DNV·GL

DIGITALIZATION & HR

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PROJECT REPORT BY STUDENTS AT THE UNIVERSITY OF OSLO - MAY 2018

EXECUTIVE SUMMARY

This project has been conducted by four students at The University of Oslo on behalf of GSS HR. This report has tried to answer the following research question; "*How does digitalization affect GSS HR's services and the user-experiences of their customers?*". We conducted four focus group interviews with GSS HR customers and two in-depth expert interviews, trying to capture interesting findings regarding customers user-experience

We were able to identify three main patterns on how digitalization affects GSS HR`s services; **Information:** It was clear that the customers of GSS HR services were generally positive towards digitalization and its potential. Particularly, the digitization of paper-based information was referred to as a digital improvement. However, we found shortcomings in the services regarding the intuitiveness of some tools and systems which negatively affected the user-experience because of the impact it had on accessibility and availability of information. Additionally, the absence of integration between the systems and tools affected their user-experience negatively, as it leads to double-work regarding searching and adding the same information multiple times. **Communication:** In this section we specifically focused on how digitalization could improve the user-experience of the through enhancing organisational communication. We found for instance that the MIP tool negatively affected the user-experience of the DNV GL employees. Even though this is not a GSS HR services we chose to discuss this as this was a topic of interest in all the focus group interviews. What was further discussed was that the organisational learning and development of user-friendly services suffers due to a lack of reciprocal and continuous feedback. **Management Empowerment**: We found that if the line-managers were provided with more self-service tools and autonomy through digitalization this could positively affect the user-experience of the services provided by GSS HR.

This analysis allowed us to present **two digital suggestion** for the future development of GSS HR`s services.

1. **Improving the CV solution** through better integration between the systems and tools which involve CVs. Also, through creating a CV system which supports customized CVs and more highlighted competence and automatic updates.
2. **Facilitating different feedback options** in order to grasp their customer demands and what effects their user-experience. This could be achieved through pop-up ratings, feedback comment section or feedback forums.

These suggestions are intended to provide input to and assist the development of efficient and user-friendly systems, and thus improve the organisational learning. Moreover, we have tried to address what other companies do regarding digitalization in HR, trying to briefly introduce the landscape of digital opportunities within HR. Finally, our report has tried to reflect on some considerations regarding the limitations of digitalization in regard of the human in human resources and data privacy.

1 PREFACE

This project report is a result of a five months cooperation between the University of Oslo`s master programme "*Prosjektforum- lederskap og organisering*" and DNV GL. We hope that the report will act as a basis for further developing the digital HR strategy for DNV GL in general, and particularly the GSS HR department. Overall, we hope that the report will provide insights and recommendations which can contribute further to DNV GL`s digital HR journey.

As students we are deeply humbled by DNV GL for giving us the chance to work on this project. The amount of trust and support we have received has been overwhelming, and we would like to thank the GSS HR department in DNV GL for this opportunity. We especially want to thank our contact person in DNV GL- Morten Sars who has invested a lot of time, effort and engagement into this project. Additionally, he deserves acknowledgement for contributing with both practical and theoretical information, and for facilitating all the practicalities. Secondly, we would thank all the informants who showed up for the interviews, and for openly sharing thoughts, feelings and experiences. Without you we would not have been able to write this report.

Lastly, we would also use this opportunity to praise Christin Wathne for her patience and for encouraging and providing us with valuable verbal and oral feedback and guidance throughout the process.

This has been an exciting and interesting process which has given us an insight into practical work experience in addition to valuable teamwork experience.

This report is written by Victoria Stang, Helene Kristoff, Bjarne Tautra Hoen and Lasse Jahren.

