EDI through an online suggestion system: The influence of HRM activities on the implementation of innovative ideas

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Abstract

Much is known about innovation and how this can be channelled through an online suggestion system. However, in what way HRM activities influence the implementation of innovative ideas that are submitted through online suggestion systems is still unknown. With the use of a multiple case study and interviews with a total of 28 employees of four different cases, the way these activities have an influence on the implementation has become clear. The different HRM activities that emerged, 'Assessing for innovation', 'Training for innovation', 'Support from manager', 'Communication about the implementation', 'Voicing expectations towards employees', 'Rewarding for innovation', 'Task composition', 'Creating time for employees to innovate', and 'Giving feedback on ideas', were integrated into the AMO-model (Bos-Nehles et al., 2017) to give a better insight into the areas they influence and have been examined to what extent they have a positive or a negative influence. Moreover, this effect appears to be influenced by multiple contextual factors that determine whether HRM activities enhance or inhibit the implementation of innovative ideas submitted through an online suggestion system. These influential factors are 'Cooperation within and between teams', 'Amount of work is perceived as too much', 'Knowledge about implementing ideas', 'Dependency on other teams and/or departments', 'Level of difficulty of ideas', 'Other/multiple systems used', and 'Idea responsibility'. It is important for organizations that work with an online suggestion system to know the context in which they try to implement ideas and how these seven points of attention are integrated in the organization. In this way, the nine HRM activities that have emerged have a better chance of strengthening the implementation phase rather than deteriorating it. Next to this, the online suggestion system itself can also be a supporting tool for the HRM activities. So, not only can HRM activities enhance or inhibit the implementation of innovative ideas that are submitted in an online suggestion system, but the online suggestion system itself can also be put to use to enhance the implementation of innovative ideas.

Introduction

In the current economic climate, innovation is an indispensable concept for organizations. Through innovation, organizations can respond better and faster to new challenges that come their way and can therefore gain competitive advantages (Billett, 2012; Bos-Nehles, Renkema, & Janssen, 2017; Smith, 2016). Innovation can be seen as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 1983, p. 35) (as cited in Vagnani, Gatti, & Proietti, 2019). Moreover, the innovation processes of organizations can be strengthened by the individual innovative behaviour of their employees (Shalley, Zhou, & Oldham, 2004). Employees can show innovative behaviour in many ways. In fact, according to Shalley et al. (2004) employees that have an innovative style are more willing to take risks, develop solutions to emerging problems and situations, and are more creative in general.

The generation and implementation of innovative ideas across organizational levels by employees originating from the work-floor can be referred to as employee-driven innovation (EDI) (Høyrup, 2010; Kesting & Ulhøi, 2010; Renkema, Meijerink, & Bondarouk, 2021). Within the theory

of EDI, innovation can stem from one single employee or a group of employees, who are not assigned to the task of innovation (Kesting & Ulhøi, 2010). The idea rests on the fact that "ordinary" employees have hidden innovation abilities and that this potential has to be uncovered and used for the organizations' and employees' benefit. To uncover these hidden potentials of employees, human resource management (HRM) can be of use (Bos-Nehles et al., 2017; Jiménez-Jiménez & Sanz-Valle, 2008; Malhotra, Majchrzak, Bonfield, & Myers, 2019). HRM can be seen as the management of personnel (Clarke, 1983) and is often the topic within academic research when it comes to innovation studies. It can be stated that HRM enhances innovation within organizations (Jiménez-Jiménez & Sanz-Valle, 2008) and is linked to innovation performance (Malhotra et al., 2019). Additionally, HRM can strengthen EDI on different levels and provides resources within an organization for innovation to occur, which makes it a valuable field for HRM managers to encourage and comprehend (Lichy & McLeay, 2020).

One of many ways to make it easier for employees to actually participate in innovation processes is the use of (online) suggestion systems (Buech, Michel, & Sonntag, 2010; van Dijk & van den Ende, 2002; Frese, Teng, & Wijnen, 1999; Lasrado, Arif, & Rizvi, 2015). By using suggestion systems, organizations benefit from the innovativeness of their own employees as these systems channel innovation in a useful direction (Buech et al., 2010) through the collecting, judging, and compensating of submitted ideas (Van Dijk & Van den Ende, 2002). Moreover, human resource systems are an important factor for suggestion systems because they make it possible for employees to participate in innovation processes (Malhotra et al., 2019). Within this same study of Malhotra et al. (2019), the authors mention that further research is necessary when it comes to employee participation systems because many employees tend to refrain from expressing themselves through these kind of systems. Moreover, being creative and submitting innovative ideas into an online suggestion system alone is not enough. Submitting ideas does not mean that the ideas are being implemented or even being used at all (Baer, 2012). The implementation of ideas is just as important for the innovation processes within organizations, but many studies focus on the generation instead of the implementation of ideas (Axtell et al., 2000; Baer, 2012). Furthermore, in today's climate, online suggestion systems are a useful tool for innovation, but not much is known about the implementation part of ideas that are submitted through such a system. In addition to this, Van den Ende, Frederiksen, and Prencipe (2015) provide evidence that moving from the generation of ideas to the implementation phase in a traditional innovation funnel system often fails and is not easy to do. For this reason, this study will focus on the implementation phase within online suggestion systems.

With employees strengthening the innovation processes of organizations, it is not surprising that a lot of organizations are trying to find the best possible ways to gather and implement innovative ideas. Even so, the focus rarely lies on the way in which some practices or activities can inhibit this process so that they can be avoided when working towards a better innovation process. It is therefore important to understand how activities can enhance but also inhibit this process of implementation within online suggestion systems. Additionally, within the existing literature the combination of the three aspects,

HRM, online suggestion systems, and the implementation of innovative ideas, have not yet been combined. The goal of this study is to try to fill this literature gap to gain new insights into how this is structured in practice and, based on the results, provide organizations with which HRM activities, and how those HRM activities can influence the implementation phase of innovation. All this in the context of an online suggestion system. This will ultimately lead to a more structured innovation process in which organizations are aware of the effect that various HRM activities can have on the implementation of innovative ideas and thus ensure a more successful implementation. By asking the following research question, this research aims to gain an explicit understanding of the relationship between various HRM activities and their possible influence on the implementation phase: *"How do HRM activities stimulate and inhibit the implementation of ideas that are submitted through the online suggestion systems?"*. The theoretical contributions of the study will not only help to better understand which HRM activities appear to have a relative impact, but also provide a better theoretical understanding of the underlying relationships of the HRM activities and the implementation of innovative ideas within the context of an online suggestion system. This allows for a better understanding of how these relationships work and provides an impetus to explore these relationships further. In addition, the practical implications indicate how organizations can deploy their HRM activities in such a way that the implementation of innovative ideas will become more successful when submitted through an online suggestion system. Especially for organizations, it is important to understand how various HRM activities appear to have a positive or a negative influence, so that they can anticipate this.

The first section of this paper contains theoretical background information on the theory of EDI, various HRM activities that are known to contribute or inhibit the general implementation phase of the innovation processes, different content-types of innovative ideas, and online suggestion systems. The second part of this study contains the research methodology. After this, the main findings are presented and discussed. Finally, practical and managerial implications are given in the form of general guidelines for organizations, followed by a conclusion.

Theoretical framework

Employee-Driven Innovation

Employee-driven innovation (EDI) can be seen as the innovation that stems from the work-floor employees within an organization, and is therefore a bottom-up process of innovation (Høyrup, 2010; Kesting & Ulhøi, 2010; Renkema et al., 2021). Kesting and Ulhøi (2010) mention that EDI refers to the innovation process in which employees who are not assigned to the task of innovation, are exactly the ones to participate in the innovation process. For this research, the part of EDI that focuses on the implementation of ideas has been studied. That is, the implementation carried out by the work-floor employees whose job requirements do not specifically mention implementation. Furthermore, EDI can be formal and informal, planned and unplanned, but the most important thing is that it should be supported, organized, and recognized by the organization (Høyrup, 2010).

Within the theory of EDI, there are multiple routes through which innovation can occur (Renkema et al., 2021). The three routes are: the organizational route, the formalized system route, and the project-initiative route. Within the first route, employees will first share their ideas with colleagues and direct supervisors, and after this they will share their ideas with the department heads. The second route is the formalized system route. Through this route, employees share their ideas through online systems. The last route of EDI is called the project-initiative route. Through this route, employees work in arranged project groups to stimulate innovation within the organization. Online suggestion systems can be categorized within the second route of EDI, the formalized system route. For this reason, the second route has the main focus within this research.

In addition, EDI exists out of five different phases, namely the emergence, development, communication, establishment, and implementation of ideas (Renkema et al., 2021). Within this study, the focus lies on the implementation phase of EDI which happens when an idea is established and the decisions are made so that the idea can be put into practice. The implementation phase of EDI can be seen as the "process of adoption of process innovations" (Voss, 1988, p.56) and where innovations are going through a transition period (Trullen, Bos-Nehles, & Valverde, 2020). Furthermore, the influence that employees have on their own submitted ideas is positively related to the implementation phase of innovation. These findings are replicated by Clegg, Unsworth, Epitropaki, and Parker (2002) in a study about implementing innovative ideas. The importance of leader support, leader-member exchange, and employees' ideas being heard by the organization are all factors that are positively and significantly linked to the implementation of innovative ideas. However, not all innovative ideas are the same and should therefore be addressed in different ways. To highlight these differences and their link to implementation, different types of ideas are discussed in the next paragraph.

Types of innovative ideas

There are multiple types of innovative ideas that can arise within organizations. The size of the ideas and the content of ideas should be discussed as this can have an influence on the way they are being implemented. The size of innovative ideas can be split into two different categories, namely incremental innovations and radical innovations (Norman & Verganti, 2014). Incremental innovations are improvements that are smaller of size and which lie within a given frame of solutions. Unlike incremental innovations, radical innovations are improvements that have not been done before and are therefore seen as having a bigger impact within organizations. EDI can both include incremental and radical innovations (Høyrup, 2010). Furthermore, ideas can have an exploitative or an explorative nature (Enkel, Heil, Hengstler, & Wirth, 2017). Explorative is how employees can better an existing phenomenon, whereas explorative is about inventing something completely new.

The content dimension of ideas also comes in all shapes and sizes and is therefore not a constant factor. The content dimension can be seen as the matter that employees have written down and submitted as their idea (Hoornaert, Ballings, Malthouse, & Van den Poel, 2017). Many studies describe the different types of ideas that employees come up with in the innovation processes (Axtell et al., 2000;

Froehlich, Hoegl, & Gibbert, 2015; Hoornaert et al., 2017; Karlsson & Törlind, 2014; Renkema et al., 2021). A way of looking at the different types of ideas is mentioned in the study by Renkema et al. (2021), in which the authors describe three different content-types of ideas within EDI, namely: primary work content, work processes, and organizational developments. Primary work content is about the work content itself and says something about the improvement of a certain product or service the organization is mainly concerned with. Work process innovation ideas are about the optimization of the work processes currently adhered to. And lastly, organizational developments are about the way the organization can improve their strategies, structures, and processes in general. It is important to mention these different types of ideas as they can be seen as the second most predictive factor of crowd evaluation for idea implementation (Hoornaert et al., 2017) and because the different content-types of ideas can influence the choice of employees which EDI route to take when pursuing a new idea (Renkema et al., 2021). In this study of searching in what way HRM activities stimulate or inhibit the implementation of innovative ideas, it is therefore important to take the different content dimensions of ideas into account. To further discuss factors that are related to the implementation phase of innovation, HRM practices that are known to have an influence on the implementation of ideas are elaborated in the next paragraph.

HRM and the implementation of innovation

There are many studies that show a positive link between HRM and innovation (Bos-Nehles et al., 2017; Jiménez-Jiménez & Sanz-Valle, 2008; Leede & Looise, 2015; Lichy & McLeay, 2020; Malhotra et al., 2019; Seeck & Diehl, 2017). HRM can be seen as the activities that organizations undertake to manage their human resources effectively (Wright & McMahan, 1992). It is not only the HRM department that has to handle all the HRM related activities, but other actors like managers are also important factors for carrying out these activities. It is therefore necessary to demarcate HRM practices when it comes to innovation on an implementation level. A study that also looks at the implementation phase separately is the study of Bos-Nehles et al. (2017). Bos-Nehles et al. (2017) found, through a thorough literature study, seven HRM practices that are seen as ability-enhancing, motivation-enhancing, and opportunity-enhancing practices for innovation. The seven practices are: training and development as ability-enhancing, reward and job security as motivation-enhancing, and autonomy, task composition, job demands and time pressure, and feedback as opportunity-enhancing HRM practices. Within these practices, there are several that have been positively linked to the implementation phase of innovation: training and development, autonomy (job control), task composition (job complexity), job demands and time pressure, and feedback. Because these practices are already positively linked to the implementation phase of innovation according to Bos-Nehles et al. (2017), they have been used as a starting point for this research to see if the same is true when an online suggestion system is used. Integrating the results of this research into the AMO-model (abilities, motivation, opportunities) provides a better representation of the contextual factors that could play a role in the implementation phase and gives a more comprehensive idea about how the HRM activities are possible affected by this. For this reason, the coding template (as described in the methodology chapter) is based off of the AMO-model (Bos-

Nehles et al., 2017). However, this does not mean that the research is limited to only the HRM activities discussed in the articles that show a positive link between HRM and innovation (Bos-Nehles et al., 2017; Jiménez-Jiménez & Sanz-Valle, 2008; Leede & Looise, 2015; Lichy & McLeay, 2020; Malhotra et al., 2019; Seeck & Diehl, 2017). The HRM activities that have emerged during the study have been included into the results to keep an open mind and to not let the HRM activities that have already been discussed in previous literature determine the outcome.

In another light, HRM practices can also have a negative influence on the innovation process when not properly integrated into the organization. Short-term contracts, for example, have a negative effect on incremental innovation (Seeck & Diehl, 2017). Moreover, a moderate amount of time pressure from the organization has a positive influence on the innovation process, but too much or not enough time pressure is negatively related to the innovation level of employees (Ohly et al., 2006). Leede and Looise (2005) also mention the balancing of rewards as a practice that is related to the implementation of innovation. However, there exists a negative relationship between rewards and innovation when employees are already intrinsically motivated to begin with (Sanders, Moorkamp, Torka, Groeneveld, & Groeneveld, 2010) or when rewards are based on performance (Fernandez & Moldogaziev, 2012).

Even though these studies about the relationship between various HRM practices and the implementation phase of EDI exist, it is still unclear what the effects of these activities are in combination with an online suggestion system.

Online suggestion systems

The importance of online suggestion systems has been the subject of conversation for a long time within the academic field. These (online) suggestion systems are deemed an important tool by many scholars, because through these systems employees can voice their innovative ideas (Buech, Michel, & Sonntag, 2010; van Dijk & van den Ende, 2002; Frese, Teng, & Wijnen, 1999; Lasrado, Arif, & Rizvi, 2015). Within the theory of EDI, online suggestion systems can be seen as the formalized system route, through which employees submit innovative ideas. Not only EDI is linked to online suggestion systems, but HRM as well. According to Du Plessis (2016), HRM and suggestion systems are intertwined because the suggestion systems self can be seen as an HRM tool. Therefore, line managers and the HRM department play a big role in the success of the suggestion system because they have the role of taking care of the explanation and awareness of the suggestion system, provide feedback, and try to motivate employees to use the (online) suggestion system by rewarding and recognizing potential ideas. However, according to Tirabeni and Soderquist (2019) suggestion systems are not always seen as something positive as they tend to limit the sense of involvement and engagement that employees feel within the innovation process. Success of suggestion systems is therefore not guaranteed. Employees submit ideas which will then be assessed and implemented by experts and not by the employees who submitted the ideas. It is important to understand that employees can have an influence in other phases of EDI within the formalized system route in which involvement and engagement can still be present.

There are a lot of different ways to organize suggestion systems. For example, Van Dijk and Van den Ende (2002) looked into three different organizations and found that all three have very different but all successful suggestion systems, that all had a different effect on the innovation processes. The success of the suggestion system is measured through the degree of participation, degree of adoption, and savings realised. Before they compared the suggestion systems, the authors explain that the suggestion system has three stages. The first stage, idea extraction, involves the sharing of ideas with the organization and focusses on the motivation of employees. The second stage, idea landing, is about the idea being set down in the organization and focuses on whether the idea has enough support, resources, and an accessible suggestion system to be put through. In the last stage, idea follow-up, the idea is being made into a project proposal. In this phase the ideas are evaluated, the employees are rewarded to stimulate future motivation for submitting ideas, and the ideas are processed. For this research, this last part is important and is studied as it covers the implementation of ideas after they went through the other phases of the suggestion system.

Which practices are most successful in supporting idea implementation through an online suggestion system is still up for debate. Although a literature review study on the success factors of suggestion systems found that system features, work environment and individual attributes are crucial features (Lasrado et al., 2016), little research has been done on how all this relates to the various HRM activities and their influence on the implementation of innovative ideas. In other words, what contextual factors can be expected to have an influence on the process when organizations use different HRM activities to improve the implementation of innovative ideas.

Bringing the concepts together

HRM activities, the implementation of innovative ideas, and online suggestion systems are all related to each other. First, EDI is supported by technology. This technology links different resources and people with each other and makes it possible to share ideas within an organization (Tirabeni & Soderquist, 2019). This happens, for example, in the form of an online suggestion system. HRM is found to support this technology as the HRM managers and HRM department are responsible for the explanation and awareness of the suggestion system (Du Plessis, 2016). Moreover, several scholars stated that HRM practices have an influence on the implementation phase of innovation (Bos-Nehles et al., 2017; Leede & Looise, 2005) and are therefore necessary to look at within this study. All these concepts together lead to the initial research model which is shown in figure 1. Within this model, it is important to understand that the implementation phase is the last phase of the innovation process that flows through the formalized system route of EDI. In other words, ideas are generated by work-floor employees and submitted into an online suggestion system after which, for some ideas, the implementation phase occurs. This study focusses on how different HRM activities could have an influence on the implementation phase of EDI within the formalized system route.

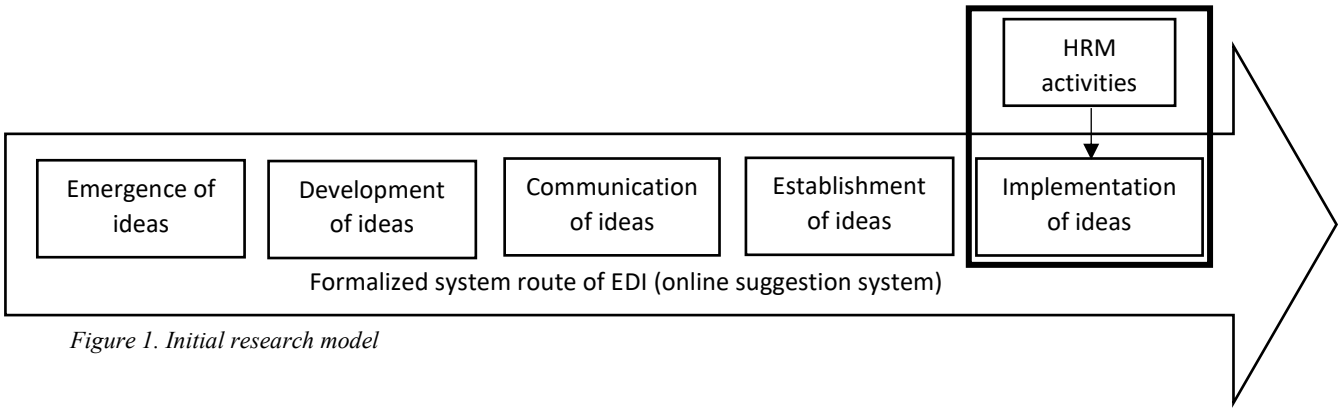

Figure 1. Initial research model

Methodology

Research method

To answer the exploratory research question, "*How do HRM activities stimulate and inhibit the implementation of ideas that are submitted through the online suggestion systems?"*, a qualitative research has been conducted with the use of an abductive research strategy. Abductive research "starts with facts and moves to an explanatory hypothesis" (Novak, 2001, p. 5). In this case, the abductive research strategy follows from the theoretical framework to develop an interpretation (Ong, 2012) after which a set of observations is analysed to draw the most likely or plausible conclusion(s). The outcome of the abductive theory does not provide one definite answer, but a number of possible explanations for a phenomenon. The abductive research strategy, in combination with the exploratory research design, calls for a qualitative research approach that can be supported by in-depth interviews in the form of multiple case studies (Yin, 2003).

