the framework is considered, the conclusion could be that perceived autonomy only has a demonstrable effect in one of the categories. Instead, the conclusions are general, and the knowledge is less rich.

The implications as described here correspond to the expected implications in chapter 1. The thesis results provide a broader and more comprehensive framework than what has emerged from the research of Flocco et al. (2022). This research is so complementary that the framework is large enough that more theoretical research becomes relevant.

# Chapter 7

# Limitations and Future Research

## 7.1 Limitations

There are a few limitations to this research. The first limitation has been mentioned before, there is a small number of participants. The results of the interviews turn into a broad framework. As I interviewed seventeen people, this is not enough support. I also did not interview multiple people at each company. I tried to filter out personal opinions as much as possible in the results. Still, as the interviewees' perspectives are considered in judging what practices do and don't work in an organization, these opinions can filter through.

The second limitation that is caused by the small number of participants is that a small number of organizations are investigated. There are many different organizational structures, and only a few organizations are analyzed. Consultants C2 and C3 mentioned different types of organizations in 4. This taxonomy was not used in further research, but organizations of all the differently described types should be researched to have more complete information. The different industries have not been taken into account. Also, the different organization types mentioned in the theory of Caluwé have not all been looked into.

## 7.2 Future Research

This research inspires a lot of follow-up research. Two follow-up studies were inspired by the consultants' view that EDI support practices should be selected according to the type of organization. The first follow-up study is into the overlap between EDI and change management. The theory of Caluwé mentions various organizations that innovate in different ways. These have not been considered in this study but are very interesting for further research. The color theory indicates how an organization can innovate effectively. The fact that some organizations like to innovate by motivating employees through the HR department or by following hierarchical structures has elements that can also be seen in the results of this study. For example, the HR department could organize values or major events, and innovation teams and other structures could take place alongside a hierarchy. Other organization types, such as the Yellow political organization, have not been studied. How EDI can take place in this type of organization cannot be extrapolated from this study.

The industries or sectors of the organizations were also not considered. Research has been done into the 'typical' structures in sectors that can give organizations an even more practical guide to which EDI-supporting practices are suitable for an organization; this could be investigated. Furthermore, the relationship between how competitive an industry is and how EDI takes place in an organization can also be investigated. Several participants have mentioned that EDI is more common in an innovative industry. This relationship and similar relationships can be further investigated.

The effect of the size of an organization on how EDI takes place in an organization can also be further investigated. This study states that how easily employees can connect with each other influences what

EDI support practices are appropriate for an organization. The size of an organization plays a role in this, in addition to the culture of an organization.

Other follow-up research may concern whether EDI is the most suitable way for various organizations to involve employees in the innovation process. Soerensen and Wandahl (2013) describe that innovation work behavior can be separated into four groups: problem recognition, idea generation, idea promotion, and idea realization. These groups are all important for an innovation to succeed. The definition states that employees are involved with defining and generating the idea. However, involving employees in the promotion and realization phase might interest organizations. Involving employees in these processes could help create a support base for the idea and have a smoother implementation process. Multiple consultants have mentioned this in their interviews. This idea is fascinating and close to the topic; however, it is just outside the scope, so it will not be delved into further. In multiple interviews, the use of EDI for idea promotion and realization came forward. For this thesis, this was outside of the scope; however, this is an interesting area. On the other hand, for some organizations, it might be appropriate for employees only to be involved in problem recognition. In the results, it is mentioned that the EDI-supporting practices for some organizations are for innovation managers to find innovative ideas that employees have. According to the EDI definition, non-R&D employees must be involved in developing the innovation, but this might not be the most suitable form of innovation in practice.

# Chapter 8

# Conclusions

Organizational structures impact what EDI looks like in an organization. The results found that when an organization is flat, communication between employees is naturally supported enough to support EDI. However, this does not mean that organizations with a higher hierarchy or a more rigid organization cannot use EDI; in this case, there must be a structure to give employees the space to communicate about innovations parallel to the existing system.

It has also been found that looking at what an organization wants to use EDI for is necessary. Is this to improve communication between employees and build community, or is the emphasis on innovating as best as possible? Other questions are whether it is desirable within the organization to allow employees to work autonomously or to provide them with better guidance.

The framework resulting from the findings is as follows. When an organizational structure is flat, EDI looks like autonomous action and innovative projects by employees. Suppose the organizational structure does not allow employees to take on projects independently or to easily contact employees with different positions. In that case, EDI must be supported with a structure. This structure is closed when the emphasis of EDI is on innovation. EDI then looks like a structure around which ideas in varying degrees of development are brought from employees to the R&D department. When the focus is on connecting employees, EDI looks different; in this case, employees are involved in the innovation process as much as possible.

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# Appendix A

# Interview Questions

## A.1 Interview Questions Employees

1. What do you understand under employee-driven innovation?
2. Do you know of instances where someone had an idea? (This can be incremental or radical, or product or process based.)
3. Is there a specific way for you to share this idea?
4. To whom do you share your idea?
5. How do you share your idea?
6. If you have an innovative idea, are you comfortable sharing that idea?
7. What happens after you would share your idea?
8. What are the positive and negative things about the organization's current system of receiving ideas?
9. How do you think the company can improve so that they can receive more ideas?
10. Do you feel like your company welcomes new ideas? Why?
11. Do you feel that there are many rules within the company?
12. How many layers are there between operations and the CEO?

## A.2 Interview Questions Innovation Managers

1. What do you understand under employee-driven innovation?
2. Can you tell me about instances where you have come across examples of employee-driven innovation?
3. Has an employee come up to you with an idea?
4. Are there specifically designed ways in which an employee can reach out with their innovative idea?
5. What are the positive and negative things about the organization's current system of receiving ideas?
6. What are you looking for in an innovative idea?
7. What are the qualifiers of a good idea?
8. To whom do you share the idea you received?

9. What is the follow-up process once a suitable idea is presented?
10. Are there a lot of rules concerning the implementation of new ideas?
11. Does the organization have many rules?
12. How many layers are there between operations and the CEO?
13. Do you think that this way of structure facilitates (or harms) EDI and how?
14. What are the positive and negative things about the organization's current system for processing these ideas?
15. How do you think the company can improve so that they can better innovate using the ideas of employees?

## A.3 Interview Questions Consultants

1. What do you understand under employee-driven innovation?
2. Have you ever introduced innovative practices in an organization before?
3. What innovative ideas do you often propose to a company?
4. What different types of innovation methods have you recommended?
5. What do you look for when choosing an approach to making a company more innovative?
6. Have you been to organizations that are very different from one another?
7. What characteristics within organizational structures change the approach to making a company more innovative?
8. What characteristics within a company's culture change the approach to making a company more innovative?
9. Why do some innovation methods fit an organization better than others?
10. What companies are best suited for innovation that comes from outside of the R&D department?