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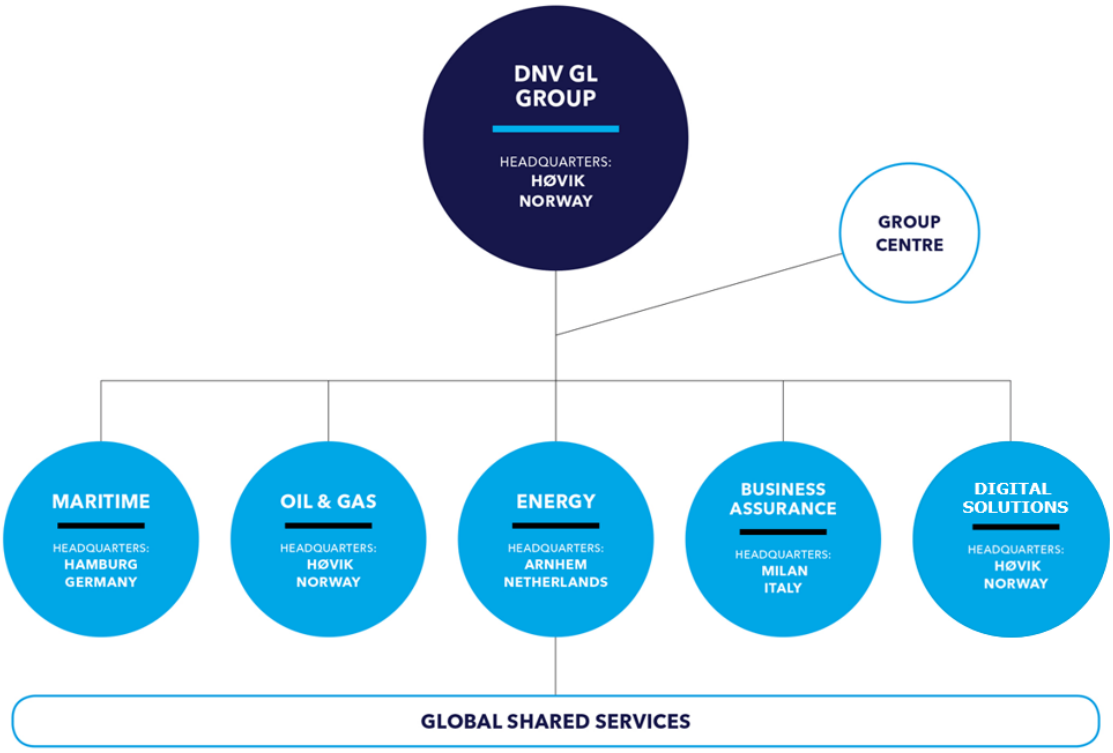
2 INTRODUCTION

2.1 Brief introduction to DNV GL and GSS HR

DNV GL is a Norwegian company owned by the foundation Stiftelsen Det Norske Veritas. Their main objective and purpose is to safeguard life, property and the environment. Their history stretches back to 1864, and globally they operate in more than 100 countries. They employ around 13,000 professionals whom are all dedicated to helping their customers make the world safer, smarter and greener. DNV GL is divided into five different business areas; Maritime, Oil and Gas, Energy, Business Assurance and Digital Solution.



Global Shared Services (GSS) is the internal service provider, and global support organisation to all these business areas. GSS as an organisation was established as part of the merger between DNV and GL in 2013. It consists of around 1200 professionals from 58 nationalities, and they operate from one global centre, nine regional centres and ten country offices. Their services revolve around IT, Finance, Human Resources (HR) and Real Estate Management & Procurement. GSS HR`s role is to attract, retain, accompany and develop DNV GL`s employees, and their services include e.g. Recruitment, Compensation & Benefits, Employment contracts, HR data handling, Pension & Insurance, Training Coordination, Global Mobility, and Office HSE.

2.2 Digitalization and HR.

Information technology (IT) is impacting the society and people's life in profound ways, and it is developing at an exponential speed. Klaus Schwab, founder and executive chairman of the World Economic Forum, argues that we are currently experiencing a fourth industrial revolution. "In its scale, scope and complexity, what I consider to be the fourth industrial revolution is unlike anything humankind has experienced before." (Schwab, 2016, p. 7). This fourth industrial revolution, or *Industry 4.0.*, has appeared as we have moved towards an increasing integration of the "everything-use" of the Internet. This is a development in which the internet is merged with production processes and products, and where the future machines organize themselves. *Industry 4.0* is said to guarantee economic benefits as it provides the companies with new business models, products and services as well as it reinforces the operational efficacy (Hermann, Pentek & Otto, 2016, p. 3928). Technological innovations like artificial intelligence (AI), robotics and blockchain make new possibilities for organisations, and the ones that hit the right wave are said to be generously rewarded. This highly discussed topic is a predicted phenomenon, and not an observed one, which gives the companies opportunities to actively explore and shape their future.

Human Resource Management has also been profoundly affected by the development, and has transformed the way organisations recruit, select, motivate, and retain employees (Stone et al, 2015). "The change to the HR department that digital technology will bring will be all pervasive and omni-directional throughout every company" (Larkin, 2017, p. 55). Deloitte's Global Human Capital Trends report (2017) explained how new digital HR products and solutions based on mobile apps and AI has redesigned the market and that as company's demographics are changing "new approaches are needed in almost every HR domain" (p. 89). Given the exponential growth in computation and digitalization capacity, the possibilities for how robots, artificial intelligence and digital platforms can serve within the HR field in the future is still uncharted territory. Hence, as one might expect from this development, investment in HR technology has expanded, and the investment levels seem to continue rising (Larkin, 2017). Nevertheless, it is hard to predict the future. Therefore, to be able to confront the digital transformations occurring it is vital that organisations remain proactive and reflect around and discuss digitalization within HR (Egerdal, 2017, p. 575). In addition, as HR is increasingly pursuing strategies earlier associated with marketing or the social media playbook "HR applications will need to become far more customer-centric, and follow the principles that today's consumers demand" (Larkin, 2017, p. 56). To survive and thrive within this ever-