Using case studies, statements can be made about the broader class with the help of a small number of units (Flyvbjerg, 2006; Seawright & Gerring, 2008) and therefore exploits the opportunity to investigate a significant phenomenon. Furthermore, through this method, the replication logic can come up in which the same result will be predicted for the multiple cases (Yin, 2003). For this reason, multiple case studies have been used to try to find patterns and structures. In this study, the various participating organizations function as a small number of units about which a statement can be made.

Data collection

With the help of an online suggestion system provider, Coimbee (n.d.), several organizations that make use of an online suggestion system have been approached. These organizations are all customers of Coimbee (n.d.) and therefore currently make use, or have made use, of the Coimbee (n.d.) online suggestion system. Coimbee (n.d.) is an organization focused on continuous improvement and offers an online suggestion system for organizations who want to strengthen their innovation process and their overall performance. The online suggestion system from Coimbee (n.d.) creates an online overview of innovative ideas that stem from work-floor employees from different teams. In the menu of the online tool, employees can submit new ideas, view their past submissions, view ideas that still need to be

realized, and view the amount of already implemented suggestions that were submitted by colleagues out of their own team and out of other teams (Coimbee, n.d.).

To specify, not all organizations make use of the Coimbee (n.d.) online suggestion system (anymore), but are all currently involved with an online suggestion system. This is described in more detail in the chapters on the selected cases and the results. Next to providing contacts for this research, Coimbee (n.d.) made it possible to enter their online suggestion system to look at how the system operates and what functions are available. The reason for this is to provide a better understanding of how an online suggestion system could be structured. After this, the organizations that participated in the study were asked to provide data of their Coimbee (n.d.) online suggestion system in order to get an overview of the ideas that have been proven successful or not successful in their implementation. Although some organizations are no longer working work with this exact suggestion system, the extracted data provided a comprehensive picture of how the organizations operate within the innovation process, allowing for comparison between the different organizations. Once that data of the online suggestion system was collected, the data was examined and the implementation phase within the online suggestion system was studied. This provided data of different innovative ideas and the extent to which these ideas are implemented within the various organizations. This type of document analysis made it more manageable to ask questions about the process of these implemented innovations later on in the second research method, interviews.

For this study, interviews have been used to gain an in-depth insight into the way HRM activities stimulate and/or inhibit the implementation of ideas. Furthermore, the format of these interviews is semi-structured and thus a set of pre-written open questions have been asked to start a dialogue (DiCicco-Bloom & Crabree, 2006). The main reason for this is to minimize the likelihood that the participants' answers are steered in a certain direction. It is important to leave room for an open conversation to find out how exactly the HRM activities occur within the various organizations, but by using pre-defined open questions less aspects will get lost. The interview protocol is included in Appendix A. Furthermore, the interviews were held on an individual level to get a more in-depth insight in the matter and to discover a shared understanding of a particular group (DiCicco-Bloom & Crabtree, 2006). Due to the current global pandemic, the interviews took place online with the use of different channels like Microsoft Teams, Google Meets, and Zoom. The conducted interviews have been recorded with a recording device (mobile phone), after which the recordings were transcribed into a document and inserted into the online qualitative data analysis tool, Atlas.ti (n.d.). The further coding process is described in the data analysis paragraph.

Selected cases

Four companies were selected to participate in this study to act as the different cases (table 1). The case organizations have been selected based on the fact that they all make use of an online suggestion system and that they have implemented innovations that were suggested via this online suggestion system. It was also important that the data they provided could be analysed in depth and that the various steps

within the online suggestion system were utilized to create a broader picture of how the organizations operated within the innovation process as a whole. Furthermore, the selected organizations all operate within a different market and have different products and services. This ensures more generally applicable theoretical and practical implications.

Through our contact person at Coimbee (n.d.), the organizations were approached to participate in this study and asked to share their online suggestions system data. It was checked in advance whether the organizations fit the criteria that were developed by meeting with spokespersons from every organization. These informal conversations with four organization made it clear that the organizations were all suitable to participate in the study as they met the criteria. Within every selected organization, a minimum of one employee who has submitted ideas that have later on been implemented has been interviewed to understand the process of the implementation phase of these innovative ideas. In addition to this, a minimum of one employee who submitted ideas that were deemed as feasible and profitable but that were never fully implemented has been interviewed. This has been done to fully comprehend the implementation phase and in what way this might be inhibited by HRM activities. Moreover, one employee of the human resource department and multiple employees in a leadership position of every participating organization have been interviewed to get a better insight into the HMR activities that stimulate or inhibit the implementation phase of innovative ideas. To ensure anonymity and confidentiality, all participants were informed of their anonymity before the interviews took place and permission was requested from the participants to record the interviews.

Table 1. Selected cases.

Company	**SocialSecure Inc.**	**Machine Inc.**	**Energy Inc.**	**Construction Inc.**
Industry	Social security services	Machinery production	Energy supplier	Construction
Size (employees)	400	100	300	80
Number of interviews	8 interviews *3 managers* *4 employees* *1 HRM*	10 interviews *3 managers* *6 employees* *1 HRM*	7 interviews *3 managers* *3 employees* *1 HRM*	3 interviews *2 managers* *1 employee*
Use online suggestion system since	2017	End of 2019	Begin of 2019	September 2020

Every participant has been given a unique code to know which position they hold within the company and from which department they are. This helps to understand whether the textual data comes from a manager, an employee, or someone from the HRM department. The codes start with the letter A, B, C, or D to indicate in which company the employee is working. The next label, A, AA or AB, B, C, D, or E, indicates the department the interviewed employee is currently positioned in. Other labels include HR (employee is from the HRM department), MA (employee has a managerial position), WE

(employee works in a team led by a manager), S (system administrator of the online suggestion system), and V (employee is part of a specialized innovation team).

Data analysis

Once the transcripts were inserted into Atlas.ti (n.d.), a thematic analysis, called the template analysis, took place. This is a form of hierarchical coding of textual data where it can be adapted to the needs of the study (Brooks, McCluskey, Turley, & King, 2015). The steps in doing a template analysis are 1) becoming familiar with the data set, 2) carrying out preliminary coding, 3) organizing the emerging themes into clusters, 4) defining the initial coding template, 5) applying the first template to new data and adapt when necessary, 6) finalizing the template (Brooks et al., 2015). The first step took place by globally reading through all the interviews in advance. This made it possible to get familiar with the data set and to understand how a single piece of text is situated within the context of the whole case.

For the second step of the template analysis, textual data that was considered useful was highlighted and captured, but not explicitly coded yet. Preliminary coding has been performed with seven out of the twenty-eight interviews by using pre-set code themes. It is important to understand that within the preliminary coding stage, it is allowed to have some themes defined in advance based on theory (Braun & Clarke, 2006). Instead of beginning with open codes, the decision was made to section the data into the main codes and funnel them down to more specific codes as the coding process progresses. In this case, the preliminary coding themes were the HRM activities divided into three categories: ability-enhancing, motivation-enhancing, and opportunity-enhancing practices. With this first data set, the different themes were applied to see how they would suit the different types of interviews (Appendix B). Next to this, the textual data that is considered informative but is not part of the defined preliminary codes is still highlighted to get a better understanding of what is occurring in the different organizations. Due to this coding technique, a clear insight into how the themes would fit a wide variety of transcripts was given and it provided more structure in the further development of the template. Furthermore, the coding of only seven interviews and then revaluating the coding process helped to improve the coding template for the following coding rounds. For this same reason, the seven interviews have been chosen based on the variety of the context of the transcripts. The aspects that were taken into account when choosing the transcripts were: different organizations, different departments, and different hierarchy levels. This resulted in the preliminary coding of interviews with three managers and three work-floor employees from three different organizations and one interview with an HRM employee.

In the third stage of the template analysis, a sub set of the data has been picked out to develop the initial template. This initial template was used to see whether it would fit other data transcripts, as described in stage four. Because the research question revolves around HRM activities, the AMO-model (Bos-Nehles et al., 2017) (ability, motivation, and opportunity factors) has been chosen to base the main themes on. The a priori themes were: “ability of employees at the implementation phase”, “the motivation of employees at the implementation phase”, and “the opportunity of employees within the

implementation phase". However, it soon became clear that these themes were not focused enough on the research question and could not fully capture the essence of the research. For this reason, the a priori themes were constantly adjusted and became more theme-focused and comprehensive. This resulted in the initial coding template (Appendix C), with seven main themes. The "involvement of the HRM department" was added as a separate theme, just like the themes "type of idea", "implementation of ideas that come from an online suggestion system" and "experienced added value of the online suggestion system".

After the initial template was set, the open coding round was further applied to get a better understanding of what took place within these different themes and to subdivide these open codes into second order codes. During this fifth stage, several changes were applied to the first order codes. The reason being that some open codes were incorrectly formulated or could be merged with other codes to get a better overview and to give more structure to the codes. This resulted into the final template (Appendix D), a more refined version of the previous template (Appendix C).

Within Atlas.ti (n.d.), the main themes were given a colour code for categorization and the underlying second order codes have been noted in "Code Groups". The colour codes are red (negative effect), yellow (neutral effect or it can have both a positive and negative effect, depending on the context), and green (positive effect). By not only listening to what was said, but also how something was said, the colours could be appointed. In other words, the colour codes depend on what was said literally, as well as how it came across in general.

By using the template as a guide, the tables 4-7 within the results chapter have been established. The coding process showed that there are many HRM activities that were identified to have an influence on the implementation of ideas that have been submitted through an online suggestion system. To assess which HRM activities were most common, the number of codes associated with these activities was examined per company. However, some participants have re-mentioned certain HRM activities or textual parts related to HRM activities at different times within the same interview that had no further content than the first time it was mentioned. For this reason, it was also examined how many different employees within one case study gave information that could be linked to the same code. This was then deducted from the number of codes associated with the activities.

Trustworthiness

To ensure the credibility of the study, a form of triangulation took place. Data collection triangulation will support the credibility of the research (Nowell, Norris, White, & Moules, 2017) and is, in this case, achieved by studying the theoretical backgrounds of the concepts of this research, executing a document analysis of the online suggestion system, and conducting semi-structured interviews. To ensure the trustworthiness in the semi-structured interviews, the participants have been selected according to their submissions in the online suggestion system and through recommendation from colleagues or managers. In addition to this, a pre-interview has been conducted to find out whether the asked questions were suitable (Elo et al., 2014). This pre-interview made it clear that the questions can be considered suitable

for obtaining rich data and that there was no need to change the questions. After all interviews were held, a quality check of the interview coding technique has been ensured by consulting the research team as this helps to think more critically and ensures that the data and codes are reliable (Kurasaki, 2000). However, this needed to be treated carefully because there exists a risk of accidentally changing the meanings by taking the pieces of text from their original context.

Transparency is achieved by clarifying what was said during the interviews and trying to reflect upon the findings and discuss this with the key informants. This last part is especially important because following up with the participants safeguards the trustworthiness of the research (Burnard, 1991; Kornbluh, 2015; Tracy, 2010) and the construct validity (Yin, 2003). For this reason, the transcribed interviews were sent to the participants after the interviews occurred. Next to this, the full research will be available to read for all the participating organizations after which they can provide feedback on the findings. Furthermore, all steps taken in the research are documented and therefore traceable. This has been done for example by recording which codes were changed during the template analysis. This also helps the dependability and the confirmability (Nowell et all., 2017) and it will therefore be possible to trace how data and findings are derived from the case studies.

Results

This chapter presents the results collected from the analysed data. The desk research has provided data on all the submitted ideas per company and how they are implemented. This gave insight into the extent to which the implementations have been successful or have failed within the organizations. After this numerical data is provided, the process of innovation is described per company. This data was obtained through the conducted interviews and made clear in what way the innovation process as a whole is structured within the four studied organizations. After the implementation and process description, it is briefly explained which role the HRM departments of the various companies have played in the innovation process. Next, the impact that the currently ongoing Covid-19 pandemic is having on the business sector is discussed. It is important to take this factor into account when discussing the results due to its possible influence on the different organizations and their processes. Lastly, the HRM activities that are considered to have an effect on the implementation on innovative ideas are mentioned. Several contextual factors are linked to those HRM activities because they seem to contribute to whether the HRM activities are having a positive or a negative effect on the implementation.

Numerical data of the implementation process

The data in table 2, obtained from the Coimbee (n.d.) online suggestion systems of three of the four participating organizations, is shown to give an indication of the current implementation processes. After the desk research, it became clear that SocialSecure Inc. has an implementation rate of 36%, whereas Machine Inc. has an implementation rate of 32,4%. However, the company that sticks out the most is Energy Inc. From the 477 submitted ideas, 251 have been implemented. This is an implementation rate of 52,6%. This is could be traced back to the fact that within Energy Inc., only the ideas that have been

pre-approved are allowed to be put into the online suggestion system (CAWES01). Besides the amount of implemented ideas, table 2 shows the amount of rejected, stopped, and current ideas within the online suggestion system of Coimbee (n.d.). Also the amount of ideas that still need enrichment before they can continue to the implementation phase is shown. However, Construction Inc. is still in the starting phase of the online suggestion system and does not yet have reliable or sufficient data to have it included in the table below.

Table 2. Toolbox numbers.

Company	**SocialSecure Inc.**	**Machine Inc.**	**Energy Inc.**
Total amount of ideas	430	247	477
Implemented ideas	155	80	251
Rejected ideas	13	44	9
Current ideas	62	6	36
Need enrichment	32	32	7
Stopped ideas	5	16	27

Next to the amount of implemented ideas, it became clear that most ideas are incremental work process innovation ideas (Norman & Verganti, 2014; Renkema et al., 2021). The ideas vary from adjustments in the way employees should approach the work process itself to replacing a lamp on the work-floor. Furthermore, most ideas have an exploitative nature (Enkel, Heil, Hengstler, & Wirth, 2017) and are more about how employees can better an existing phenomenon instead of inventing something completely new. In other words, already existing work processes are improved instead of devising completely new processes.

The online suggestion system and the innovation process at individual company level

After the coding process, it became clear that the way the online suggestion system is established in all four organizations differs extensively. The main differences are manifested in how the online suggestion system is used and moreover to what extent it is used. Table 3 depicts the four organizations and their suggestions system usage levels.

Table 3. Suggestion system usage.

Company	**SocialSecure Inc.**	**Machine Inc.**	**Energy Inc.**	**Construction Inc.**
Total amount of submitted ideas	430	247	477	23
Suggestion system users	Per team different; not all employees have access	Improvement team plus some managers; not all employees have access	Especially specialized employees; not all employees have access	Selected group of employees/ managers
Usage level	Low	Medium/high	Low/medium	Medium

It should be taken into account that the four organizations all started working with an online suggestion system in a different year which explains the differences in the amount of total ideas. For example,

Construction Inc. considers the online suggestion system to be a fairly new tool and cites this as a reason why the usage level is quite low. In addition, Machine Inc. is the second to last of the four organizations to use the online suggestion system and has fewer ideas submitted than SocialSecure Inc. and Energy Inc., both of which have started using the online suggestion system at an earlier stage. Besides looking at when the organizations started using the online suggestion system, the differences in the amount of employees have also been taken into account when determining the usage levels. For example, Machine Inc. has been given a 'Medium/high' usage level, whereas Energy Inc. has been given a 'Low/medium' usage level, while Energy Inc. has more ideas submitted into the online suggestion system. This statement is based on the current number of employees who are involved and actively contribute to the innovation process through the use of the online suggestion system.

How the online suggestion system is manifested is different in every organization. For example, SocialSecure Inc. has some teams that use the online suggestion system and other teams have never heard of it, Machine Inc. has appointed a special task force to support the online suggestion system, Energy Inc. on the other hand has appointed innovation specialists to engage with the online suggestion system and to support the work-floor employees, and Construction Inc. is still in its start-up phase when it comes to the online suggestion system. Within Machine Inc., it can be seen that the formalized system route of EDI is combined with the project-initiative route of EDI (Renkema et al., 2021). The project-initiative route of EDI is achieved through using a special task force, also known as the innovation team, in which employees from different departments take place to work with the online suggestion system and help implement innovative ideas. Not only is the online suggestion system used in various ways, the innovation processes in which the online suggestion system is being used are also structured differently per organization. Below is a brief summary of every organization's innovation process and how the online suggestion system is manifested within this process.

SocialSecure Inc.

SocialSecure Inc. has made the system available and non-obligatory. Because of this, not all the teams use the online suggestion system and a division has developed between the teams in terms of the innovation process. This gap is reflected in the fact that each team deals with innovation in a different way. Some teams have regular meetings to support the innovation process and use the online suggestion system to support these meetings, while other teams have never heard of the online suggestion system and are less involved with the innovation process. Moreover, the fact that not everyone has access to the online suggestion system could be a contributing factor to this gap.

- *"There are (domain name) teams that use the online suggestion system, but the team I am part of does not use the online suggestion system."* – AAWE01.

Machine Inc.

Machine Inc. has established a specific innovation team to support the innovation process. This team gathers the ideas from the work-floor employees and collects them in the online suggestion system. The

managers of the work-floor also have access to the online suggestion system and organize weekly meetings with their team of work-floor employees to gather new ideas ant to discuss the progress of ideas that are already being addressed. When it comes to the implementation phase, the work-floor employees are not always included. The innovation team selects the ideas that will be tackled and carries out most of the implementations themselves. However, when it comes to 'low-difficulty ideas' that, according to the work-floor employees, do not need a process of implementation, the work-floor employees will resolve this problem almost immediately on their own, or otherwise together with their manager.

- *"He just thought that during your own work, and I agree with him, that you have to already improve. And that does happen with certain things. If we saw improvements to be made or made small adjustments somewhere, then it would happen automatically. Without involving entire processes".* – BCWEV03.

Energy Inc.

Energy Inc. has also made their online suggestion system non-obligatory and is most recognizable for their innovation specialists that are linked to each team to support the innovation process. Many employees, although not all, have access or insight into the online suggestion system. However, the innovation specialists handle the implementation process in which work-floor employees can participate if they want to. The innovation specialists are appointed internally and get a specific training to be able to make a valuable contribution to the implementation of innovative ideas and to support the work-floor employees within this process.

- *"We have all (...) or almost everyone, done the Yellow Belt training from Lean Six Sigma. And the ones that really work on those projects have also done the Green Belt. Of which I am one."* – CBWE03.

Construction Inc.

Construction Inc. is still in the start-up phase of the online suggestion system. For this reason, the employees who currently work with the system were interviewed and asked about their intention of how they want to organize the innovation process in the future. Construction Inc. currently has a selected group of employees who work with the online suggestion system and try to shape the innovation process. The goal is to have the entire company work with the online suggestion system in the future. They do not suggest that every employee should have access to the online suggestion system, but that the online suggestion system should become a standard tool in the procedure of proposing and implementing innovative ideas.

- *"It has recently been said (...) that we are really going to use this* (i.e. the online suggestion system). *Only what you see is that it needs implementation time."* – DAMA01.

The co-existence of several platforms

Besides the fact that all companies have a different innovation process, they often make use of other suggestion systems or platforms to support the online suggestion system. Other platforms that support

the online suggestion system include: Excel, whiteboards, an intern social media platform, and physical information boards. Some organizations even started using a whole different main online suggestion system. The main online suggestion systems, other than Coimbee (n.d.), include: Microsoft Teams, Trello, and Office 365. Moreover, within some specialized teams, for example an IT department, the employees use online suggestion systems that are only available for their own department.

The main difference with the online suggestion system from Coimbee (n.d.) and other online suggestion systems is that the other systems do not have as many functions and mainly serve as an overview of idea, whereas the goal of Coimbee (n.d.) is to run the idea through a whole process of theoretically substantiated steps. This is perceived as both positive and negative according to different employees (see 'Influential factors') due to it being experienced as more difficult.

The fact that in some cases different online suggestion systems are being used by the organizations did not have an effect on the interview protocol. The same questions have been asked to employees from organizations with a different main online suggestion system. For this research, all online suggestion systems will be looked at in the same way and are therefore mentioned as 'online suggestion system' within the quotes instead of their product name to provide a more clear overview of the answers. Having employees referring to different online suggestion systems during the interviews should not affect the results as their function stays the same. The function being collecting innovative ideas from the work-floor employees, selecting the ideas that are deemed worth implementing and finally, starting the implementation phase and ensuring that the idea is realised. However, how the online suggestion system is situated within each company could have an effect on how often different HRM activities are mentioned and to what extent they have a perceived positive or negative effect. This became clear when the four studied companies all mentioned different HRM activities, some of which overlap strongly and others were only specifically mentioned within one company. To analyse the differences between the companies, the cases will first be looked at individually and then compared with each other (see 'HRM activities').

The absence of the HRM department

After getting a clear representation of how the innovation processes are structured within the four organizations, it became clear that in none of the studied organizations the HRM department plays a significant role within the innovation process. After interviewing employees from that department, it was cited that in some cases the HRM department does not have much knowledge of the online suggestion system or even knew it existed: *"Well the only thing, I think I also indicated that in the mail, that the toolbox is not known to me anyway."* – ADHR01. The employees from the HRM department do not get involved with the online suggestion system and the implementation of innovative ideas. They leave working with the online suggestion system and implementing ideas to the managers or innovation specialists because they do not feel that this is part of their job responsibility (BEHR01). In addition, after the question whether this was the desired situation for the company, the interviewed employees of the various HRM departments indicated that they were willing to do more within the innovation process

as they believe that it could be of added value: *"But about such things as those, I think they don't think about that. And that I mean more with that what actually involves me, yes, I might be able to do a little more in that."* – BEHR01. To sum up, the HRM departments are not, or only slightly, involved with the implementation of innovative ideas, but they do feel that the involvement should be more. This is because the employees of the HRM departments do see the added value of getting involved in the innovation process, however no reason could be given why this is not happening yet.

The effect of the Covid-19 pandemic on innovation

Before continuing with the results concerning the different HRM activities, it should be mentioned that Covid-19 has taken a big toll on the business sector and many aspects of the innovation process are affected by the pandemic. The data suggests that Covid-19 has an influence on both the extent to which the online suggestion system is used and on the way the innovation process is carried out. The most common experienced negative change is the different work environment that employees have and that the process of innovation has endured many setbacks due to this change.

- *"Well then came corona and yes the day starts have continued, but under a completely different dynamic. Much less involvement in one way or another. Less interaction."* – AAMA01.
- *"And well that corona does not actually do much good I must say. Because of it, several meetings are actually just a bit bogged down. (...). But last week we also had a meeting, but I was not there because I was at home in quarantine."* – BAAMA02.
- *"At the moment it is a bit on hold. Also because working from home is of course very different from working at the office. So you notice that this change has ensured that the online suggestion system is now on hold. We did focus on this at the beginning of the year, but for example we no longer have the day start we had before. We have it, but it just has a different structure."* – CCWE02.
- *"Well and with corona you can see that watering down. Everyone had different things to do at some point."* – DAMA01.

It is important to mention these changes and to understand that these shifts in society and in the business sector might cause more negative outcomes then would otherwise be the case. Moreover, it could have been the case that the structure of the innovation process within the organizations would have been further developed by now, if it had been evolved 'undisturbed'. Nevertheless, the results will focus on the currently observed HRM activities that can enhance and/or inhibit the implementation of ideas submitted through an online suggestion system.

Influential HRM activities on implementation

Tables 4-7 represent the most regularly observed HRM activities per organization that can enhance and/or inhibit the implementation of innovative ideas by work-floor employees. The activities, which are divided into the three dimensions of the AMO-model and listed in order of most common, are supported by sample quotes. These sample quotes are representing either a positive or a negative factor, indicated by '+' for positive, and '-' for negative. The quotes are classified as positive or negative based on both what was said literally by the interviewee and the interpretation given to it afterwards during

the various coding stages. In addition, the HRM activities are linked to the online suggestion system to clarify how the HRM activities have a potential effect on the implementation through an online suggestion system. It also shows how the online suggestion system can support the HRM activities. To clarify, during the interviews it became clear that the online suggestion system can help support the HRM activities to make them more effective. So there are several HRM activities that seem to enhance and/or inhibit the implementation of innovative ideas in the context of an online suggestion system, but the online suggestion system can also support certain HRM activities within the innovation process. It is also possible that with certain HRM activities no such link is found and, in that case, the field is left blank.

Table 4. HRM activities within SocialSecure Inc. that inhibit or enhance the implementation of innovative ideas by work-floor employees.

Area	HRM activity	Sample quotes	Online suggestion system
Ability of employees at the implementation phase	*Assess for innovation*	+ "Even with people who have been doing their job for five years, they simply lack certain knowledge. They have also recently had a so-called skills task matrix filled in. just to indicate, that was just a whole set with activities in which they had to judge themselves, like how far are you? Are you in green, red or orange." – AAMA01 - "But if you do not choose it (for your assessment) then you would not be told at the end of the final assessment that you have not improved." – AAWE03	+/- Online suggestion system is not included in the assessment for implementation.
	Training and development: training for innovation	+ "And what is required for this is that your employees can keep up. And that also means that hey sometimes have to go through a certain improvement. And it differs a lot per function, but we give them the opportunity either in terms of training or in terms of something else so that they can continuously improve and work on themselves." – ADHR01 - "The course that I am doing is in my own time. Occasionally you are allowed to spend an hour during working hours, but it is not the intention that you will do an entire training during working hours." – ABWE04	
	Recruitment for innovative employees	+ "The people I am hiring now are mainly people with an improvement mindset who show ownership." – AAMA01 + "There is going to be a shift from business unit manager. And then we also try to attract someone who is actually concerned with innovation." – ADHR01	- Online suggestion system is not known to HRM department and therefore not used in the recruitment process.
	Feedback about idea	+ "I try to ask the kind of questions so that someone eventually comes back with a better idea, instead of us shooting it down completely." – ABMA03	- Employees that do not have access to the online suggestion system cannot get feedback on all ideas.
	Training and development: training for online suggestion system	+ "They would initially do a training. But then came corona, so that did not happen. So they have given webinars (…) everyone can watch and ask questions." – AAWE01 - "He (i.e. the online suggestion system) was once introduced to SocialSecure Inc. and we did not get a good explanation on how it works and what you can do with it." – ABMA03	- Many do not know how the online suggestion system can support the implementation.
Motivation of employees at the implementation phase	*Communication about the implementation*	+ "First, you have to spend a lot of time sharing that vision that you have with people. (…). We have to keep repeating that and do it regularly. Special sessions are done with people for this. And that works very well." – ACMAS02 + "Now we have a day start once a week and then once a week a joint week start with other employees of the team. And we simply discuss what has happened in recent weeks, where do we want to go. And there is just open talk about the state of affairs and that also stimulates innovation." - AAWE02 - "The risk is that if the top only sends numbers, the risk of people not wanting is high. (…) I still have the feeling that I am forced to go	+ Online suggestion system is used to communicate. + Online suggestion system is used to support regular meetings. - Online suggestion system is not used by all employees, teams and departments.

		somewhere that I actually disagree with or something. Well that does something to the motivation." – ACMAS02	
	Voicing expectations towards employees	+ "There is of course a policy that is established from a higher hand. And well that will usually be that they want to get more customers of course. So in that sense it is encouraged to all think about how can we keep our services up to standard with even more customers." – AAWE01 - "It differs a lot per team whether that is actually expected of you in your role. And that is not always directly linked to that senior category, but really depends on what role you have." – ADHR01 - "What struck me is that there was a very rigid way of thinking in terms of functions. In my team you have juniors, mediors, and seniors. (…). in groups it is very much the idea if you are a senior then you are all-knowing and you are involved in everything and you do the difficult work. And as a medior then you know 'I don't have to because that's what seniors are for'." – AAMA01	- No expectations are voiced towards employees concerning the online suggestion system.
	Assessed for innovation	+ "In our assessment at the beginning of the year we had agreed that everyone must implement three ideas. And then we capture together what we will do and during the bilateral consultations we test every now and then how things are going, what have you done. So people are being assessed for it." – ABMA03 - "But if you do not choose it (for your assessment) then you would not be told at the end of the final assessment that you have not improved." – AAWE03	+/- Online suggestion system is not included in the assessment for implementations.
	Support from manager	+ "Especially from my role, I have to establish a culture that improvement pays off. (…) Also the people who have this intrinsic feeling of 'doesn't really seem necessary'. Just to indicate that working at SocialSecure Inc. is not only about processing a file, but that improving is an important part of your work." – AAMA01 - "This person in question, he just doesn't want it. He just wants to work hard and he really works. He handles twice as many tasks as the rest does. (..). So that he does not improve on that part, I leave that for what it is." – AMBA03	+/- It is not expected of the employees that they ensure implementation by means of the online suggestion system. + Online suggestion system is used to record who is responsible for idea.
	Rewarded for innovation	+ "You have seven elements that you can get a bonus on. So if you just did very well on all seven, you will receive a bonus of 120%, for example if you have not done two improvement actions, you will receive a bonus of 100%." – ABMA03 - "And we did a staff survey last year, and 57% of people said they do not feel stimulated by this kind of thing. By such a bonus month so to speak." – ACMAS02	+/- Bonus does not include any mention of the use of an online suggestion system.
Opportunity of the employees at the implementation phase	*Meetings to support the implementation process*	+ "Well, we often have evaluation moments, so bilateral meetings with our managers. Meetings are often immediately scheduled as soon as there is an idea that needs to be implemented." – AAWE02 - "A lot of ideas are being mentioned, for example, during the daystart. But I think that those ideas are being shouted and nothing else is done with them." – AAWE01	+ Online suggestion system is used to support regular meetings
	Task composition	+ "recently someone has been appointed as senior within a team. (…) but really to make those process improvements, because that person is very sharp and good at this and also at the implementation of it." – ADHR01 - "Of course I was given the task of keeping up with that (implementation). Maybe that's why it's a little less because they (other employees) might not really see that as a task." – AAWE03	- It differs per department whether the online suggestion system is seen as part of the job responsibilities. - The feeling exists that the online suggestion system is part of only certain functions.
	Creating time for employees to innovate	+ "We are going to offer a number of workshops. (…). Okay what happens then, they have to register for that. So on three different days. I say ok what happens then? Will their work be put on hold? Yes their work will be put on hold. I say ok, but then we have to look for a solution that at that moment people who are not there for a few hours that their work is handed over to colleagues. So that is now something that is being set in motion." – ADHR01	

		- "No but for example, the course I am doing is in my own free time. Occasionally you are allowed to spend an hour during working hours, but in any case it is not necessarily the intention that you will do an entire training during working hours." – ABWE04	
	Feedback about idea	+ "If something (i.e. an idea) does not get selected, they (i.e. employees) know immediately. Then I indicate that it is not going to happen. That is what we discuss with each other. Or if it does get selected, then it is of course good news." – AAWE03	- Employees that do not have access to the online suggestion system cannot get feedback on all ideas.

Table 5. HRM activities within Machine Inc. that inhibit or enhance the implementation of innovative ideas by work-floor employees.

Area	HRM activity	Sample quotes	Online suggestion system
Ability of employees at the implementation phase	*Support from manager*	+ "And also give guidance. That they (i.e. employees) know how that will go, improving. And what you have to do for it and what do you encounter." – BABMA03 - "Well, a manager should of course be able to give guidance to the people below him, yes how should I say that, they should be able to lead. But if the manager can't do that, little will happen." – BAAWEV04	
	Training and development: training for online toolbox	+ "We had help from a consultant in the beginning. He taught us a number of things, how you can best tackle things." – BBWESV02 - "It is more the older guard who would like to be given some tools to clarify the use of the online suggestion system." – BAMAV01 - "Some people have problems with that. They get lost in the program and just need an explanation to be properly guided." – BAMAV01	- Consult about/training for the online suggestion system is only available for the innovation team.
	Training and development: training for innovation	+ "The intention was actually that we started with a course on continuous improvement and about how to round of problems and how you can do that in terms of lists and adding structure to them." – BDWESV01 - "We have not organized training courses in change management or how to guide those ideas." – BEHR01	+ Online suggestion system used to look back and learn from previous ideas.
Motivation of employees at the implementation phase	*Communication about the implementation*	+ "Where we want to go to is that from the innovation group, they will give more and more presentations on the current improvements that are happening and what the status is and what we encounter or what is happening. Or what still needs to be done." – BABMA03 - "When I got seated in a conference room and then all of a sudden a paper was on the door. That was an entire A4 page full of meeting guidelines. Nobody is going to read that. It was an improvement point that came from the innovation group. (…). This has not been manifested company-wide. It feels to me that they discussed this within the innovation group and this has come out.(…). And then I think is this the right way to propagate it like that? I don't know." – BEHR01 - "So now it comes up on my list as an improvement point, while I have already discussed this in another consultation and we have already chosen whether or not to tackle it. And then you have a bit of an overlap because there are two systems." – BEHR01	+ Online suggestion system is used to communicate. - Multiple systems are used which negatively impacts the communication.
	Voicing expectations towards employees	+ "Well I just reported last Wednesday that I want to see one proposal from everyone from A to Z in the coming year and that I will solve that with them. So that they are actively involved in working towards the solution." – BABMA03 + "I think they expect it from the entire company, but especially the innovation group. Because they have to put a little more focus on it." – BCWEV03 - "Creating clarity among employees, what is exactly expected of them. That was not there in the beginning." – BAMAV01	- Less expectations towards work-floor employees concerning the online suggestion system and implementation than towards the innovation team.
	Feedback about idea	+ "Then you also demotivate again. So if you do it then you also have to substantiate it very well. And don't just say no bluntly. You really have to substantiate what why you are not doing it. Why you can't." – BAAMA02	+/- Online suggestion system is not used by work-floor employees. Therefore, no link is found.

		- "The most important thing is, and we really fall short on that, progress, finish, and, above all, provide feedback on what happened. And again that may well be that you are not going to do anything with it for such and such reasons. We don't have the budget, it is too difficult, other things are more important, but provide feedback to that person so that the expectations are clear." – BDWESV01	
	Support from organization	+ "If improvement wants to be a success in an organization, then the entire organization must believe in it and declare its willingness to go along with it. And I must say, my previous employer, where that has become e a success, the director simply propagated. That was discussed from top to bottom, it took shape and they eventually started working on it." – BABMA03 - "I actually think that is everywhere like if it is not motivated from above, the motivation does not come quickly." – BCWEV03	- Organization (directors/HRM department) does not, in any way, get involved with online suggestion system.
Opportunity of employees at the implementation phase	*Feedback about idea*	+ "Where does the idea come from. If it comes from someone in the workplace, you should involve them in some way anyway. This can also simply be giving feedback when something has or has not been completed or has been completed." – BDWESV01 - "The moment that input is really useful for rounding it up properly and solving the problem, then they are involved. When they cannot contribute very much in terms of content, and that is often my estimate now, then you inform them more about the current status." – BDWESV01	+/- Online suggestion system is not used by work-floor employees. - Innovation team decides whether work-floor employee can contribute to the implementation.
	Creating time for employees to innovate	+ "But if he sees the improvement himself, then a lot of time can be made available for it." – BCWEV03 +/- "Time can be made available for it. So if there is an idea and an employee indicates: I would like to be involved in it, then he will get time for that. Only we are a production company. We are not a company with all layers, all consultation structures, all extra functions with extra capacity. We do not have that at our disposal." – BEHR01	
	Task composition	+ "Of course just the MT members because that is just part of their position. If you are working on a higher level you should work on it on a daily basis. And you yourself are actually continuously improving. That is just part of that." – BEHR01 - "The innovation team that is not, you just do it besides your regular work. So and that is also expected by those managers of those different departments of those people. So it is not the case that you get time besides your work for the innovation team" – BEHR01	+ Working with the online suggestion system is part of job responsibilities of the innovation team. - Online suggestion system is not part of job responsibilities of other employees.

Table 6. HRM activities within Energy Inc. that inhibit or enhance the implementation of innovative ideas by work-floor employees.

Area	**HRM activity**	**Sample quotes**	**Online suggestion system**
Ability of employees at the implementation phase	*Training and development: training for innovation*	+ "One is, and that has also fallen a bit in the water this year with corona. But all employees within Energy Inc. receive yellow belt training. (…). But everyone who has worked here for more than a year has received yellow belt training." – CAMA01 - "Honestly, no. We really did it with a very large group of people, the green belts. And I notice that actually the learned way of working is half applied. And it is often that when you use it (i.e. the knowledge), you do not use the whole system but a little bit of it." – CBWE03	+ Online suggestion system used to analyse ideas and to measure how long it would take to implement. - No training explicitly for online suggestion system.
	Assess for innovation	+ "For example during the assessment interview. Then they have to judge you whether you are functioning sufficient, good or excellent. You are only excellent if you had a very good idea and implemented it and then you hear afterwards oh I should have done that for an excellent, okay. Well and then the following year I will strive for that." – CAWES01 + "That is of course for me as an innovation specialist it is just an essential part of my job. So I am indeed assessed on that. They really just look at how I ran projects, did I run them well, how has my communication been. And it is not that they really look at the state of the online suggestion system." – CBWE03	+/- Online suggestion system is not included in the assessment for implementations.