changing environment organisations must become digital, and a digital transformation of the business and organisation is necessary (Peters et al. 2016). This short introduction provides some contextual background to the field of digitalization and HR, laying the foundation for the purpose of the project conducted for GSS HR.

2.3 Digitalization in DNV GL

In DNV GL a digital journey has been taking place over the last couple of years, and by 2020 DNV GL`s goal is to be a data-smart company. They have taken important first steps through using digital solutions to innovate and offer better services to their customers, as well as increasing their own efficiency. The digitalization trends have affected all sections of their organisation and has also changed how DNV GL`s GSS HR department provides services to managers and employees. GSS HR has undergone major digital changes, and their ambition is to enable and support DNV GL to become a digitally robust, agile and efficient leader. The question now is how to proceed with the digital HR journey in DNV GL and for specifically the GSS HR department.

2.4 Research Question

Following the organisations project mandate and a meeting with GSS HR we found that the fundamentals for GSS HR's digital journey, lay in the need for increased efficiency and quality, but not least, the need for providing their employee`s with added value, hence creating a more user-friendly experience. Therefore, we have created the following research question:

How does digitalization affect GSS HR's services and the user-experiences of their customers?

By the "customers" we are referring mainly to those whom use the services provided by GSS HR, and these are specifically line managers, Business Area HR and the employees at the GSS HR department. This research question contains two stages. Firstly, we will through our analysis try to answer our research question by examining how HR services and processes can affect the user-experience through digitalization. Secondly, we will draw lines from the processes above and create suggestions regarding possibilities and concerns regarding digital HR. This part involves us exploring and charting current digital technologies and innovative solutions, and their potential for creating a more user-friendly service for the GSS HR´s customers. This stage will also allow us to understand what other companies are doing regarding digitalization within HR compared to DNV GL.

Our research question will offer us a chance to explore the current field of digital HR. Because of the topic being highly contemporary, this research might attract interest and awareness outside DNV GL. The project allows us the chance to generate knowledge within a field which has not yet been fully explored. Overall, this project report will act as a basis for further developing the digital HR strategy for DNV GL in general, and the GSS HR department specifically.

3 THEORY

In this section we will introduce the theoretical framework we consider most relevant in accordance to the designed research question. Since our project involves digitalization in HR, we will firstly present the relevant definitions and theories accordingly. These will be digitalization, HRM, e-HRM, and goals for adapting e-HRM. E-HRM will be emphasised as this is the theory attached to literature on digital HR. Additionally, we will introduce the concept of organisational learning, as this theoretical framework will play an important role in our analysis.

3.1 Digitalization

Brennen and Kreiss (2014) defines digitalization as "the way in which many domains of social life are restructured around digital communication and media infrastructures" (n.p.). The concept of digitalization should be distinguished from the concept of digitization, which is "the material process of converting individual analogue streams of information into digital bits" (Brennen & Kreiss, 2014, n.p.). In other words, digitalization refers to how people utilize IT, and digitization refers to how IT takes over tasks that earlier were conducted by humans. Both these terms will be consistently used throughout our project report.

3.2 Human Resource Management (HRM)

"The idea of HRM in the distinctive sense of the term was, and is, based around the notion that people management can be a key source of sustained competitive advantage" (Mabey et al.,1998, p. 1). Those who work with HR can have a multitude of tasks, but the common denominator is that they work with the organisation's human resources (Egerdahl, 2017). HRM is often divided into either `hard´ or `soft´ modes. These modes represent two different HR directions in terms of what measures are emphasised to achieve maximum performance from their employees (Egerdal, 2017). Hard HRM represents a view of the employees as resources, just as technology and capital, which can be controlled (Egerdahl, 2017). Soft HRM on the other hand puts emphasis on the "human" trying to

enhance the resource through commitment by providing them with e.g. trust and responsibility (Egerdal, 2017). Which perspective an organisation has about their employees (soft or hard) will colour their lens regarding which strategies to follow, tools to take advantage of and so forth.

3.3 Electronic Human Resource Management (e-HRM)

There is no academically agreed upon definition of e-HRM to this day, however, we found these separate definitions to cover and summarise the range of definitions.