		- "It is not the core of the function, right? So if an employee really lags behind in contributing to continuous improvement, it is not the case that the employee immediately receives an unsatisfactory assessment. But it will be very difficult for that employee to get an above-average rating." – CAMA01	
	Support from manager	+ "You also have to help an employee. You simply see that not every employee always has the same amount of experience with work instructions or does not know exactly who they should consult, or who can check their work. (…). So you also have to put some help in it." – CAMA01 - "I'm not going to train him to make sure he gets the right expertise to fix that problem. No, then we will place it with someone who does have the right expertise and who has more time and space because it is part of their duties." – CCMA03	
	Recruitment for innovative employees	+ "We have always recruited with the idea that everyone should be able to do everything. (…). But with that that idea in mind, recruitment within the organization has always been done at hbo-level. That also means that in general most employees really do have the intellectual capacity or the kind of conceptual thinking ability to really be able to reflect on one's own work." – CAMA01 - "We now look very closely at the profile of an employee, also whether they bring enthusiasm to start with innovations. But I do not want to say that I am specifically looking for that." – CDHR01	+ One employee was hired to ensure that innovation became part of the job within the whole organization. - When said employee left, innovation and the online suggestion system became less of a topic. No new employee has been appointed.
Motivation of employees at the implementation phase	*Communication about the implementation*	+ "And then it is communicated, widely communicated. Because maybe other teams can also use it. And then in the online suggestion system, the improvement has been completed." - CCMA03 - "I would, for example, I don't know if that is possible, but I might want to see it (i.e. improvements) from other teams. And I might want to organize something in that because people get lost there quite quickly." – CBWE03 - "Not at all. I even told the scrum team, guys what are you all doing? Can you please keep us informed? Well then after a year they decided to send us a report once a month." – CAWES01	+ Online suggestion system used for overview and to make the ideas from different departments more transparent. - Online suggestion system barely used to view implementations. Not everyone has access/is aware of the online suggestion system.
	Voicing expectations towards employees	+ "At employee level, we actually have two functions. And that is an operations employee and a specialist operations. And in both positions, it is noted that we expect the employee to perform certain tasks, (…), but also that he or she comes with improvement ideas, that they contribute to the realization of improvement ideas." – CAMA01 - "Solving it yourself is not something we expect from an employee." – CBMA02	- Use of online suggestion system is not expected by management.
	Task composition	+ "You must of course assess and reward people, so in the regular assessment you look to what extent people meet their job profile and so there is explicit reference to the job profile that states: you must do the work well, but continuous improvement of the work is also part of the job. So it also takes part in the assessment of the employees." – CAMA01 - "It is something that was taken as a team goal last year, but if you look at it, when you weigh it against other team goals, then of course the other team goals weigh much more heavily. Because it forms the basis of the function most employees have." – CCWE02 - "That this does not happen at the employee level or at the service employee level is also logical. Because that is simply not part of their job description." – CCMA03	+ Online suggestion system is seen as job responsibility by the innovation experts. - Online suggestion system is not seen as job responsibility, unless you hold the position of innovation expert.
	Innovation as part of team goals	+ "It is mainly for the team. So for example, if we look at last year, we had the condition that at least ten improvements must be completed. But it was not by definition that we indicated that every employee should have one (i.e. implementation)." – CCWE02 - "I only know what we had as a team goal, but I don't know what was decided by other team leaders regarding the online suggestion system." – CCWE02	+ Included in team goals, of some teams, to make use of the online suggestion system.

		- "I think it has gradually diminished from above. (…). It was not included in the operational goals at the time. In which you see that the team leaders do not include them in their own team goals. And so you see that it no longer receives time and attention in your regular planning, in your daily activities." – CCMA03	
	Assess for innovation	+ "You must of course assess and reward people, so in the regular assessment you look to what extent people meet their job profile and so there is explicit reference to the job profile that states: you must do the work well, but continuous improvement of the work is also part of the job. So it also takes part in the assessment of the employees." – CAMA01 + "Recently of course at the end of the year I get another nice assessment interview. And when you hear well, we are really positively surprised, yes that gives you the motivation to keep going again and also by just saying throughout that it is good that you are working on it." – CBWE03	- Online suggestion system is not included in the assessment for implementations.
	Rewarded for innovation	+ "Well actually we work with a bonus, a bonus arrangement so to speak. (…). There is literally a sum of money that someone gets. If you include that in the bonus objectives, that is of course a very good motivation for people to really look for okay what could be better, what will it yield, in order to ultimately achieve results." – CBMA02 - "In terms of reward, nothing is done for it (i.e. in combination with online suggestion system). No training is put on it. There will be no people, you have to take your chances. If you don't grab them, then no one is asking you: isn't this something for you?" – CAWES01	+/- Not rewarded for use of online suggestion system.
Opportunity of employees at the implementation phase	*Task composition*	+ "We now have many employees that want to start doing things, you also get that space. And when you do that more often, then we also have a separate function for that. Then you are a process expert and then you can really get started with continuous improvement and put in a lot of time there." – CDHR01 - "It becomes more important when it is part of your function. (…). Or if we just say hey it is nice if you do that but there is no framework. Then they will pay attention to where those expectations are set, because that ultimately determines your salary or your bonus." – CCMA03	+ Online suggestion system is accessible for all innovation experts as it is deemed their job responsibility. - Online suggestion system is not perceived as job responsibility for work-floor employees.
	Meetings to support the implementation process	+ "What happens the most is we have a day start or a week start. Basically just means that we briefly discuss with the whole team what happened and what are we going to do. So then we kind of share the results with each other. (…). Certainly employees who do not yet know their way within the team." – CBMA02 - "The process expert has received all the information from us. Then he says the presentation will be during the Christmas holidays. I say yes but then I am free. Yes then I'll do it without you. You know what I mean?" – CAWES01	+ Online suggestion system used to support regular meetings.
	Feedback about idea	+ "We always keep tracking the idea whose idea it originally was based on the online suggestion system. So we will always try to keep those employees engaged and provide feedback. (…). Now that is much more transparent, (…) we try to ensure that the employee also receives feedback and remains engaged." – CAMA01 - It crashes (i.e. the idea), but then help me as your role as process expert to perhaps phrase it differently or package it differently you know. Or tell me to make a slightly different problem definition in order to get it through. But it (i.e. the idea) really just bounces back. And I don't know what to do with it." – CAWES01	+ Online suggestion system to record whose idea it was originally to give feedback to those employees and to keep them engaged.
	Creating time for employees to innovate	+ "We now have a lot of employees if you want to get started with something, then you get that time and space. And when you do that more often, then we also have a separate function for it. Then you are a process expert and then you can really get started with continuous improvement and put in a lot of time there." – CDHR01 - "It also depends on what it will yield. Is it something that will make our work much easier? And will it ensure that the customer will call less? Yes, then I will make the necessary time for that." – CCMA03	

		- "I have to request this (i.e. getting time for innovation) from our planning department two weeks in advance. (…). So I really have to indicate this well in advance. So there it is, that is actually the first delay you have. Because you have to wait two weeks." – CBWE03

Table 7. HRM activities within Construction Inc. that inhibit or enhance the implementation of innovative ideas by work-floor employees through online suggestion systems.

Area	HRM activity	Sample quotes	Online suggestion system
Ability of employees at the implementation phase	*Assess for innovation*	+ "Fairly strict remuneration system with making agreements, interim assessment, assessments. We have all put it in the systems, all kinds of boxes with financial goals and safety goals and also qualitative goals to make things better. Yes, that's something the manager must think about." – DAMA01 - "I think that there is nothing wrong with linking someone's name to the idea, but you have to be careful that you do not hang some kind of assessment on that. Like the more is on your name the better you do or something. I don't think that that or the more money you have saved the better you are. I think you should be careful with that." – DAMA01	+/- Online suggestion system is not included in the assessment for implementation.
	Support from manager	+ "Well sometimes it is difficult. Because of course we have those colours because you have blue people who think very process-based and if they have to deviate from that they find that very difficult. So sometimes you also have to help. It is also important to coach them in this a little bit." – DBMA02	
Motivation of employees at the implementation phase	*Communication about the implementation*	+ "You can share it with others, I then made it a success through the tool. (…). Put it in the newsletter like we have a weekly update for all employees. So then you see it is going to arise among the employees. And so an initiative was picked up which was actually at a standstill." – DAMA01 - "Usually the improvement programs belong to the managers, the people in the office. They (i.e. employees that work outside) often have complaints, they have ideas, but they are not listened to. Or they say: what are you all doing at the office? Well that also happens here, that is often said." – DAMA01	+/- Online suggestion system not used to communicate implementations.
	Voicing expectations towards employees	+ "Instead of people going to the assembly line and then run production. Because we are originally a traditional construction company, but we just want to grow into a smart construction organization. And by stimulating these kinds of things, guiding people in this, you just see that we get there." – DBMA02 - "As long as we don't hear from our managers, it will be fine. So people hind behind that. The manager is also important. If he does not have a stimulating role, then that will also demotivate. – DBMA02	+/- In some parts of the organization the use of the online suggestion system is stimulated.
	Assessed for innovation	+ "We don't have that yet, but it is the plan. And that is mainly due to the urgency of the management. Soon we will really focus on the purchasing department here. For example, they have to put at least five improvement initiatives in the online suggestion system per year. Well a number of people are responsible for that. If that doesn't happen then I don't know what will happen." – DWES01 - "Look, if you are just rewarded based on the improvements that are not included in the tool, but are in the department plan, why would you make all kinds of improvements, what is the incentive and the drive to implement all kinds of improvements? Because you only get busier when you do that." – DAMA01	+/- Online suggestion system is not included in the assessment for implementation.
	Rewarded for innovation	+ "And so that means that on an individual level, you will be judged on by the end of the year. Does your increase percentage depend on that. Because your remuneration and assessment are linked to salary." – DAMA01 - "If you have to choose and you are busy, then you will first choose what is on your list of your results agreements on which your reward depends, I think." – DAMA01	+/- Not rewarded for using the online suggestion system.
Opportunity of employees at the	*Innovation as part of individual goals*	+ "So you make a personal annual plan. And included are a number of factors that we consider important, how are you going to improve in	

implementation phase		this in the coming year? What do you need for that? In terms of training, in terms of competence development." – DBMA02 - "It is usually quite organized in the department plans. (…). I think that we leave improvements that are not captured in the department plan." - DAMA01	
	Task composition	+ "For the sake of continuity, I was asked if I would still like to help in the organization, including quite a lot of issues that others don't get around to handling. So I am mainly concerned with improvements within the organization." – DAMA01	+ Online suggestion system is linked to task composition of innovation function.
	Support from manager	+ "I think they should continuously encourage that in the various consultations. (…). Because you often see in the organization is that people have all sorts of ideas and that you say something like: hey that's a good idea, will you handle that? Then people quickly think oops, they get scared and they are suddenly the owner of the idea. (…). But we want to activate that people come up with suggestions for improvement and we also want to encourage them to actually do something with them." – DBMA02	

Ability-enhancing HRM activities

The sample quotes in the tables 4-7 convey a general picture of how the innovation process is enabled by different HRM activities in the four organizations. Moreover, it shows that the different organizations have many HRM activities in common. First, for the area 'The ability of employees at the implementation phase', the most common HRM activities are 'Assessed for innovation', 'Training for innovation', and 'Support from manager'.

Assessed for innovation

In all organizations, except for Machine Inc., an assessment focused on innovation takes place. When employees are assessed for innovation, this can be seen positively influencing the implementation of ideas. For employees to successfully implement innovative ideas, they need to function well within their own field of work and have the right (amount of) knowledge, which they sometimes lack (AAMA01). By assessing the work-floor employees on innovation, for example on how well they understand the innovation process or how they act within implementation-specific projects, both the company and the work-floor employees themselves know what needs to be done to get them to that desired level of implementation skills. Subsequently, an estimate can be made to what extent and in which areas training or extra support is needed. For example, SocialSecure Inc. presents work-floor employees with a skills task matrix they can fill in on their own (AAMA01). This indicates where employees think they are when it comes to their level of implementation skills. SocialSecure Inc. also makes it possible for employees to get assessed on innovation as part of their annual goals. It does however come with some limitations. Work-floor employees can choose whether they are assessed on innovation. They have the opportunity to choose other aspects to be assessed on and exclude innovation as a whole. When it comes to assessing the employees within Energy Inc., innovation is seen as a 'side issue' for which employees can get a higher score on their assessment, but it is not mandatory to achieve. It is even said that the other (team) goals on which employees are assessed weigh much higher (CCWE02), and as a result the implementation is perceived as less important. Energy Inc. does have employees who have been specifically deployed in positions to supervise the innovation process and who are always assessed for

innovation. However, this is no longer considered EDI as they are specifically assigned the task of innovation (Kesting & Ulhøi, 2010). Moreover, Construction Inc. is still in the starting phase of the online suggestion system and is planning on focussing the assessment of employees more on the innovation part of their function. They also include "qualitative goals to make things better" (DAMA01) to the job responsibilities and assessment to stimulate the employees into getting involved with innovation. The online suggestion system is however not included in the assessment process for work-floor employees in any of the four studied companies. If this were the case, this would mean that the theory of EDI has not been taken into account. Not making the online suggestion system mandatory can be therefore considered as having a positive effect. In contrast to the work-floor employees, this is the case for innovation experts in Energy Inc. The use of the online suggestion system is expected of them because it is seen as part of their task composition. The same applies for the innovation team in Machine Inc. Altogether, it can be seen that job responsibility and assessment are linked to each other in the organizations. Where implementation and the use of an online suggestion system is not believed to be part of the job responsibilities, it is not assessed most of the time. Within Energy Inc., where continuous improvement and the implementing of innovative ideas is seen as part of work-floor employees' job responsibilities, the employees have the opportunity to get assessed on that aspect of their work, despite it not being written literally in their job description. When they choose to get assessed on that particular aspect, it appears to have a positive effect on the implementation of innovative ideas.

The online suggestion system is mostly used to create a structured overview of all the ideas that exist within the organizations. This means that when employees do get assessed on innovation, the online suggestion system is a helpful tool to see to what extent and how these employees are involved with the implementation of innovative ideas. In this case, the online suggestion system is supporting the HRM activity of assessing employees.

Training for innovation

The HRM activity 'Training for innovation' is also clearly reflected in the ability-enhancing area within three of the four studied companies. SocialSecure Inc., Machine Inc., and Energy Inc. offer courses to their work-floor employees that are explicitly focussed on innovation. Within SocialSecure Inc., the training opportunities are facilitated by means of a so called 'personal development budget' which enables work-floor employees to choose a training or course of their choice (ACMAS02). Next to this, SocialSecure Inc. has a training policy for the regular work activities. This policy consists out of training courses that are required for the employee's position and, in addition to this, courses that help employees gain the knowledge and skills they would need for a promotion or to strengthen their position in their current function. When employees do not possess the right (amount of) knowledge about their own field of work, the implementation could be negatively influenced (AAMA01). So, not only is training for innovation important for the implementation of innovative ideas, but also training for the employees' own field of work. In addition, SocialSecure Inc. offered an online training about the use of the online suggestion system for the work-floor employees (AAWE01). Unlike SocialSecure Inc., Machine Inc.

does not offer any training concerning innovation (BEHR01). However, an employee that is part of the innovation team has said that a course for how to handle problem solving is being offered by Coimbee (n.d.) (BDWESV01). How employees can tackle problems or ideas the best way is therefore not taught by the company itself, but by an external party. Nevertheless, this course gives employees information about how to handle ideas in a structured manner. This is a standard procedure of Coimbee (n.d.) that they offer every company that starts using their online suggestions system. However, this course is generally not given to work-floor employees but only to those who hold positions related to innovation or those who are higher in the organization hierarchy. Therefore, it may be possible that the HRM activity 'Training for innovation' in some cases only affects the implementation at the level of innovation specialists rather than at the level of the work-floor employees. The third company in which training for innovation takes place, Energy Inc., has specific lean yellow belt training that is mandatory for all employees. The lean philosophy is characterized by producing services or products at the lowest costs possible and as fast as the customer requires (Bhamu & Sangwan, 2014). The lean-based training gives employees in all levels of the organization an idea of how they can recognize ideas and opportunities for improvement and how they can improve within their own field of work. In addition, the company offers lean green belt courses for certain (innovation-specific) functions, which go into more depth about the implementation phase and how this phase should be structured (CAMA01). The lean black belt course is specifically for management and is about creating an innovation culture and executing major improvement programs. Similarly to Machine Inc., Energy Inc. does have training specifically for innovation and the implementation phase of innovation, but this is mostly reserved for employees with innovation-specific functions and not the work-floor employees.

Support from manager

Lastly, the support provided by the managers of the work-floor employees can be seen as an ability-enhancing HRM activity. This is mainly due to the knowledge transferring and coaching approach that the managers take to enable work-floor employees to implement ideas. This activity is prominently visible in three of the four organizations. Within Machine Inc., Energy Inc., and Construction Inc., the managers indicate that they feel that it is their job responsibility to support and coach employees who do not have the right capabilities or the knowledge to be able to contribute to the implementation of innovative ideas: *"I take care of the stuff and they carry it out and they have the idea and they carry it out for the rest. With some support from me, some advice and stuff."* – BAAMA02. However, within SocialSecure Inc., work-floor employees are supported by their managers but this appears to be more present within the idea generation phase and less within the implementation phase.

Seeing that in some cases the employees carry out the implementation, it is noticeable that a lot of the work-floor employees do not have access to the online suggestion system. Even though this is seen as a helpful and supporting tool to use within the implementation phase. With the support of managers this could be achieved, if this is in line with the view of the organization as some organizations do not feel it is necessary for work-floor employees to have access to the online suggestion system.

To sum up, assessing for implementation, training for implementation, and supporting employees are seen as important activities within the innovation process to secure a successful implementation phase. When the assessment for innovation and, more specifically the assessment for the implementation phase, is left out, employees do not perceive this as part of their job responsibilities. This results in other activities getting precedence because those are seen as more important due to the consequences they entail when they are not executed (properly). Moreover, assessment and task composition seem to go hand in hand within the innovation process. Not getting assessed on implementation or innovation in general seems to contribute to the notion that innovation 'belongs' to other functions and not to those of the work-floor employees. Next to this, training on implementation is mostly directed at the employees who have specific innovation functions. Work-floor employees are usually excluded from these implementation-related courses. However, when they do have the opportunity to participate in innovation-related courses, they themselves do not always choose to participate, even though training for innovation and implementation seems to be an enhancing HRM activity for implementation. The last activity, supporting employees, is important for the implementation due to the knowledge transfer to employees and the coaching role that managers take on. This increases the ability to work on implementation of innovative ideas at the work-floor employee level.

Motivation-enhancing activities

For the second area of the AMO-model, 'The motivation of employees at the implementation phase', the most common HRM activities are 'Communication about the implementation', 'Voicing expectations towards employees', 'Assessed for innovation', and 'Rewarded for innovation'.

Communication about the implementation

Within all four organizations, it has been clearly stated that the communication about the implementation is important to successfully implement an idea. The most important reason to use this activity is to create support among the employees. Work-floor employees have mentioned within the interviews that when they do not see the reason or the added value of a new implementation, the implementation will most likely fail. For instance, not getting informed (enough) is usually met with a negative reaction (CAWES01). In addition, when it is communicated in an undesirable manner, some believe that this could have a negative effect on the implementation of an idea (BEHR01). Finally, the content of the communicated implementation is seen as an important aspect for the implementation to be accepted by the employees (ACMAS02). When work-floor employees do not understand why an idea is being implemented or they disagree with it, the right kind of communication can ensure a more successful implementation. Clearly, it can be stated that the work-floor employees are very important for the implementation phase. Because if their support is missing, the likelihood of a successful implementation seems unlikely.

When it comes to the online suggestion system, employees from SocialSecure Inc. and Machine Inc. have mentioned that the tool is sometimes used to communicate. Therefore, the online suggestion

system is supporting the HRM activity 'communication about the implementation'. However, this does not happen at the work-floor level as many work-floor employees do not have access to the online suggestion system. When employees do not have access to the online suggestion system and others do, it could mean they are missing information they would otherwise have received (ACMAS02).