- "The application of computers and telecommunication devices to collect, store, retrieve, and disseminate [HR] data for business purposes" (Stone et al., 2015, p. 216).
- "A way of implementing HR strategies, policies and practices in organisations through a conscious and directed support of and/or with the full use of web-technology-based channels" (Ruel et al., 2004, p. 365)

Both these definitions seem to take on a view of HR as conducting a strategic role in the organisation. However, the first can be argued to represent a view of HR as a more traditional personnel approach with the focus on collecting and retrieving information for the organisation whilst the second has a more contemporary view of HR as a support function. HR has progressively been given a role in the `strategic´ modes of business, and strategic HR has become a new phenomenon within the field. "The argument [is] that better human resource planning is the basis of superior business performance (...)" (Singh, 2003, p. 531). Both these definitions of e-HRM- portray digital tools as enabling the organisation in reaching their strategic goals and can also be argued to represent a harder approach to HR as it views e-HRM as a means towards an end i.e. achieving strategic goals.

3.4 Goals for Adapting e-HRM

Parry and Tyson (2011) lists five goals for digitalization of HR - efficiency, service delivery, management empowerment, strategic orientation, and standardisation (p.338). We found in our project that some of these goals seem to fit GSS HR`s goals for e-HRM, therefore we have chosen to emphasise this article throughout our analysis. The authors explain how e-HRM could create efficiency advantageous through e.g. "increasing the speed of processes, reducing costs and releasing staff from administrative work" (p. 337). However, the authors argue that to achieve efficiency a necessary factor is sufficient training. Service delivery i.e. improving the customer satisfaction from line managers was another goal. If this is realized the authors suggest that this could make information more accessible and available and thus improve accuracy in management decision-

making. The authors found that HR skills such as analytical, strategic thinking, communication and negotiation skills were a necessary factor to attain the desired outcomes. A third goal for adapting e-HRM was to empower line managers so that they were able to conduct HR activities previously conducted by the HR function.

The last goal of e-HRM is related to standardization, thus creating consistency through everyone using the same common systems and conducting the same procedures. The authors found that this goal is often achieved by organisations who do not specify it as a goal as well, "(...) making this a positive unintended outcome". Some additional factors were viewed as necessary in order to achieve the intended outcomes from e-HRM. These were that the employees and managers need to engage with the systems, thus making it acceptable and used across the organisation. Additionally, the design of the e-HRM system needed to be user-friendly and intuitive. Even though it was not explicitly said by managers, the researcher found that organisations often had a goal of making HR more strategic through implementing e-HRM. The authors also found that the organisations did believe "(...) that the introduction of e-HRM had a positive impact on their organisational image" (p. 349).

3.5 Organisational Learning

Zetterquist, et al. (2014, p. 222-224) explain Argyris's theory of organisational learning in their book. They define learning as "the discovery and correction of errors", and these errors are according to the author connected to knowledge. He further explains how learning is linked to actions, and that consciousness and feedback on these actions is the way organisations learn. The organisation must reflect on their actions, discover errors and consequently correct them. Further, the organisation and the individual must show willingness to change. The author highlights two types of learning: double-loop and single-loop.

Single-loop learning is a process where one is solving problems through modifications within the same frame of reference. By constantly fixing a recurring error with a temporary solution this will not ensure that the error will not occur again, the organisation risks facing the same problems multiple times. The organisation learns through becoming experienced with the specific solution and reduces the risk of related coincidences or accidents. This is not an efficient way of learning in the long run, because it prevents better solutions for the sake of doing things as they always have been done.

In contrast to single-loop learning, double-loop learning is a process of developing persistent solutions outside the existing frame of reference. Ideally, it creates an environment for organisational learning processes and development, which can lead to more efficient organisations. Instead of constantly dealing with a recurring error, double-loop learning focuses on identifying the underlying reasons of the error and finding persistent solutions (Argyris, 1982). Instead of fixing the effect of the error, it fixes the cause of the error. This is important as organisations are increasingly having to adapt to changes in the environment. Employee feedback can be an important asset in the process of organisational learning, but at the same time keeping in mind their limitations and risk of path dependency.

4 METHOD

This section will first outline our study design and reasons for choosing our methodological approach. Thereafter, we have divided our section into in-depth interviews, followed by focus-groups interviews. These sections include the execution of these interviews and the data processing. Thereafter, we have conducted a methodological discussion, involving internal and external validity and reliability issues.

4.1 Choice of Methodological Approach

To manage the mandate produced by GSS HR, we found it appropriate to narrow the questions down to one primary research question. This was essential as we were dealing with three different questions from the mandate. However, through conversations with our employer it became clear that one question had more gravity and was more vital for the organisation to receive answers about. Our research question became as mentioned "*How does digitalization affect GSS HR's services and the user-experiences of their customers?".* This question includes interpreting the customers thoughts and opinions in order to provide GSS HR with tangible suggestions. Therefore, we found it appropriate to apply qualitative methods to understand in-depth how the user-experience could be improved. Creswell and Poth explain how qualitative research is most useful when we need a "(...) complex, detailed understanding of the issue" (2018, p.45) and these details can only be discovered through direct storytelling and dialogue. Our research question required exactly this, an in-depth understanding of a complex issue i.e. user-experience. User experience will throughout this assignment be subject to each participant subjective understanding of the term, including own opinions and experiences of the services provided by GSS HR.

We decided to use both in-depth interviews and focus group interviews as parts of our data collection process. The purpose of the in-depth interviews was to get a broader perspective of the topic of digitalization of HR, and to get useful insight at an early stage of the data collection process. The focus group interviews were arranged to target more specific information about the customers views on the same topic, with their personal experiences from using the services provided by GSS HR.

4.2 Interviews

Both the in-depth and focus group interviews had a semi-structured designed, but with different interview guides based on their purpose, to secure that the interviews did not deviate too far from the topic. Particularly for the focus group interviews the interview-guide became an important tool to keep the conversation on track. The guides contained 8-12 interview questions, with the aim to create a natural interaction both between the moderator and participants, and between the participants themselves. All the interviews lasted for around one and a half hour. One researcher operated as a moderator who sat the agenda and directed the discussion. The other researcher acted as an observer and noted down important arguments and attitudes in the context of the interviews.

The participants were provided with an information and consent form, which was signed before the interviews. In this form the participants were informed that all personal data would be treated with confidentiality and would be anonymized, that participation was voluntary, and that they could withdraw their consent at any time. For additional information, see *Attachment 2.*

4.3 In-depth Interviews

We chose to conduct in-depth interviews with experts as our research question implied an exploration of the field of digitalization and digital HR. As this field is continuously evolving and most academic literature is not up to speed with this development, we found it useful to reach out to certain people with extended knowledge, either through academic research or through experience within the field of digitalization. The in-depth interviews provided us with useful insight of current and future possibilities of digitalization and HR, and acted as inspirational guidelines for the execution of the project. One of the experts **(E1)** is an advisor at an organisation which focuses on the digitalization of Norwegian companies. This organisation's main objective is to create competence and knowledge within this field in order to make businesses more competitive. The other expert **(E2)** is a professor within organisational studies, he provided us with necessary information regarding the field of digital HR and pointed us in the direction of specific literature.

4.3.1 Execution

We conducted two expert interviews which provided additional theoretical framework to our analysis. Approximately 10 questions were asked, and these were organized into four main topics which revolved around trends and developments within digitization, digitalization within organisations, digitalization and people, and lastly digitalization and HR. The interviews were located at the offices of the experts and the interviews were voice-recorded.

4.3.2 Data Processing

After the in-depth interviews were completed the recordings were transcribed. Since our interview guide was already split into themes, there were no additional need to code or categorize these transcriptions. The data obtained from these interviews have been used to explore and support our recommendations regarding future technological possibilities and considerations within DNV GL.

4.4 Focus Group Interviews

We decided on focus group interviews in order to collect information about the customers perspectives about digitalization and user-experience with GSS HR. The strength of the focus group interview is its ability "to capture content in the form of understandings, perspectives, stories, discourses and experiences ´not otherwise meaningfully expressed by numbers´" (Millward, 2002, p. 162). Focus group interviews provided both subjective perspectives, in addition to creating a dialogue and foster creativity and reflection within the group. Hence, highlighting the innovation aspect of our research question

The interview questions composed were not considered as involving any need for including sensitive information, also the credibility of the data acquired were not viewed as being limited by having the interviews at a group level. Therefore, we found that the focus group interviews would provide all the necessary information to conduct our analysis. The focus group interviews also offered an opportunity to gather larger data within a short time frame and thus enabled us to get a wide and nuanced overview (Scott and Garner, 2013, p. 299). This combined with the in-depth interviews provided an understanding of the question at hand and strengthened the probability of finding relevant and interesting information.

4.4.1 Execution

Because of our limited access and knowledge about the individual employees, our contact person recruited the respondents, based on our selection preferences. Our preference regarded different seniority and locations, with a purpose to collect data from a diverse range of employees. We executed in total four focus group interviews, with 3-5 participants in each interview. The first focus group interview was conducted through Skype with GSS HR-employees at different locations and with variating seniority. In the other three focus group interviews the participants were line managers in DNV GL. One interview was conducted through Skype, and two as physical interviews. The line manager interviews were divided based on seniority in DNV GL. The purpose of this division was to ensure that the participants had common reference points, to make a smooth exchange of experience and to lower the barrier of communication.