Voicing expectations towards employees

Not only does the communication about the implementation matter, voicing expectations towards employees is also of great importance. It is important to let employees know what is expected of them and to what extent the organization would like to see them participate within the innovation process. Nevertheless, it should not be construed as a mandatory process in which all employees have to participate, as this would take away the concept of EDI. This concept being that work-floor employees who are not specifically assigned the task of innovation are joining the innovation process (Kesting & Ulhøi, 2010). However, the problem that arises when no expectations concerning the innovation process are expressed towards the employees, is that innovation is not seen as part of their job responsibility (AAMA01). Instead of not voicing expectations but letting work-floor employees know what is expected of them, they will start to shift and get more involved with the innovation process: *"Instead of people going to the assembly line and then run production. Because we are originally a traditional construction company, but we just want to grow into a smart construction organization. And by stimulating these kinds of things, guiding people in this, you just see that we get there."* – DBMA02. The feeling that continuous improvement, the implementation of ideas in particular, is expected of you as a work-floor employee, makes it feel more as part of your job responsibilities. This is not only seen at the work-floor employee level, but also at the manager/director level. For example, an HRM employee of SocialSecure Inc. mentioned that their HRM department does not get involved with the innovation process or the online suggestion system because they do not experience it as part of their job responsibility. It is seen as something that is invested within the domains or the teams and not the HRM department (ADHR01). Moreover, a manager of Energy Inc. described their role in the innovation process as minimal, and instead has it outsources to someone else within the team (CCMA03). When employees in all levels of the organization do not feel that innovation is part of their job responsibilities, it might get more challenging to get ideas to the implementation phase and to bring them to a successful outcome.

Expectations concerning the online suggestion system in particular, are scarce within all four organizations. Within SocialSecure Inc., Machine Inc. and Energy Inc., it is not expected of employees to make use of the online suggestion system. This does not alter the fact that some employees make use of the online suggestion system anyway as they are intrinsically motivated to do so (CBMA02). However, using the online suggestion system is expected of employees with specific innovation-related functions, such as innovation specialists or employees who are part of the innovation team. Nevertheless, it can be stated that no expectations concerning the online suggestion system are expressed towards the work-floor employees.

Assessed for innovation

Assessing employees for innovation is seen as an influential HRM activity for motivating work-floor employees to implement innovative ideas. This activity can be linked to 'voicing expectations towards employees'. Assessing employees on their contribution within the innovation process automatically comes with certain expectations that have to be met to get a good rating on the assessment. Within three of the four companies, these assessments on innovation takes place (see also 'ability-enhancing activities'). Assessing employees is not only influencing the abilities of employees within the implementation phase, but it has also been said to stimulate the motivation towards implementing ideas: *"In the beginning of the year, we had to each provide an improvement, things that you thought oh this can improve our process. And at the end of the year it is checked whether you have done something with it and whether something has come out of it. And that it did not work out completely, that is not necessarily bad, but you must have paid attention to it."* – ABWE04. This factor also seems to be connected to employees perceiving innovation (and especially implementation) as part of their task composition. It does however come with some limitations. For example, in SocialSecure Inc., work-floor employees can choose whether they are assessed on innovation or on other aspects of their work and exclude innovation as a whole.

Rewarded for innovation

Rewarding employees for their innovation efforts is also a common practice to motivate employees within the implementation phase. Whether the effects of rewarding employees is always positive is still up for debate. This is due to the negative relationship between rewards and innovation when employees are already (intrinsically) motivated (Sanders et al., 2010) or when the rewards are based on performance (Fernancez & Moldogaziev, 2012). Nevertheless, it stands out that the majority of the organizations make use of this practice. In three of the four organizations, a rewarding system is linked to the innovation process. According to a self-administered survey, the HRM department of SocialSecure Inc. fount out that 57% of the employees do not feel stimulated by rewarding innovative behaviour, which is maintained through the use of a bonus month (ACMAS02). Just like SocialSecure Inc., Energy Inc. works with a bonus arrangement for innovation. That is, if employees choose to include it in their bonus objectives (CBMA02). The remuneration and assessment of Construction Inc. is also linked to qualitative goals and improvement initiatives. However, a manager has mentioned the dangers of rewarding employees on certain aspects of their job: *"If you have to choose and you are busy, then you will first choose what is on your list of your results agreements on which your reward depends, I think."* – DAMA01. In other words, other tasks do not get priority if employees mostly focus on the activities they are rewarded on. Within the three organizations in which rewarding is part of the assessment for innovation, it is clear that they consider rewarding to be a motivation-enhancing practice for innovation. However, rewarding employees does not appear to be linked to the online suggestion system. When employees are assessed and rewarded on implementation, the online suggestion system is mostly disregarded. Companies mainly look at what has been achieved and how they have acted in this regard

without looking at the use of the online suggestion system. However, the online suggestion system could play a role when rewarding employees, as it tracks who has performed implementation related actions. A downside of this is that only those who have access to the system, have a chance to receive a reward based on their recorded activity (DAMA01).

Looking at the most common HRM activities in the motivation-enhancing area for idea implementation, it becomes clear that the communication about the implementation and voicing the expectations towards employees are seen as the most stimulating activities. Employees want to feel included through communication and they want clarity and transparency about why it is they need to implement something. Moreover, if expectations are not voiced towards employees, they assume it is actually not expected of them, which can lead to a negative impact on the implementation. Even though assessing employees is related to voicing expectations, assessing employees on implementation radiates more obligation. As a consequence, work-floor employees will pay more attention to this part of innovation as they consider it more important themselves. And last, the rewarding of employees can also be linked to assessing employees. When employees choose innovation to be part of their bonus objectives, they are assessed and rewarded accordingly. Even though SocialSecure Inc. has held a survey in which 57% of the employees said they do not feel stimulated by such a reward, this is a common used practice within three of the four companies.

Opportunity-enhancing activities

For the area third area of the AMO-model, 'Opportunity of employees at the implementation phase', the most common HRM practices are 'Task composition', 'Creating time for employees to innovate', and 'Feedback about idea'.

Task composition

When innovation is captured within the task composition of employees, more time and resources are made available for employees to implement their ideas (CDHR01). Within Energy Inc., it is also mentioned that when innovation is part of your function, it becomes automatically more important (CCMA03). However, incorporating innovation into the task composition of work-floor employees is contradictory with the concept of EDI, where innovation is embedded into the daily activities that occur within the employees' task responsibility (Høyrup, 2010). It is not surprising that employees whose job is mainly focused on innovation get more time to engage in continuous improvement, but this also shows the negative effect on implementation and EDI in general of having these innovation-specific functions. The work-floor employees do not see it as their job responsibility anymore and as a result they become less and less involved (AAMA01). Conversely, in Machine Inc. the position of the innovation team members is seen as an ancillary position, even though these employees are specifically appointed the job of innovation team member (BEHR01). The implementation is expected of these employees, but they are expected to do this besides their 'regular work' and therefore do not get much extra time and space to work on the implementations.

Creating time for employees to innovate

Creating time for employees is very important but often job-related, just like described in the previous paragraph. The employees of SocialSecure Inc., Machine Inc., and Energy Inc. describe that time can be made available for employees who want to work on innovative ideas. However, there exists a clear limit in the amount of time that is given and in what way this time and related resources are made available. For example, training focused on innovation is made available in SocialSecure Inc., but one employee mentioned that it is expected to do this training in the employees' own free time (ABWE04). In addition, the work-floor employees of Machine Inc. are under the impression that time can be made available to implement ideas, but only when the manager sees the added value of the improvement himself beforehand (BCWEV03), when there are no or almost none orders that must be completed urgently (BAAMA02), and when the budget to implement an idea has been approved by the overseas office (BAAMA02). Within these frameworks, it is possible to get time to implement ideas. Unlike Machine Inc., within Energy Inc. the work-floor employees are of the impression that time can be made available as long as the employee takes the initiative (CAWES01). There are no strict guidelines or frameworks to be adhered to. It can be stated that within the three organizations where 'creating time for employees to innovate' is discussed, that time can indeed be created, but mostly under certain conditions. Next to this, when employees perceive time to implement ideas, they also feel that there is time to work with the online suggestion system, but there is no time explicitly set aside for using the online suggestion system.

Feedback about ideas

The third most common activity within the opportunity-enhancing practices is getting feedback on ideas, which has been observed within three of the four organizations. Getting feedback on ideas and whether they get selected, increases the opportunity of work-floor employees to get involved in the implementation phase of innovation. Giving feedback enables the work-floor employees to get insight into the idea and thereby increases the opportunity of work-floor employees to get involved: *"For that group of employees who do have the capacities, I try to help them a little more with setting frameworks; well this is who you have to involve, this is the product. And then I also just give feedback on the product so that they will eventually learn that themselves."* – ABMA03. Within Machine Inc., it is stated that employees are not always informed about the current status of submitted ideas (BDWESV01). They are only getting involved when their input is deemed useful from the innovation team's point of view. Giving and receiving feedback ensures a lot of information circularity and different insights from employees from different departments. When this is not done structurally, the implementation of innovative ideas could be negatively impacted. Furthermore, the feedback could and should be going both ways as the knowledge lies in all the different departments and hierarchy levels: *"Because we know best all the innovations we encounter. The management doesn't know what should be changed because we work with those programs all the time and they don't."* – AAWE02. It is the managers and innovation specialists within the organizations that mostly determine whether employees receive feedback within

the implementation phase: *"We always keep tracking the idea whose idea it originally was based on the online suggestion system. So we will always try to keep those employees engaged and provide feedback. (...). Now, that is much more transparent."* - CAMA01. This also indicates that the online suggestion system makes it easier to monitor the employee responsible for entering the idea into the online suggestion system and keeping them informed and, in some occasions, involved in the implementation phase. On the other hand, many employees do not have access to the online suggestion system and can therefore not receive feedback on all of their ideas.

Altogether, the three HRM activities 'Task composition', 'Creating time for employees to innovate', and 'Feedback about idea' can create a greater opportunity for employees to implement innovative ideas that have been submitted through an online suggestion system. When innovation is part of employees' task composition, it becomes more important and employees get more time, resources, support etc. to implement ideas. This can however be detrimental to the work-floor employees as innovation is not always part of their task composition even though they want to get involved in the implementation. Creating time for employees is part of the opportunity-creating aspect, as it gives employees more room to work on implementations and to work with the online suggestion system. On the other hand, working with the online suggestion system is in many cases seen as an additional task that entails extra effort and labour. When employees have the feeling that they do not get enough time to work within the innovation process, they will also be less likely to engage with the online suggestion system. It is therefore important for both the implementation and the online suggestion system that sufficient time is created. Lastly, getting feedback on ideas is important because it can increase the involvement of employees within multiple aspects of the implementation phase. When the current status of an idea is shared, it can be discussed with multiple employees and departments, which increases the opportunity for employees to voice their opinion, which in turn can lead to new insights and a better understanding of the problem and/or idea.

Influential factors of the HRM activities

As can be seen in the previous paragraph, there are several HRM activities that can enhance or inhibit the implementation of innovative ideas that are processed through an online suggestion system. However, these HRM activities have influential factors that can explain why those activities have either a positive or a negative effect on the implementation phase. In other words, they are contextualizing the effect. These factors, in the context of the online suggestion system, should be taken into account when implementing ideas as they can determine whether an HRM activity will become enhancing or inhibiting. By mentioning these factors (table 8), we gain a better understanding of where adjustments need to be made within the innovation process to further develop the implementation phase. Moreover, it will give an insight into which of the HRM activities, mentioned in Tables 4-7, could be coupled to these areas. The factors are listed in order, starting with the most common factors that have been mentioned during the interviews. Next to this, the factors are arranged to show first the positive influence they can have on the HRM activities, and subsequently the implementation phase, after which the

possible negative influence is highlighted. At the latter, the negative effect is usually the result of the factors not being executed correctly or in some cases, not being present within an organization.

Table 8. Influencing factors on the implementation during the implementation phase.

Factors	Influence	Sample quotes	Affected HRM activity
Cooperation within /between teams	Positive	*"Then you are actually in a kind of group from different departments that have a certain view on that."* – AAWE03 *"It is a fairly flat organization, (…). And well, I have access to the drawings so I just look in the structure, I get the relevant parts out, I get the drawings, and I print that out or I discuss it with those guys on the spot here at my computer. (…). And then we contact the engineering department, we discuss the problem, they come down to have a look, then we have already checked the dimensions and the like. And then eventually it gets resolved."* – BABMA03 *"Because often you also notice when you have an idea, then you need someone else to fix certain things because, for example, you do not have the rights yourself. So collaboration is really the key here."* – CCWE02	• *Communication about the implementation* • *Support from manager* • *Feedback about idea*
	Negative	*"Well we had a vacuum cleaner that did not always work well. A large industrial vacuum cleaner. It is actually consulted without the people who have to work with it to buy that vacuum cleaner. (…). Only the old one is used because that one has much more room. (…). So one from the improvement group ordered that."* – BAAWE05 *"Sometimes it is difficult because you are dependent on someone else's schedule. And they may also have to ask questions to their team leader or the person above them or at least their supervisor. So you notice that the more people you work with, the more difficult it becomes."* – CCWE02 *"We had information in all places, all talked past each other: 'what are you talking about, the response times'. And we all had different lists. Yeah what do we mean with this, well that was not clear. So then you continuously talk past each other. Well so then we said hey we have to organize better, we have to make that clearer."* – DAMA01	
Amount of work is too much/ primary work activities take precedence	Negative	*"I think we should be allowed more space for that (i.e. working on innovative ideas). In this case, the team leader cannot do much about it. But we have more work than we can handle properly. As a result, the space is also limited to get started."* – AAWE01 *"It makes a lot of sense if you are very busy and you have a certain deadline for certain machines and parts must be ready, yes then it is at that time then it is sometimes difficult to do certain things because there is simply not much time to be made available for it. And that is very noticeable."* – BAAMA02 *"Employees sometimes have the idea that there is no time. It is often busy. We have to do a lot. (…). So that's why I think that a lot of employees have something like dude, I just do my thing because that has to be done. So I think that's the main barrier. That people feel that there is no time to improve."* – CBMA02 *"What you see is as soon as the management starts to steer, they want something to happen per month or per week. Well then in contrast, time must also be made available for this. So thing X needs to be finalized. As a consequence, thing Y that cannot be worked on. And right now X has to be finished, because I want that, but Y also has to be finished, because the manager wants that."* – DAMA01	• *Creating time for employees to innovate* • *Support from manager* • *Training and development: training for innovation*
Knowledge about implementing ideas	Positive	*"Yes, mainly our department. Because we know best all the innovations we encounter. The management doesn't know what should be changed because we work with those programs all the time and they don't."* – AAWE02 *"Only when it is going to be implemented, then we really have to, the people who have a lot to do with it. So then they are also included."* – BABWEV06 *"Ultimately, you have to make it more concrete and ensure that it can be implemented. (…). So, that employee can really help from practical experience to the idea. Well, and to sharpen the problem, but also to further concretise the solution direction."* – CAMA01	• *Communication about the implementation* • *Training and development: training for innovation*
	Negative	*"You simply see that not every employee always has the same amount of experience with rewriting work instructions or does not know exactly who they should consult or who can check their work. (…) it is really not the case that every employee with us can make a good business case and has*	

		the key figures and the knowledge and skills to do that. So you also have to put in some help." – CAMA01 *"Well, our biggest threshold was that people did not yet knew very well, what exactly an improvement is. So what exactly is the core of an improvement. That was still difficult."* – DWES01	
Dependency on other teams/departments	Positive	*"We have of course all kinds of improvements that can be made and I hope there is still some low-hanging fruit that we can fix ourselves. Because everything we can solve ourselves, we can actually get it solved."* – AAMA01 *"In production, these are often the less big ideas and the employees can simply make decisions in a smaller group."* – BAMAV01	• *Communication about the implementation*
	Negative	*"I think that just a lot of people have ideas for improvement and that group of course has several departments for which they have to do these improvements. So yes, you have to make choices. Who goes first and what is more important at that time? I think that that's the reason."* – AAWE03 *"Look what I just summarized, that idea comes from my group. I have to work on that. But sometimes you also have ideas, you just need other departments. I feel that if that is the case that it will be a bit more difficult."* – BAAMA02 *"Especially when we really need an IT team. So when it is really something technical that needs to be solved. So when an employee cannot do anything about it himself. You often hear coming back: IT is busy, they already have a planning until well say about twelve months into the future."* – CBMA02 *"Recently we had a project. This was about classification of suppliers and this required certain expertise in purchasing and safety. So then a purchasing employee who then needed a safety employee to resolve a particular point. So I think he then went to email or call. Like: what do you know about this? Oh yes I do know. Well then it will be put in the online suggestion system."* – DWES01	
Difficulty of idea	Positive	*"Often it is immediately put into action so yes it is not that we record it somewhere in a program, but it is just immediately that an action arises from it."* – AAWE02 *"Well, we mainly pick the low-hanging fruit, what they call it. So those are projects that are relatively easy, have a lot of effect, and can be done quickly. And those often fall within that 25% (i.e. the 25% of ideas that get implemented)."* – BBWESV02	• *Multiple activities within the whole process of implementation*
	Negative	*"If it is something very high in difficulty then we have to see if it is worth implementing. And whether it is possible at all. And if it is something very easy, then we just pick it up ourselves in the team."* – CCWE02 *"Too many actions, too little depth within the actions. So like adding documents, textual explanation. And a complete integrated overview of a large project, for example that supplierday. That consisted of five teams and each team that had something like yes, it was 200 points that had to be picked up within a certain time. That is not possible in the online suggestion system."* – DWES01	
Other/ multiple systems used (to support main suggestion system)	Positive	*"What we now often see is that we also have reports in Excel and that we go through them. But I actually think that such a online suggestion system can be a good addition to that Excel. Because you will always need Excel for certain figures."* – AAWE02 *"What we actually did is discussing the new items in the online suggestion system every week. What we did then to make that physically or at least to make it visible is that we also put those improvements on a whiteboard. On a magnet thingy."* – CBMA02	• *Communication about the implementation* • *Meetings to support the daystart*
	Negative	*"Well, at SocialSecure Inc. we really work with many different types of systems that do not talk to each other. And not a half year passes without a new system being implemented."* – ABMA03 *"So it now comes up on my list as an area for improvement, while I have already discussed this in the health and safety consultation and there we have chosen whether or not to take on the idea. And then you have a bit of overlap because there are two systems."* – BEHR01 *"And Excel is certainly still used. But I don't really know about that either. So if, for example, person X who sees an improvement, he puts it in his Excel file and then maybe it will be shared with one or two other people, that's it."* – DWES01	
Idea responsibility	Positive	*"Well I think I am, yes everyone always laughs at me, but I am always very much on the; what do we agree on, when will you deliver it. I am always quite there, I am very steadfast in that. The rest of the people always do that very much, they say; yes otherwise I will get 'ABMA03' on my head, I*	• *Voicing expectations towards employees*

	always have to laugh a lot. I just steer a lot on that, and so do other people." – ABMA03 *"So I think that's the power of this online suggestion system is. So if you see an improvement, you put it in, but you actually are. So you are actually also indirectly responsible that that improvement initiative is completed."* – DWES01	• *Assessing for innovation*
Negative	*"So then in that sense in think that not very much ideas are being tackled, because the person who shouts it (i.e. shouting the idea at the daystart) takes no action to actually link implementation to it."* – AAWE01 *"The only drawback I think within this company, what I run into a bit 'who is pulling the cart?' It needs to get going. You can enter something (i.e. into the online suggestion system), but then nothing happens."* – BAAMA02 *"So there are limits to that autonomy, I think. At a certain point you just get to the level that employees simply cannot grasp that responsibility."* – CAMA01	

Cooperation within and between teams

Cooperation between teams can be seen as a factor that is influencing the opportunity of employees to engage in the implementation phase. When cooperation between teams runs smoothly, this is seen as a great advantage. However, when the cooperation appears to be rather difficult, this is experienced as a major nuisance whereby the opportunity and even the motivation of employees is strongly affected. This is reflected in the communication about the implementation and getting (no) feedback about ideas. When asked why some ideas fail while other are successfully implemented, one employee said: *"Difficulty, cooperation with different teams. You are also very dependent on other people when you work in a company. Because very often you also notice when you have an idea, then you need someone else to fix certain things because, for example, you do not have the rights yourself. So collaboration is really the key here."* – CCWE02. An example of the negative effect that (insufficient) cooperation could entail, comes from Machine Inc. When work-floor employees suggested an idea, the idea was not handled properly due to the lack of communication (BAAWE05). The team handling the implementation believed that the idea could be easily implemented and quickly marked as complete within the online suggestion system. However, after the implementation it became clear that the idea was not tackled properly. The weak cooperation between the teams made for insufficient or even no communication between the teams and, moreover, no feedback was given on the idea. This weak interconnection is directly linked to the failed implementation. When communicated properly, the implementation would likely have been successful. However, due to insufficient cooperation, the teams were not able to (efficiently) communicate back and forth about the issue and the opinions of the work-floor employees were not taken into consideration, which ultimately led to a failed implementation.