The questions were designed to grasp their general perception regarding digitalization, user-experience of the current services, and desired improvements within the area of e-HRM. These topics were asked through ten open questions and our main goal was to facilitate a natural conversation while still keeping it structured, e.g. “what is your general experience with GSS HRs services user-friendliness?”**.** Our general experience with the focus group interviews was that all the interviews generated rich data regardless of it being over Skype or physical. The Skype-interviews however, were without video because of technical issues, this led to a stronger moderator role than anticipated as people waited until they were asked directly to answer.

4.4.2 Data Processing

After the focus group sessions were completed, all notes and recordings were transcribed and systematically analysed in order to assure quality in the data. Since we were four researchers and had four focus group interviews we saw it as beneficial to split up the interviews and code them separately. We then came together to discuss our main findings. Altogether we found the coding as having three main denominators throughout, these were information, communication and management empowerment. We then gathered the four transcripts in order to do our coding once more, focusing on these categories.

4.5 Methodological Discussion

Creswell and Poth (2018) emphasises how there exists a variety of views on validity and reliability within qualitative studies. However, we have chosen to apply Jacobsen (2015) framework in our

methodological discussion section. The demand to quality of a qualitative research study is related to the capability of the researcher to reflect over the interaction between the research the results (Jacobsen, 2015, p. 246). The total quality can be reduced into three categories (Jacobsen, 2015, p. 228). Firstly, the internal validity, which is if the results corresponds to what the researcher intends to find out. Secondly, the external validity, is the level of which the collected data can be generalized to other contexts. Thirdly, the reliability, is if the collected data can be trusted.

4.5.1 Internal Validity

The internal validity is dependent on the participants actual knowledge of the topic, their ability to communicate this, and the researchers' ability to understand and formulate the participants arguments. The participants in the interviews were primary sources, and actual users of the systems, and accordingly had profound knowledge of the topic of our study. We experienced that the participants had a clear interest in supporting our study and provide us with best possible data, since it also would improve their work life. A risk was that the GSS HR employees could feel ownership to the HR systems and present an exaggerated positive view, but we felt that this was not the case as they shared several critical viewpoints on the systems. In general, we did not have the impression of neither motives to present false data or lack of knowledge on the topic amongst the respondents.

Another aspect that could have weakened the internal validity is the language barrier between Norwegian and English. This could possibly have affected our interpretation of the data obtained. Since the respondents had different nationalities, there was variety in their English skills and consequently, some of them were harder to understand than others. We could have reduced the risk of this by asking more clarifying questions during the interviews, to keep a natural flowing conversation amongst the respondents without unnecessary interruptions.

4.5.2 External Validity

To assess the external validity of our research, we have to consider if the participating respondents are representative of the general views of the GSS HR´s customers. We regard our selection of twelve line managers divided into three interviews as a sufficient amount to get enough data, and we experienced that corresponding answers occurred across the different interviews. In hindsight, we could have held an additional interview with the GSS HR employees to strengthen the external validity, to assure that the data was not biased.

The fact that the participants were recruited by our employer, may have reduced the external validity of the research. Would a random recruitment process lead to more representable data for the general employee? And did the employees who participated in the interviews differ from the ones who did not respond to the invite? These are valid questions to ask, but the format of a qualitative research study will always have deficiencies regarding generalization to a larger population. However, this can be important insight for future research, to provide a more generalizable research.

4.5.3 Reliability

Creswell and Poth (2018) explained how reliability can be enhanced through transcribing digital files, which were done after the interviews. This could have improved our reliability as every researcher could return to the transcription to ensure the quality of the data. Furthermore, Creswell and Poth (2018) mentions that reliability in qualitative research "often refers to the stability of responses to multiple coders of data sets" calling it "intercoder agreement". In our case the reliability was strengthened by the fact that we were two researchers participating in the interviews, that we did recordings, and that data got perceived and interpreted in an equal manner afterwards. In this way we ensured that our interpretations were done independently due to our subjective perceptions (Kvale & Brinkmann, 2015, p. 211- 276).

The context of the interview can also affect reliability, and especially three contextual aspect could have affected our data. We conducted two Skype-interviews and it is possible that the dynamics within the group could have been affected by `technicalities´ since Skype only allowed audio, and not video. The respondents were thus not able to see each other, which could have prevented the focus-group from achieving a natural dialog since the respondent could not read each other's body language (Tjora, 2012, p. 104). Face-to-face communication inspires trust, mood and honesty (Kvale & Brinkmann, 2015, p. 22). Despite these challenges, the information flow seemed natural. One reason for this could be that the employees were accustomed to using Skype as a communication tool. Also, one could argue that lack of video might have made the respondents more comfortable since it appeared more `anonymous´.

Another contextual concern could be group pressure between the informants (Harboe, 2013, p. 80). This might have affected our data if our participants were not completely honest in order to accommodate the group. However, all the respondents were given the opportunity to elaborate and substantiate on all questions through their own words and this strengthens the reliability of the data.

A third contextual aspect which could have affected our reliability was if the organisations had certain motives for choosing our respondents. If the informants were chosen in order to display GSS HR services positively, we might have missed out on information that could have been valuable to grasp the user-experience. However, we found the chosen respondents to be open and critical and thus this not to be the case.

5 ANALYSIS 1

In this section we will introduce to you our main findings based on our analysis of the interviews. Because our research question contains two stages, we have decided to separate our findings into two sections where the first section addresses our main research question and the second analysis draws further on the first trying to emphasise the second stage. In consideration of the flow of our arguments we have decided to present the findings and discussion together. Each question is presented with its own appraisals and contains our discussions together with the theoretical framework introduced above plus additional research. See *Attachment 1* for a system and tool guideline.

How does digitalization affect GSS HR' s services and the user experiences of their customers?

The first part of the analysis is structured into topics of findings we considered most relevant to the theoretical framework and the research question. We identified three main patterns on how digitalization can affect GSS HR´s customer user-experience. These patterns we have chosen to categorize into the following categories; information, communication and management empowerment. These will be introduced separately in the following section. Nevertheless, these categories are not mutually exclusive, and the identified features can cross-over. For the sake of order, we have tried to separate them as systematically as possible. All the sections will try to answer our research question regarding how digitalization can affect the user-experience of services provided by GSS HR.

5.1 Information

A common denominator throughout our focus group interviews was the topic of information. As presented in the theory section, one of the main features within e-HRM is the collecting, storing, retrieving and dissemination of data and information through digital platforms (Stone et al., 2015, p.

216). Thus, information is an important feature of e-HRM, and as Parry and Tyson (2011, p. 338) explained e-HRM tools are often implemented in order to improve organisational efficiency and service delivery. Therefore, using e-HRM to collect, retrieve and distribute information could enhance the employees user-experience through creating more agile services. This section will discuss digitized information, interface, integration and lastly, training. The findings and analysis of this feature will in the coming section be presented and discussed in depth.

5.1.1 Digitized Information

Based on the data obtained from the focus group interviews, we discovered several ways in which digital information can affect the customer user-experience. Both the GSS HR employees and the line managers had a generally positive view on digitization of information, and explicitly mentioned the Electronic Paper Files (EPF) and the Intranet as implementations that had improved their user-experience. The interview conducted with GSS employees highly praised the EPF project in regard to the digitizing of paper-files. This relates to information because when documents become electronic, people get easier access to the information. "I think it is very convenient that it is all digitalized because we can easier go through files and send them to the employees at their request*"* (**GSS5)**. Emphasis was put on how it allowed them to spend considerable less time on finding, scanning and emailing, and consequently, this digitization resulted in more efficient communication and accessible information.

However, the participants mentioned that the digitized information was not accessible in certain cases.

> *(..) I sometimes find it difficult searching for some documents or forms. I think we could improve in this area to make things clearer for people where to find things themselves (…). So maybe by publishing more information online and by making it more searchable/easier to find this will improve the problem **(GSS2)**.*

Two other respondents supported this reasoning and emphasised how some of the systems were not user-friendly and that this was also something that the line managers were struggling with. This discussion leads us onto the second aspect that was apparent from the focus group interviews, i.e. a request for a better interface.

5.1.2 Interface

The word interface has a twofold definition. Firstly, it can refer to the software that enables interaction between a person and a computer. Secondly, it can refer to the interaction between

systems. In the following, the person-computer interaction will be referred to a as interface, and the system interaction will be referred to as integration (Oxford Dictionary, 2018). A major part of the effective interaction between systems is that it can be expected that data flows naturally and effectively and is easily accessible (Ross, Weill and Robertson, 2006). These attributes do not seem to be fulfilled by the Intranet, Partner or MIP according to the respondents, but rather the opposite.

The respondents were, in part, satisfied with the Intranet as a digital source of information. However, there were contradictory views of the Intranet's interface. In general, the respondents were pleased with the front-page, however they had divided opinions regarding the intuitiveness. "What was a good advancement was this Intranet page where you have kind of everything and one look and can access everything, I appreciate that very much *"**(LM4)***. A clean layout to the front-page was mentioned by this respondent as something positive, because it made information easily accessible and coherent, and contributed to a good interface. This corresponds to Parry and Tyson's (2011) arguments regarding user friendliness and intuitiveness as vital preconditions in order for e-HRM goals to be achieved. However, one contradictory point was made about the intuitiveness of the Intranet front-page.