An example of a positive effect between the cooperation within teams and the opportunity of the implementation, is that of SocialSecure Inc. SocialSecure Inc. has project groups for the implementation, consisting of many different employees to combine the knowledge of different departments and to create a culture that is more concerned with innovation. This can also be linked to the project-initiative route (Renkema et al., 2021), which is here seen supporting the innovation process in the context of an online suggestion system. This route ensures that more work-floor employees have the opportunity to work on the implementation, with the preferred outcome being that employees are better able to deal with ideas in the future. For this reason, this factor can also be seen as ability-

enhancing: *"In such a group we look closely at the composition. Is there someone who really wants to* (i.e. intrinsic motivation)*? Is there someone from that middle group* (i.e. someone who wants to but does not have the right knowledge/capabilities yet)*? And is there also someone who does not naturally raise his finger? And with that you hope in a somewhat smaller context that there will exist a culture of 'oh wait, it's cool and here I can provide my input, here I see that my actions yield results'."* – AAMA01. Although collaboration within and between teams can be seen as a factor that generally affects the ability of employees in the implementation phase, no direct link has been found with HRM activities linked to the ability-enhancing or -inhibiting aspect of the AMO-model.

When it comes to the cooperation within and between teams, the online suggestion system mainly serves as a tool to keep an overview of all the ideas that have emerged within the different teams. This could therefore be enhancing the cooperation within and between teams. However, almost none of the teams keep an eye on the content of the online suggestion system from other teams and/or departments. This, in combination with some employees not having access to the online suggestion system and many departments using different kind of systems (see 'Other/multiple systems used'), is mentioned as to why the cooperation between the departments can be experienced as difficult (BEHR01). This shows that the online suggestion system can play a supporting role in the cooperation between teams, but only when used correctly. Moreover, cooperation within teams strengthens the underlying relationships, which can affect the extent to which employees are influenced by the behaviour of their co-workers and their manager. When co-workers and managers within a certain team show a positive attitude towards the implementation of innovative ideas and towards the online suggestion system, this behaviour is quickly adopted by work-floor employees (AAMA01; BCWEV03; CCWE02; DBMA02). Similarly, this is also the case when co-workers and/or managers show a negative attitude towards the implementation of innovative ideas. It is therefore an important aspect to take into consideration when looking at the motivation-enhancing and -inhibiting factors. To sum up, cooperation within and between teams is of great importance for the ability-, motivation-, and opportunity-enhancing and -inhibiting aspects.

Amount of work is too much/primary work activities take precedence

The second most experienced obstacle of the work-floor employees is not having enough time for innovation. Many employees experience this pressure because innovation is mostly seen as a side-issue. Just like the paragraph 'Opportunity-enhancing activities' explains, when innovation is not included in the task composition of employees, it becomes less important and therefore the focus remains on the work tasks that are not related to innovation: *"The innovation team that is not, you just do it besides your regular work. So and this is also expected by those managers of those different departments of those people. So it is not the case that you get time besides your work for the innovation team."* – BEHR01. This means that when the amount of work is perceived as overwhelming or too much, the opportunity of employees to participate in the implementation phase of innovation decreases due to less time being available. Moreover, other aspects of the innovation process are affected as well. For

instance, when the amount of work is experienced as too much, no time is available for following a training for innovation (ABWE04). Next to this, managers who feel pressured to complete certain goals or tasks in a certain time will show less support for work-floor employees who want to work on the implementation of innovative ideas instead of working on their primary work activities (BAAMA02). This will consequently lead to less time being created for employees to work on implementations. Overall, the opportunity of employees to engage in the implementation phase of innovation is reduced when the amount of work is perceived as too much.

When the online suggestion system gets involved and is added to the workload, it becomes clear that some employees are showing resistance due to the fact that this means less time is available for primary work tasks (CBMA02). Furthermore, once they make use of the online suggestion system, some of the employees mention that they get deterred by the many functions the system has. This extra effort of using the online suggestion system is amplified by not having enough time for the regular work activities.

Knowledge about implementing ideas

The third factor, knowledge about implementing ideas, is in these cases influencing the ability of work-floor employees to implement innovative ideas. Due to insufficient knowledge about the implementation of ideas, communication about the implementation fails because employees do not agree with its content (BAAWE05) or because it is not known how and with whom to communicate (BEHR01). When employees are not aware of the scale of certain implementations within the company, it can cause miscommunication or even some friction between departments: *"So then I think sometimes I think oh if you maybe asked me for example, and not that I want to interfere with the solution of how they handle the implementation of the idea. But more: do you have thought that it should be supported company-wide? So would it also be useful if you know how all departments think and work and how you can best communicate with those people?"* – BEHR01. Moreover, when the employees who do not possess the knowledge needed for a successful implementation are the ones implementing it, the responses from the other employees are almost always negative due to the fact that the implementation goes differently than desired: *"Recently someone wanted to have a few caps in his workshops and he wanted four lamps. (...) then you come up with an idea and then you indicate how you want it, but then it is done slightly differently. (...). But the person who carries it out thinks 'oh I know better* (i.e. how to implement the idea)*'. So that does not work well either."* – BAAWEV04.

When it happens that employees do not meet the needs to implement innovative ideas, organizations offer various training programs to upscale their knowledge on this matter. Therefore, the knowledge that employees already have or do not have is influencing the HRM activity 'training for innovation'. Within SocialSecure Inc., the employees need to fill out a skills and knowledge matrix to determine what they need in order to meet the innovation standards set within the organization (ACMAS02). The company will check whether they can provide the employees with the right tools and training to meet those needs. This does not necessarily mean that every employee should have the exact

knowledge on how to implement ideas, but also that ones who do not have this kind of knowledge can easily get in touch with the employees who do: *"Then we will hand it over to someone who does have the right expertise and who has more time and space because this is part of his job description."* – CCMA03.

The online suggestion system can also play a supporting role in the ability and the knowledge employees have on how to implement ideas. Within online suggestion system, ideas can be supplemented with additional information about what is envisioned, which makes implementation of the ideas easier due to the additional information available. However, within all four cases, not all work-floor employees have access to the online suggestion system and can therefore not provide feedback on ideas from other employees or provide an elaboration of their own idea. In the cases where the work-floor employees do not have access to the online suggestion system, they have the opportunity of communicating their ideas to their manager who then enters the ideas into the system on their behalf. However, they do not have the option to attach an additional explanation or comment to this idea. Although some colleagues may consider this to be unnecessary, it ultimately proves to be very useful for the implementation due to the additional information that increases the knowledge. In summary, the online suggestion system can provide additional information to increase knowledge within the implementation process, while not having the knowledge to implement ideas correctly will most likely lead to a failed implementation.

Dependency on other teams/departments

Dependency on other teams and/or departments is believed to be an obstacle, as this route takes longer to implement ideas than if the teams could tackle the ideas themselves: *"But as soon as it has to be deposited with another team, it can really take a while."* – AAWE02. For this reason, this factor is seen as opportunity-inhibiting whereas no dependency on other teams is seen as opportunity-enhancing. Employees mention that there is too little capacity in the departments on which they are dependent, which makes it take longer to fully implement ideas or to get a response at all. Moreover, some ideas are getting prioritized due to this lack in capacity, which makes it harder for other ideas to get implemented. As said in the interviews, they end up at the bottom of the priority list (CCMA03). The factor 'dependency' can be linked to the other influential factors 'The amount of work is too much/primary work activities take precedence' and 'Cooperation between teams'. Due to the little capacity or the excess amount of work within other departments, the ideas are not being implemented (AAMA01; CAMA01). Moreover, whether ideas are being implemented or not is not always fed back to the departments that are dependent on others for implementation. This can be seen as a weak collaboration between the various teams. When people are dependent on other teams for the implementation, the cooperation between teams is especially important. A greater dependency on other teams should mean that there is more feedback and more communication happening between the teams, however, the opposite is currently true within the organizations. Additionally, the online suggestion system can also be seen as a negative factor when various departments are using other main systems

(see 'other/multiple systems used'). In fact, the dependency on other teams makes the use of the online suggestion system seem less effective. Not having the (same) online suggestion system fully integrated in all the departments within an organizations is detrimental to the implementation phase. In these cases, the ideas are not being communicated or seen by other departments. As a result, ideas are not implemented at all or are even attempted to implement twice without success (CBWE03).

Difficulty of ideas

All ideas vary in shape and size and in level of difficulty. However, the interviewed employees within all four cases usually only mentioned work process innovation ideas (Renkema et al., 2021) of which the majority can be considered as relatively small incremental innovations (Norman & Verganti, 2014). Moreover, most of the smaller ideas are experienced as easier to implement than those who are bigger in size. This stems from the fact that when ideas are smaller, less employees and other departments need to get involved, which makes the implementation consist out of fewer steps and increases the opportunity of employees within the implementation phase: *"But when it concerns, for example, something small or something to make our work just a little bit easier, then we will do that ourselves. And then we will probably give feedback if it is implemented successfully."* – ABWE04. Furthermore, according to many employees, smaller ideas are easier to work with in the online suggestion system than ideas that take up more time and/or have more people involved: *"For example about the planning. But yes that is also a difficult thing of course that is quite broad and large to do. So yes, there are also many people who have to deal with it so yes often we will wait a while* (i.e. implementing the idea)*."* – BAAWEV04. The difficulty of an idea can therefore be seen as an influential factor in the feasibility of certain implementations. This factor can be seen affecting the entire process because everything within the innovation process is adjusted to what type of idea employees are dealing with. Whether an idea has many steps and is therefore considered more difficult to implement, or has fewer steps and is therefore considered easier to implement, it will affect the process accordingly. For the difficult ideas, more training, a better communication, more support from managers etc. is needed for it to succeed. Because all of these extra steps, it has a greater chance of negatively influencing the HRM activities involved. For the smaller and therefore easier ideas, all of these aspects are necessary, but to a lesser extent. The fewer steps required for implementation, the fewer areas there are where complications can arise and vice versa.

The difficulty of ideas also seems to have an influence on whether the online suggestion system is used. Smaller ideas are deemed more feasible when put into the online suggestion system, while larger and more difficult ideas are adversely affected when put into the online suggestion system: *"Too many actions, too little depth within the actions. So like adding documents, textual explanation. And a complete integrated overview of a large project, for example that supplierday. That consisted of five teams and each team that had something like yes, it was 200 points that had to be picked up within a certain time. That is not possible in the online suggestion system."* – DWES01. Even though this is seen as an obstacle, the online suggestion system provider, Coimbee (n.d.), has mentioned to divide large

tasks into smaller activities to make it more manageable: *"The advice we got, I think, we talked to X and he mentioned that we need to make smaller blocks within the system. (...). We have especially chosen to divide the action into fairly small actions. (...). Quite a large one and then you are not busy for three weeks."* – DAMA01. Nevertheless, most of the employees experience difficulty when ideas are seen as larger, especially when it involves organizational developments or product changes. In addition, ideas that are too small are also not processed with the help of the online suggestion system (BCWEV03). This leaves only a small part of the ideas being processed with the help of the online suggestion system. This can also be seen in the study of Renkema et al. (2021), where the different content-type of ideas can influence the choice of employees which EDI route to take. In conclusion, the difficulty of ideas seems to have an effect on how the process of implementing ideas is being carried out and the opportunity employees have within this process.

Other/multiple systems used

When there exist many different systems to support innovation within one organization, it may happen that information does not reach all departments and the motivation to use such a system diminishes: *"Well, at SocialSecure Inc. we really work with many different types of systems that do not talk to each other. And not a half year passes without a new system being implemented."* – ABMA03. When the information is not aligned due to multiple systems being present within an organization, the communication will suffer because of this. The fact that many different teams and departments all have their own place to store information, prevents having a coherent overview that crosses team boundaries. As well as that, aligning or integrating the online suggestion system with other systems used in the organizations turned out to be not possible. In contrast to the negative effect of having multiple systems can bring, additional systems to support the main online suggestion system are experienced as positive. These additional systems can range from whiteboards at the office to support the daystart meetings, to Excel sheets to gain a more in depth cost and benefit analysis: *"What we actually did is discussing the new items in the online suggestion system every week. What we did then to make that physically or at least to make it visible is that we also put those improvements on a whiteboard. On a magnet thingy."* – CBMA02. To conclude, having multiple systems can have a negative influence when they are not linked to each other, but a positive influence when they are supporting the main online suggestion system.

Idea responsibility

Responsibility is a very broad concept. In this context, idea responsibility is referring to the employee or employees who are responsible for not only suggesting the idea, but also ensuring that the idea is implemented successfully. In some cases during the interviews, it was voiced that it is the responsibility of the work-floor employee to also work on the implementation of an innovative idea: *"So those people are then also challenged to explain and implement the improvements they have worked out. So it's not just generating. It is also carrying out, possible with help, asking for help if necessary, documenting, working instructions and implementing."* – ACMAS02. However, some problems concerning the idea

responsibility have surfaced. First, in some cases there is no clear policy on who is responsible for the implementation, nor is this communicated to the employees in any way, with the result that some ideas are not implemented at all: *"The only drawback I think within this company, what I run into a bit 'who is pulling the cart?' It needs to get going. You can enter something (i.e. into the online suggestion system), but then nothing happens."* – BAAMA02. Second, when it is clear who are the ones responsible for the implementation, this responsibility is not always taken. As a solution, an employee of Construction Inc. mentioned that the online suggestion system could be used to make sure that no uncertainties can arise about who is responsible for the implementation: *"So I think it* (i.e. putting names on the initiatives within the online suggestion system) *helps by giving some kind of social pressure or something. But in any case to make it more transparent for the entire organization of what is going on. And then you also feel responsible for taking that on. So I think that also makes it faster."* – DAMA01. The online suggestion system can therefore help to create an overview of the responsible parties and ensure that progress is being made. On the other hand, it can support for example the assessment for innovation when it is used as a guide to see how many ideas are being submitted by certain employees and whether they are successfully implemented (DAMA01). Altogether, idea responsibility makes that certain employees take the lead in implementing the ideas and when it is not clear who is the responsible employee, or if that responsibility is not taken, the implementation will most likely suffer because of this. Moreover, the feeling that some employees are responsible for implementing ideas and acting on this responsibility, is associated with the company voicing expectations concerning innovation towards the employees and the motivation employees have to work on the implementations.

Conceptual model

To create an overview of the different HRM activities and contextual influential factors, a conceptual model is shown below. Figure 2 shows the HRM activities (brown) and their relationship with the different aspects of the AMO-model, namely ability (blue), motivation (pink), and opportunity (purple). Next, it shows which influential factors (grey) are related to the various HRM activities. These influential factors also seem to appear to be linked to one another, as discussed in the chapters above.

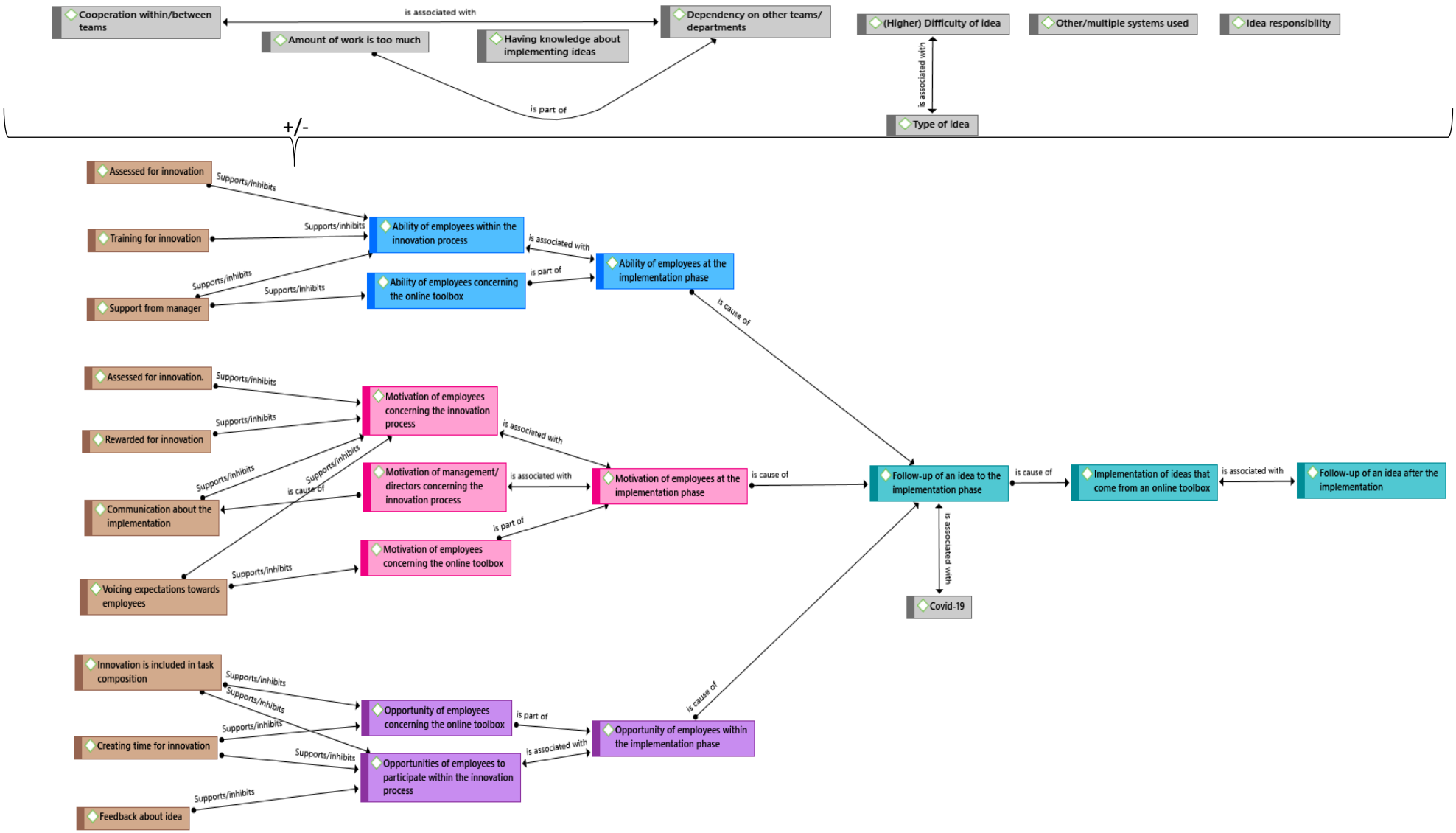

Figure 2. Conceptual Model.

Discussion

This study shows that there are nine identified HRM activities that are widely used among the four studied cases, all of which can be seen to have an effect on one of the three aspects of the AMO-model (Bos-Nehles et al., 2017) and thereby influencing the implementation of innovative ideas that have been submitted through an online suggestion system. These nine HRM activities (Assessed for innovation, Training for innovation, Support from manager, Communication about the implementation, Voicing expectations towards employees, Rewarded for innovation, Task composition, Creating time for employees to innovate, and Feedback about idea) can enhance as well as inhibit this implementation. This effect is influenced by seven factors (Cooperation within/between teams, Amount of work is too much/primary work activities take precedence, Knowledge about implementing ideas, Dependency on other teams/departments, Difficulty of idea, Other multiple systems used, and Idea responsibility), which are present within all organizations, but all to varying degrees. Moreover, other than the originally thought effect of HRM activities on the implementation through an online suggestion system, the different HRM activities are also supported by the online suggestion system. Therefore, the online suggestion system plays an indirect role in how and whether the implementation of innovative ideas is successful.

Theoretical implications

Many of the HRM activities as mentioned by Bos-Nehles et al. (2017), as well as other HRM activities, have been identified as enhancing and/or inhibiting factors for the implementation of innovative ideas. Especially in the context of an online suggestion system, there are additional conditions that cause these activities to have a positive or a negative impact. The applied HRM activities (Assessed for innovation, Training for innovation, Support from manager, Communication about the implementation, Voicing expectations towards employees, Rewarded for innovation, Task composition, Creating time for employees to innovate, and Feedback about idea) seem to affect the implementation of innovative ideas which were inserted into an online suggestion system within the four cases. The influential factors happening within the context of an online suggestion system, as shown in the conceptual model (figure 2), are in this case jointly responsible for whether the effect is enhancing or inhibiting the implementation. For instance, when the cooperation within and between teams is not optimal, the implementation has a high probability of failure due to the fact that information, intentions, and goals get lost. This is in line with the study of Lepak, Lia, Chung and Harden (2006), where the authors found that practices like job design, work teams, and information sharing are used to offer opportunities for employees. Next to the cooperation within and between teams, other underlying mechanisms that make for a positive or negative effect of the HRM activities are: having the right amount of work, having knowledge about the implementation, the dependency on other teams, the difficulty of an idea, having other/multiple online suggestion systems, and idea responsibility. These factors are important to take into account when deploying the HRM activities, especially in the context of an online suggestion

system. In conclusion, many HRM activities correspond to those that influence innovation in general (Bos-Nehles et al., 2017; Jiménez-Jiménez & Sanz-Valle, 2008; Leede & Looise, 2015; Lichy & McLeay, 2020; Malhotra et al. al., 2019) and to the HRM activities that mainly influence implementation (Bos-Nehles et al., 2017; Leede & Looise, 2005), but when the online suggestion system is added, it can be seen that additional influential contextual factors are involved. As a result, organizations can apply certain HRM activities with the belief they will positively influence the innovation process, while they could actually have a negative effect due to the contextual factors. This can be seen, for example, at the communication about the implementation. When the cooperation within and between teams is not optimal, and the employee who communicates the implementation does not have the exact knowledge on how to tackle the innovative idea, the communication is usually experienced negatively. In addition, when organizational responsibility for implementation is not clear or not taken, feedback is often not given or it is given to the wrong person, expressing expectations towards the work-floor employees about innovation does not come across, and too much emphasis is placed on the task composition. The latter leads employees in the workplace to only cling to the activities contained in the task composition, which often does not contain anything about the implementation of innovative ideas.

Besides the HRM activities that enhance and/or inhibit the implementation of innovative ideas that are submitted through an online suggestion system, this research shows that the online suggestion system is also supporting the various HRM activities. This is reflected in all four cases, where the online suggestion system is, for example, used to communicate about the implementation, to support the regular meetings about implementations, and to gain insight into the innovation process in general and who the responsible actors are for the implementation. Within current literature, online suggestion systems are mainly described as a tool through which employees can voice their ideas (Buech, Michel, & Sonntag, 2010; van Dijk & van den Ende, 2002; Frese, Teng, & Wijnen, 1999; Lasrado, Arif, & Rizvi, 2015). In addition, Du Plessis (2016) already indicates that the online suggestion system can be linked to HRM, because the online suggestion system is an HRM tool in itself. However, the findings of Du Plessis (2016) mainly relate to the crucial role that the HRM department and line managers should play in the success of the online suggestion system and that the online suggestion system can increase the survival of organizations in competitive economies. This research contributes to this by explaining the important role the online suggestion system can play in applying various HRM activities to improve the innovation process. Besides this supporting role, it is known that online suggestion systems are not always seen as having a positive effect on innovation (Tirabeni & Soderquist, 2019). This is also reflected in this study. Due to the online suggestion system not always being fully integrated into the organizations, which for example happens when different departments use different online suggestion systems, the data shows that this leads to sub-optimal results. Moreover, this can lead to influencing the HRM activities negatively. For example, when organizations do not let every employee have access to the online suggestion system, it is not traceable which employee is seen as the person responsible for the implementation and no assessment or rewards based on this information can be made. In addition, not being able to identify who came up with the idea has a negative impact on the provision of feedback and

on the additional information to be gathered when this is needed. Moreover, when the online suggestion system is not available for (all) the work-floor employees, they miss out on an overview of all the submitted and implemented ideas. In other words, less can be learned from each other and information gets lost.

The online suggestion system not being available for all employees could also have negative consequences for the employee-driven innovation (Kesting & Ulhøi, 2010). Having innovation-specific functions where only those employees have access to the online suggestion system, reinforces the feeling that employees in the workplace do not find is necessary to get involved in the implementation of innovative ideas. This is in line with the study of Shin, Yuan, and Zhou (2017), where the authors found that the perceived innovation job requirement has a positive relation with the innovative behaviour for employees who already have a low interest in innovation. The employees who are more intrinsically motivated are less affected by this. However, this positive relationship for employees who already have a low interest in innovation can only be achieved if those employees consider the job requirement to be important (Shin, Yuan, & Zhou, 2017). This importance depends on whether the remuneration expectation is high or if the organization attaches great importance to it. The online suggestion system being available for only a certain group of employees seems to affect the perceived job requirements and therefore the innovative behaviour of the work-floor employees. This could explain the answers that were given during the interviews where many employees mentioned not getting involved with innovation due to it not being a part of their job responsibilities, but where the underlying reason actually is about them not being intrinsically motivated to do so which increases the impact of the relationship. However, this cannot be confirmed because this has not emerged from the data. The study of Montag, Maertz, and Baer (2012) also mentions the importance of external drivers. The external drivers influence the expected creative performance behaviour of employees, whereas internal drivers influence the unexpected creative performance behaviour. When organizations do not make the online suggestion system available to all employees or voice their expectations concerning the implementation of ideas, employees feel that no innovative behaviour is expected of them, which will most likely negatively influence the expected creative performance behaviour.

In addition to the work-floor employees not feeling that it is their job to work on the implementations, it can also be the case that they do not get the opportunity. This happens for example when the project-initiative route of EDI is adopted to support the formalized system route of EDI. In some organizations, multiple employees from different departments come together to give their input on innovation related matters and to support the use of the online suggestion system. In one case, employees from a specific innovation team gather all the ideas from the work-floor employees and put them in the system under their own name. This project-initiative route of EDI (Renkema et al., 2021) appears to have a positive influence on the innovation process within the four cases, due to sharing knowledge and strengthening the underlying cooperation between the teams. However, it can also have a negative impact on the chances of employees in the workplace when they are excluded by this project group and the opportunities to participate are very low. This can therefore be seen as both enhancing

and inhibiting the implementation phase of innovative ideas, depending on how it is structured within the organization. So, having an online suggestion system could mean that employees have a lower sense of involvement and engagement with the innovation process (Tirabeni & Soderquist, 2019), but having an online suggestion system and making it available for only a certain group of employees might have an additional negative effect.

To get a better picture of how the four cases use the various HRM activities, the role the HRM departments plays within this process has been studied. The positive link between HRM and innovation process (Bos-Nehles et al., 2017; Jiménez-Jiménez & Sanz-Valle, 2008; Leede & Looise, 2015; Lichy & McLeay, 2020; Malhotra et al., 2019) and the importance of the involvement of the HRM department with the online suggestion system (Du Plessis, 2016) have been addressed many times within the current literature. On the whole, the HRM departments are active in carrying out the various HRM activities, like determining who qualifies for certain training programs, assessing employees, and creating the task compositions. It was for these reason that the assumption was made that the HRM departments would play an significant and central role within the innovation process. It became clear from the interviews that many of the HRM employees do not actively support the implementation of innovative ideas and are not familiar with the online suggestion system. Moreover, after being asked if this was the desirable situation, all interviewed HRM employees mentioned that it would be valuable to get more involved with the innovation process and with on the online suggestion system. An explanation as to why the HRM departments are not as engaged as the literature says they should be cannot be given with certainty. However, a possible explanations could be that HRM employees do not see actively supporting the innovation process or working with the online suggestion system as part of their job responsibilities, the innovation process and/or the online suggestion system is set up by other departments whereby HRM is not involved, or because the (line) managers carry out a large part of the HRM activities themselves. These reasons were given in response during the interviews, but the most HRM employees indicated that they did not exactly know why they are not involved with the innovation process or the online suggestion system. To better understand why the HRM departments of all four cases do not get involved with innovation, further research on this aspect is necessary.

Managerial implications

To make the most out of the implementation phase through the use of an online suggestion system, it is important to understand the many different HRM activities that can be carried out to enhance this process. A few of the most important HRM activities are communicating the reason of implementation, voicing the company's expectations towards employees concerning innovation, and making managers take on a more innovation-oriented role. Communicating the reason for implementation needs to be done on a platform or through a certain manner so that all employees actually get to hear it. Platforms like internal social media, are often optional to look at and, above that, not always popular. With this in mind, it is important to make sure that the message organizations want to communicate, actually reaches

the recipient. The same goes for voicing expectations towards employees. However, innovation should not be made a mandatory aspect of the task composition as this could undermine the theory of EDI (Kesting & Ulhøi, 2010) and affect the creative performance behaviour of employees (Montag, Maertz, & Baer, 2012). Apart from this, it is important to make sure what it exactly is that organizations expect from their employees concerning the implementation of innovative ideas. Where one organization really wants their employees to be involved with the whole process of innovation, other organizations want employees to only be active when it concerns an implementation that is company-wide or for the specific employee's department only. Next to this, voicing expectations towards work-floor employees would be an action that is most likely to succeed when it comes from the managers of those employees. As seen in the results chapter of this study, work-floor employees that are working in teams in which the cooperation is perceived as positive, are more likely to take over the opinions of other co-workers and/or manager. For this reason, it is important that the employees in leadership positions are aware of their role and impact, and take on an active attitude towards the implementation of innovative ideas. This will most likely ensure a positive attitude from work-floor employees towards the innovation process and therefore increases the chance of implementations being successful.

When it is clear what it is the company expects from the work-floor employees and how they will channel this, many contextual factors should be taken into account. Besides giving feedback about ideas and creating time for innovation which are two HRM activities that are almost always perceived as positive when they happen regularly, the other seven HRM activities' influence is mostly dependent on various factors. For this reason, it is important to ask certain questions before starting the implementation phase. For example, 'how will the innovation process be structured within the organization?'. This question makes clear in what way the implementation takes place and who are the responsible actors within this process. Next, divide the roles and make sure that there exists no ambiguity about the agreements that have been made and roles that have been appointed. In other words, structure is key. Other questions that companies should ask themselves before starting on the implementation phase are: 'how well do the different departments cooperate?', 'to what extent do we as a company enable work-floor employees to engage in the innovation process?', 'to what extent do we want work-floor employees to engage in the innovation process?', 'to what extent do the work-floor employees have the knowledge to implement ideas?', 'to what extent are different departments dependent on each other?', 'what will be our strategy for different types of ideas (difficulty and content type)?', and 'to what extent do we make employees responsible for their own ideas?'. When these questions are asked, relevant HRM activities can be appointed (see table 8) and adapted to the innovation process of the organization.

To sum up, the board and line managers should adopt an active role within the innovation process and the use of the online suggestion system to ensure successful implementations. And before anything else, it should be known how the organization operates and what the shared goals are. It is important to give clear directions, appoint certain roles, divide innovation tasks, and support EDI where possible, without innovation appearing as mandatory. And finally, the online suggestion system should

be of added value and should make the process easier, even though it is still sometimes experienced as an extra burden by some work-floor employees. When this is the case, companies could reassess the use of the online suggestion system and make sure that the influential factors and HRM activities are well adjusted to each other.

Limitations and future research

The main limitation is the context in which the research took place. Due to the Covid-19 pandemic which was going on at the time of the research, some adaptations had to be made. The restricting societal rules were limiting the data gathering process in some ways and possibly the outcome of the research. The data gathering process took place online, as mentioned in the methodology chapter, and meeting with (potential) companies and participants became more difficult due to the increasing workload for the organizations in various sectors that the Covid-19 pandemic entailed. For this reason, it was not always possible to interview the employees that have been selected in advance. Nevertheless, a great amount of employees from various departments and hierarchy levels in the four different organizations have been interviewed. In addition, even though many HRM activities are widely used and are commonly seen as supporting the implementation of innovative ideas, this does not necessarily mean that they strengthen the innovation process to the same extent for every organization. For example, rewarding employees is still under discussion as to whether this actually stimulates the employees to become more involved in the innovation process (Fernandez & Moldogaziev, 2012; Sanders, Moorkamp, Torka, Groeneveld, & Groeneveld, 2010). It is therefore important to consider how the aforementioned HRM activities have an impact on an organization's own situation, which can vary greatly with the four cases studied. It should be taken into account that this study is a multiple-case study. It paints a general picture of four different types of organizations, but it cannot be said with certainty that these results will be exactly the same when companies from other sectors are included and when the Covid-19 pandemic is disregarded.

For future research it would be wise to broaden this research to companies that operate within other sectors to get a more inclusive image of how the innovation processes are arranged within those organizations. In addition, It would be very insightful to understand how the HRM department can assume an innovation-related role where they apply the various innovation-related HRM activities in organizations using an online suggestion system, and why this is not always the case in practice. In this study it became clear that most of the HRM departments of the participating organizations do not play a role within the innovation process when it comes to the online suggestion system or the implementation of innovative ideas at the work-floor level. The employees that operate within the HRM departments do however believe that their department could play a bigger role in making the innovation process, and especially the implementation phase, very successful. It is already known that HRM and suggestion systems are intertwined (Du Plessis, 2016). However, it is not known why this does not always happen in practice. There is still a lot to gain for these departments in making the organization obtain even more competitive advantage.

Conclusion

This study shows that there are multiple HRM activities that could have both a positive and a negative effect on the implementation of innovative ideas that are submitted through an online suggestion system. These HRM activities are 'Assessing for innovation', 'Training for innovation', 'Support from manager', 'Communication about the implementation', 'Voicing expectations towards employees', 'Rewarding for innovation', 'Task composition', 'Creating time for employees to innovate', and 'Giving feedback on ideas'. The answer to the research question *"How do HRM activities stimulate and inhibit the implementation of ideas that are submitted through the online suggestion systems?",* can be linked to the seven influencing factors that are contextualizing the effect. These influential factors are 'Cooperation within/between teams', 'Amount of work is too much/primary work activities take precedence', 'Knowledge about implementing ideas', 'Dependency on other teams/departments', 'Difficulty of idea', 'Other multiple systems used', and 'Idea responsibility'. For this reason, it is important to understand how the various HRM activities work on their own, but it is also important to understand in which context the innovation takes place as these seven factors appear to make the various HRM activities have a positive and/or a negative effect on the implementation. This positive effect happens when the various HRM activities ensure that the work-floor employees have the abilities, motivation, and the opportunities to work and the implementation and when 1) cooperation within and between teams is optimal, 2) employees do not have the feeling that the amount of primary work tasks is too much, 3) employees have the right (amount) of knowledge about implementing ideas and working with the online suggestion system, 4) there is little to no dependency on other teams and when there is, the cooperation runs smoothly, 5) the difficulty of an idea is known and resources and time are made available accordingly, as well as a clear division of roles, 6) multiple systems are only there to support the one main suggestion system within an organization and no other online suggestion system is present, and lastly 7) the responsibility for the innovative ideas is known and is being taken.

Next to how these factors have an influence on the effect of the various HRM activities, the online suggestion system itself appears to be a supporting tool for the found HRM activities. The online suggestion system can be used as a supporting tool for assessing employees on innovation, to communicate about the implementation, to further strengthen the knowledge about implementing ideas, and to capture who in the organization is responsible for the implementation.

In summary, it can be seen that the different HRM activities linked to the capabilities, motivation and opportunities of employees in the workplace, and the influencing factors of these activities, have an effect on the implementation of innovative ideas submitted through an online suggestion system, whereby the online suggestion system itself can also play a supporting role in the various HRM activities.

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Appendix

Appendix A

Interview protocol

The research question functions as the guideline for the interviews. The interview protocol consists out of two different interviews, namely interviews that will be conducted with employees of the organizations and interviews that will be conducted with HRM personnel or line managers etc. Before the interviews start, the organizations and the individual participants will be ensured of anonymity and confidentiality. Moreover, the organization and the individual participants will receive information about the purpose of the interview to guarantee their understanding of the process. As the interview starts, the participants are asked permission to record the interview with a recording device (mobile phone). Again, they will be made aware of the anonymity and confidentiality. After the interviews are conducted and transcribed, participants have the opportunity to view the transcripts.

Interview protocol HRM personnel/line managers

Focus of the research	Sub Focus of Research	Questions
Opening of the interview	Introduction	Explanation of research protocol and questions
		Could you introduce yourself and explain the work that you do for company X?
General beliefs about the formalized system route of EDI	General thoughts about the online suggestion system	Can you explain Coimbee in a few words to us? How does it work? What is your view on Coimbee?
	Experience with the online suggestion system	To what extent are you (or the HR department) involved with the suggestion system?
		What is the role of HR concerning the toolbox/continuous improvement/innovation?
		What is the HR policy concerning the toolbox/continuous improvement/innovation?
Generation phase of EDI	Participation of employees in the suggestion system	Could you tell us something about the participation of employees in generating and registering ideas in the toolbox? Question further: can you describe how

		you or the organization stimulates the participation of employees in generating and submitting ideas? Are there any other factors that prevent this? If yes, which one?
Promotion phase of EDI	Participation of employees in the suggestion system	Could you tell us about employee participation in the selection process and then the development of ideas? Question further: can you describe how you or the organization stimulates employee participation in the selection of ideas? Are there any other factors that prevent this? If yes, which one?
Implementation phase of EDI	Participation of employees in the suggestion system	Can you tell us something about employee participation in the introduction of ideas into the organization (and feedback and learning from ideas)? Question further: can you describe how you or the organization stimulates this participation of employees in the implementation? Are there also factors that prevent this? If yes, which one?
Improvement process	General participation of employees	Can you tell us something about employee participation in continuous improvement / innovation? Question further: what is the organization doing to increase participation? What could prevent employees from participating?
	Participation	Could you tell us a bit about employee engagement within company…? Question further: what is being done to increase engagement? What are the factors that can make employees less engaged?
HRM activities	Ability-enhancing practices (e.g. training and development)	Could you explain which methods are used to train employees? Could you explain which methods are used to evaluate employees?

		To what extent do the employees have the capacities to implement ideas themselves (which have been entered via the toolbox)?
		Could you explain what you, your department, or the organization is doing to encourage this?
	Motivation-enhancing practices (e.g. reward, job security)	Could you explain the motivation of employees to be involved in the implementation of ideas (or in continuous improvement)?
		Can you describe how the organization or HR ensures that they are motivated? (in connection with continuous improvement or general)
	Opportunity-enhancing practices (e.g. autonomy, task composition, job demands, time pressure, feedback etc.)	To what extent do the employees have the opportunity to work individually or in a team on the implementation of their own ideas (or continuous improvement)?
		What is the organization, you, or your department doing to stimulate this?
	Fail to implement ideas	What is the organization, your department, or you yourself doing that can prevent the implementation of ideas (or continuous improvement)?
Ending the interview	-	'Thanking participant and explaining the follow-up process'

Interview protocol work-floor employee

Focus of the research	Sub Focus of the research	Question
Opening of the interview	Introduction	Explanation of research protocol and questions.
		Could you introduce yourself and explain the work that you do for company X?
General beliefs about the formalized system route of EDI	General thoughts about the online suggestion system	Can you explain Coimbee in a few words to us? How does it work? What is your view on Coimbee?
	Experience with the online suggestion system	To what extent do you, as an employee, deal with the online suggestion system? Can you give an example?
		Can you give a detailed explanation of how your idea was processed by the system?
Generation phase of EDI	Participation/interaction with the suggestion system	Do you work with the toolbox by generating ideas and registering them? If so, can you indicate in as much detail as possible how this process went? If not, why not?
		What were important factors for this process to succeed? Which factors inhibited this process?
Promotion phase of EDI	Participation/interaction with the suggestion system	Do you interact with the toolbox by selecting and developing ideas? If so, can you indicate in as much detail as possible how this process went? If not, why not?
		What were important factors for this process to succeed? Which factors inhibited this process?
Implementation phase of EDI	Implementation through online suggestion systems	How does having an online suggestion system influence the implementation of ideas that you submit?
	Failure to reach the idea implementation phase	Of all the ideas that are being submitted through the online suggestion system, how many are implemented? Why do you

		think some ideas are not being implemented? (when they are deemed profitable/feasible etc.)
	Participation of employees in the implementation phase	Do you interact with the toolbox by executing ideas, reporting ideas and/or learning from ideas? If so, can you indicate in as much detail as possible how this process went? If not, why not?
		What were important factors for this process to succeed? Which factors inhibited this process?
HRM activities	Ability-enhancing practices (e.g. training and development)	In what way do you have the abilities to be engaged in the idea implementation through the online suggestion system?
		Can you explain what the organization does to support this?
	Motivation-enhancing practices (e.g. reward, job security)	Can you tell me about your motivation to be engaged in the implementation of ideas that have been submitted by you or one of your colleagues?
		Can you describe how the organization stimulates or motivates you to do so?
	Opportunity-enhancing practices (e.g. autonomy, task composition, job demands, time pressure, feedback etc.)	In what way do you and your colleagues have the opportunity to implement ideas submitted through the online suggestion system?
		What does the organization do to increase the opportunity of employees to participate in the implementation of ideas?
	Fail to implement ideas	What does the organization / your manager do to prevent the implementation (execution) of ideas?
Ending the interview	-	'Thanking participant and explaining the follow-up process'

Appendix B

Initial template draft (main themes and underlying second order codes)

Ability of employees at the implementation phase
- Type of training
- (Intended) result of training
- Opportunity of employees to participate in training
- Knowledge of toolbox
- Knowledge of own field of work
- Knowledge of innovation process

Motivation of employees at the implementation phase
- Motivation to use online toolbox
- Motivation of employees to innovate
- Motivation of management/directors

Opportunity of employees within the implementation phase
- Opportunity of employees to participate in innovation process
- Opportunity of employees to participate in training
- Opportunity of employees to work with online toolbox (accessibility)
- Feeling that there is no time/room for innovation
- Dependency on other teams

Toolbox
- Accessibility of toolbox
- Ease of use of toolbox
- Knowledge of toolbox
- Motivation to use online toolbox
- Function of toolbox
- Experienced added value of toolbox
- Experienced limitation of toolbox
- Expectation towards employees concerning online toolbox
- Other/multiple systems used

Implementation
- Follow-up of an idea to implementation phase
- Follow-up of an idea after implementation phase
- Result of an implemented idea
- Reason for failed implementation
- Feeling that ideas are implemented in the wrong way
- Communication about the implementation

Type of idea
- Difficulty (high)
- Difficulty (low)
- Work process idea
- Primary work content
- Organizational development
- Definition of idea

HRM
- Involvement of HRM with innovation
- Experienced added value of HRM
- Experienced limitations of HRM

Appendix C

Initial template

Ability of employees at the implementation phase	Ability of employees within the innovation process	Amount of work is too much
		Coaching role of innovation specialist
		Coaching role of manager
		Cooperation between teams
		Cooperation within team
		Creating time for training
		Difference between departments with how innovation is structured
		Getting feedback about idea
		Having knowledge about implementing ideas
		Having knowledge about own field of work
		Having no/not enough knowledge about implementing ideas
		Having no/not enough knowledge about own field of work
		Innovation as part of individual goals
		Learning from each other between teams
		Learning from each other within team
		Learning through execution
		Newness of employees: lacking knowledge to implement ideas
		Newness of employees: motivated to implement ideas
		Online toolbox to look back and learn from previous ideas
		Primary work activities take precedence
		Project groups for innovation
		Training explicitly for the innovation process
		Training for online toolbox
		Training for own field of work
		Training opportunities are not exploited
	Ability of employees concerning the online toolbox	Difference between departments with how innovation is structured
		Having no/not enough knowledge about online toolbox
		How toolbox was introduced within the organization

		Insufficient communication
		No training for online toolbox
		Online toolbox has too many functions
		Training for online toolbox
	HRM policies concerning ability	Assessed for innovation
		Assessed for knowledge
		Budget for training
		Communication about the implementation
		Getting feedback about idea
		Innovation as part of individual goals
		Not getting feedback about idea
		Recruitment for innovative employees
Motivation of employees at the implementation phase	Motivation of employees concerning the innovation process	Anxiety to participate in innovation process
		Assessed for innovation
		Bottom-up idea
		Celebrate successes
		Coaching role of innovation specialist
		Coaching role of manager
		Communication about the implementation
		Cooperation within team
		Dependent on IT-department
		Early stage involvement
		Expectations towards employees concerning innovation
		Getting feedback about idea
		Habituation/long-time employment
		Ideas are ignored
		Ideas take too long to get implemented
		Influencing each other within team to engage in innovation
		Influencing each other within team to not engage in innovation
		Innovation in own time of employee
		Innovation not perceived as job responsibility

	Innovation perceived as job responsibility
	Intrinsic motivation
	Manager showing added value of innovation
	Motivation through involvement
	Newness of employees: motivated to implement ideas
	No expectation towards employees concerning implementing ideas
	No expectations towards employees concerning innovation
	No expectations towards employees concerning online toolbox
	No intrinsic motivation
	No support from manager
	Not clear who is responsible for innovation
	Not getting feedback about idea
	Not seeing added value of innovation
	Not seeing results of innovation
	Online toolbox to record who is responsible for idea
	Organization culture
	Resistance through past experience
	Rewarded for innovation
	Seeing added value of innovation
	Seeing results of innovation
	Support of manager
	Support of organization
	The incentive to implement an idea: greater quality
	The incentive to implement an idea: making work easier
	The incentive to implement an idea: saving time
	The incentive to implement an idea: saving/making money
	The incentive to implement an idea: to be able to continue primary work activities
	The use of regular meetings to support the innovation process
Motivation of employees concerning the online toolbox	Cumbersome access to online toolbox
	Expectations towards employees concerning the online toolbox

	Habituation/long-time employment
	Having no/not enough knowledge about online toolbox
	How toolbox was introduced within the organization
	Influencing each other within team to not use the online toolbox
	Influencing each other within team to use the online toolbox
	Innovation perceived as job responsibility
	Not getting feedback about idea
	Online toolbox has too many functions
	Other/multiple systems used
	Quick access to online toolbox
Motivation of management/directors concerning the innovation process	Intrinsic motivation
	Market demands innovation
	No support from manager
	Not clear who is responsible for innovation
	Not getting feedback about idea
	The incentive to implement an idea: greater quality
	The incentive to implement an idea: making work easier
	The incentive to implement an idea: saving time
	The incentive to implement an idea: saving/making money
	The incentive to implement an idea: to be able to continue primary work activities
	Way of presenting an idea
HRM policies concerning motivation	Assessed for innovation
	Communication about the implementation
	Expectations towards employees concerning innovation
	Expectations towards employees concerning online toolbox
	Getting feedback about idea
	Innovation as part of individual goals
	No expectations towards employees concerning implementing ideas
	No expectations towards employees concerning innovation
	No expectations towards employees concerning online toolbox

		Not assessed for innovation
		Not getting feedback about idea
		Not rewarded for innovation
		Rewarded for innovation
Opportunity of employees within the implementation phase	Opportunities of employees to participate within the innovation process	Amount of work is too much
		Cooperation between teams
		Cooperation between teams not optimal
		Cooperation within team
		Creating time to innovate
		Dependent on IT-department
		Difference between departments with how innovation is structured
		Early stage involvement
		Employee absenteeism
		Employee not responsible for own idea
		Employee responsible for own idea
		Employee turnover
		Getting feedback about idea
		Having knowledge about implementing ideas
		Having knowledge about own field of work
		Having no/not enough knowledge about implementing ideas
		Having no/not enough knowledge about own field of work
		Having to take authority into account
		Ideas that individual/own team can solve
		Ideas that individual/own team cannot solve
		Innovation in own time of employee
		Not getting feedback about idea
		Not offering all employees equal opportunities
		Offering all employees equal opportunities
		Organization culture
		Other/multiple systems used to support main toolbox
		Primary work activities take precedence

		Project groups for innovation
		Selection criteria project group
		Support of manager
		The use of regular meetings to support the innovation process
		Top-down idea
		Training in own time of employee
	Opportunities of employees concerning the online toolbox	Account for/access to online toolbox
		Difference between departments with how innovation is structured
		No account/access for online toolbox
		Other/multiple systems used
	HRM policies concerning opportunity	Budget for implementation
		Budget related reason for not implementing
		Getting feedback about idea
		Innovation is included in task composition
		Innovation is not included in task composition
		Not getting feedback about idea
Implementation of ideas that come from an online toolbox	Follow-up of idea to the implementation phase	Budget for implementation
		Budget related reason for not implementing
		Cooperation between teams
		Cooperation between teams not optimal
		Cooperation within team
		Cooperation within team not optimal
		Difference between departments with how innovation is structured
		Expected result does not outweigh the required effort
		Having knowledge about implementing ideas
		Having knowledge about own field of work
		Having no/not enough knowledge about implementing ideas
		Having no/not enough knowledge about own field of work
		Having to take authority into account

	Idea not seen as a priority
	Idea is seen as a priority
	Idea that solves itself
	Ideas are ignored
	Ideas cannot be resolved
	Ideas take too long to get implemented
	Ideas that individual/own team can solve
	Ideas that individual/own team cannot solve
	Influencing each other within team to engage in innovation
	Influencing each other within team to not engage in innovation
	Insufficient communication
	Not clear who is responsible for innovation
	Online toolbox not used to collect ideas
	Other teams have priority
	Responsibility not taken for idea
	The incentive to implement an idea: greater quality
	The incentive to implement an idea: making work easier
	The incentive to implement an idea: saving time
	The incentive to implement an idea: saving/making money
	The incentive to implement an idea: to be able to continue primary work activities
	Time related reason for not implementing
	Top-down idea
	Way of presenting an idea
Follow-up of idea after the implementation / reason for successful/unsuccessful implementation	Checked whether idea has been fully implemented
	Communication about the implementation
	Cooperation between teams
	Cooperation within team
	Having knowledge about implementing ideas
	Having knowledge about own field of work

	Having no/not enough knowledge about implementing ideas
	Having no/not enough knowledge about own field of work
	Influencing each other within team to engage in innovation
	Influencing each other within team to not engage in innovation
	Insufficient communication
	No structure in implementing ideas
	Not checked whether idea has been fully implemented
	Online toolbox to look back and learn from previous ideas
	Result is measured afterwards
	Root of the problem is analysed
	Root of the problem not analysed enough
Involvement of HRM department with innovation process	Account for/access to online toolbox
	Coaching role of manager
	Cooperation between teams
	Cooperation within team
	Creating time for training
	Creating time to innovate
	Difference between departments with how innovation is structured
	Expectations towards employees concerning innovation
	Having no/not enough knowledge about online toolbox
	Innovation not perceived as job responsibility
	Intrinsic motivation
	Measuring the needs of managers and employees
	No expectations towards employees concerning innovation
	No policy concerning innovation process
	Policy to increase involvement
	Provide support to achieve top-down company goals
	Recruitment for innovative employees
	Selection criteria training
	Training explicitly for the innovation process
	Training for own field of work

Type of idea	Difficulty of idea	High difficulty
		Low difficulty of idea: is tackled first
		Low difficulty of idea: resolved immediately
		Low difficulty of idea: small idea
	Type of idea	Bottom-up idea
		Company-wide idea
		Organizational development idea
		Primary work content idea
		Top down idea
		Work process idea
Experienced added value of the online toolbox	Function of toolbox	Online toolbox as a reminder
		Online toolbox for overview
		Online toolbox not used to collect ideas
		Online toolbox to analyse problem
		Online toolbox to capture ideas
		Online toolbox to communicate
		Online toolbox to ensure progress
		Online toolbox to look back and learn from previous ideas
		Online toolbox to prioritize ideas
		Online toolbox to record who is responsible for idea
		Online toolbox to support day start
		Online toolbox to support follow-up
		Other/multiple systems used to support main toolbox
		Type of toolbox matters less than execution of it

Appendix D

Finalized template

Ability of employees at the implementation phase	Ability of employees within the innovation process	Amount of work is too much
		Coaching role of innovation specialist
		Coaching role of manager
		Cooperation within/between teams
		Difference between departments with how innovation is structured
		Experienced advantage of online toolbox
		Getting feedback (no) about idea
		Innovation as part of individual goals
		Knowledge about implementing ideas
		Knowledge about own field of work
		Learning from each other within/between teams
		Learning through execution
		Newness of employees
		(No) support from manager
		Primary work activities take precedence
		Project groups for innovation
		Training opportunities are not exploited
		Type of training
	Ability of employees concerning the online toolbox	Communication about the implementation/innovation process
		Difference between departments with how innovation is structured
		Experienced limitations of online toolbox
		How toolbox was introduced within the organization
		Knowledge about online toolbox
		Type of training
	HRM policies concerning ability	Budget for training
		Communication about the implementation/innovation process
		Feedback about idea
		Innovation as part of individual goals

		(Not) assessed for innovation
		Recruitment for innovative employees
Motivation of employees at the implementation phase	Motivation of employees concerning the innovation process	Anxiety to participate in innovation process
		Bottom-up idea
		Celebrate successes
		Coaching role of innovation specialist
		Coaching role of manager
		Communication about the implementation/innovation process
		Cooperation within/between teams
		Dependent on other teams/department
		Early stage involvement
		Experienced added value of online toolbox
		Feedback about idea
		Habituation/long-time employment
		Having expectations towards employees
		Having no expectations towards employees
		Ideas are ignored
		Ideas take too long to get implemented
		Influencing each other within/between teams
		Innovation in own time of employee
		Innovation (not) perceived as job responsibility
		Intrinsic motivation
		Motivation through involvement
		Newness of employees
		(Not) assessed for innovation
		(Not) rewarded for innovation
		(No) support from manager
		(No) support of organization
		Not clear who is responsible for innovation
		(Not) seeing added value of innovation
		(Not) seeing results of innovation

	Organization culture
	Resistance through past experience
	The incentive to implement an idea
	The use of regular meetings to support the innovation process
Motivation of employees concerning the online toolbox	Experienced advantage of online toolbox
	Feedback about idea
	Having expectations towards employees
	Having no expectations towards employees
	Habituation/long-time employment
	How toolbox was introduced within the organization
	Influencing each other within/between teams
	Innovation (not) perceived as job responsibility
	Knowledge about the online toolbox
	Limitations of online toolbox
	Other/multiple systems used
Motivation of management/directors concerning the innovation process	Feedback about idea
	Intrinsic motivation
	Market demands innovation
	(No) support from manager
	Not clear who is responsible for innovation
	The incentive to implement an idea
	Type of toolbox matters less than execution of it
	Way of presenting an idea
HRM policies concerning motivation	Communication about the implementation/innovation process
	Feedback about idea
	Getting feedback about idea
	Having expectations towards employees
	Having no expectations towards employees
	Innovation as part of individual goals
	(Not) assessed for innovation

		(Not) rewarded for innovation
Opportunity of employees within the implementation phase	Opportunities of employees to participate within the innovation process	Amount of work is too much
		Cooperation within/between teams
		Dependent on other teams/department
		Difference between departments with how innovation is structured
		Early stage involvement
		Employee absenteeism
		Employee turnover
		Feedback about idea
		Having knowledge about implementing ideas
		Having knowledge about own field of work
		Having to take authority into account
		Idea responsibility
		Ideas that individual/own team can solve
		Innovation in own time of employee
		Knowledge about implementing ideas
		Knowledge about own field of work
		(Not) offering all employees equal opportunities
		(No) support from manager
		Organization culture
		Other/multiple systems used to support main toolbox
		Primary work activities take precedence
		Project groups for innovation
		Selection criteria
		The use of regular meetings to support the innovation process
		Top-down idea
	Opportunities of employees concerning the online toolbox	Difference between departments with how innovation is structured
		(No) account/access for online toolbox
		Other/multiple systems used
	HRM policies concerning opportunity	Feedback about idea

		Innovation is (not) included in task composition
		(No) budget for implementation
Implementation of ideas that come from an online toolbox	Follow-up of idea to the implementation phase	Communication about the implementation/innovation process
		Cooperation within/between teams
		Dependent on other teams/department
		Difference between departments with how innovation is structured
		Expected result does not outweigh the required effort
		Function of online toolbox
		Having knowledge about implementing ideas
		Having knowledge about own field of work
		Having to take authority into account
		Idea is (not) seen as a priority
		Idea responsibility
		Ideas cannot be resolved
		Ideas take too long to get implemented
		Ideas that individual/own team can solve
		Influencing each other within/between teams
		Knowledge about implementing ideas
		Knowledge about own field of work
		Low difficulty of idea
		(No) budget for implementation
		(No) support from manager
		The incentive to implement an idea
		Top-down idea
		Way of presenting an idea
	Follow-up of idea after the implementation: reason for successful/unsuccessful implementation	Communication about the implementation/innovation process
		Cooperation within/between teams
		Experienced advantage of online toolbox
		Influencing each other within/between teams

		Knowledge about implementing ideas
		Knowledge about own field of work
		No structure in implementing ideas
		(Not) checked whether idea has been fully implemented
		Root of the problem is (not) analysed
Involvement of HRM department with innovation process		Coaching role of manager
		Cooperation within/between teams
		Difference between departments with how innovation is structured
		Having expectations towards employees
		Having no expectations towards employees
		Innovation (not) perceived as job responsibility
		Intrinsic motivation
		Knowledge about online toolbox
		Measuring the needs of managers and employees
		(No) account for/access to online toolbox
		(No) policy concerning innovation process
		(No) support from organization
		Policy to increase involvement
		Provide support to achieve top-down company goals
		Recruitment for innovative employees
		Selection criteria
		Type of training
Type of idea	Difficulty of idea	High difficulty
		Low difficulty of idea
	Type of idea	Bottom-up idea
		Company-wide idea
		Top-down idea
		Primary work content idea
		Work process idea