> *I also agree with what (...) is saying about the one front-page in the Intranet. There it is more self-explanatory to find information. But again, if you go to the Intranet you don't find anything unless you know where you can find it* (**LM1**).

When employees have to acquire in-depth knowledge on the software to be able to manoeuvre it, this contradicts the earlier addressed goal of e-HRM regarding intuitiveness.

Additionally, the Partner tool`s interface was brought up as something which could improve.

> *I think the Partner is still under improvement. At the moment I find it not very intuitive. I find it dreadfully slow, too many buttons to press, not very nicely layout. Then, functionality once you made it there... it's a lot of scrolling going on the screen until you get to the information you want to get. But first you have to get to all the other dominoes at left and right (...)* ***(LM4).***

This emphasises how the software does not sufficiently enable interaction between a person and a computer and that it is therefore a limited degree of interface. This in turn affects the user-experience in a negative way. Another informant also referred to Partner as not having an intuitive interface, explaining how it should be `self-explanatory´ but that this is not there yet for Partner (**LM1**). The other participants agreed with the statement above, that an improved Partner interface would be beneficial for both the line managers and their employees. Regarding MIP, all the participants in one

of the interviews seemed to agree that there were too many options to click on in the front-page and several of these were never in use. Having a messy interface seemed to limit the customers, this might be something that needs to change in order to improve the overall user-experience.

In addition, one focus group interview mentioned the need for GSS HR to hire more UX (User-experience) leads so that their customers could in turn get a greater user-experience when using their services.

> *(...)it's mostly about those big systems not looking like real snappy and feeling like Google or Netflix or anything like that. People kind of want that. Because you expect that what you get at home is what you get from the workplace as well, and that's not just for us it's a major thing (**LM9**).*

Another participant supported this and explained how when using Netflix or Uber no one ever questions where to press in order to get where they wanted, because the pages are so intuitive. All this together emphasises how interface needs to be considered when implementing e-HRM as it highly affects the user-experience of GSS HR`s customers.

Furthermore, when asked to recall any previous systems that the participants had come across that they were particularly fond of, one of the participants mentioned a HR portal that had everything in one place with an easily understandable interface.

> *I remember we had a service portal that was very limited in its functionality, and at some point a new portal for HR was introduced and what was absolutely beautiful about this portal was that everything. Literally everything was in one place (**GSS4**).*

This sums up the general understanding we got after conducting the interviews. The addition of an intuitive system with accessible and integrated information, would potentially improve the overall user experience of GSS HR customers. However, especially the aspect of user-friendliness for the line managers and the GSS employees were linked to the systems also interacting with each other. This brings us to the next section of information, namely integration.

5.1.3 Integration

Interaction between the different systems (i.e. integration) works as an underlying factor for a clean interface. Weill, et al. (2006, p. 28) claims that the benefits of good integration between systems "include increased efficiency, coordination, transparency and agility" which in turn "allow the company to present a single face to customers". Regarding integration, there was not mentioned any

specific systems that were well connected. This indicates that the focus of the participants was on the challenges of integration, even when asked which systems worked well. Weill, et al. (2006) mention that the traditional approach to IT development is a set of silo systems that do not communicate with each other. Each IT- system supports one business function, where information and data does not flow between them. "Individually these systems and applications work well, though together they hinder a company's efforts to coordinate customer, supplier and employee processes" (Weill et al., 2006, p. 6).

The participants agreed that the integration was a problem with some of the current services provided by GSS HR.

> *I think the frustration there is something that we do not really get what we need to get out from the system and that they do not talk to each other, so you have to get different information from different systems (**LM1**).*

It was also mentioned by the same respondent that you had to type the information into multiple systems manually which was viewed as a very time-consuming process. During the interviews this topic emerged as something hindering the line managers and GSS HR employees user-experience. Integration of information across different systems, makes the customers tasks easier as it reduces time spent on unnecessary tasks. The recruitment process and the CV tools were particularly mentioned as areas that could be improved through better integration.

Further, the recruitment process was a difficult area where it was obvious that information had to be manually copied from one system to another.

> *(...) for instances if the hiring manager would like to start a recruitment process, we have specific form for that which is cool, but basically then the recruiter has to manually copy it to another system so actually doing it a second time, and when we have a decision for the final candidate we are rewriting it for the third time (**GSS3**).*

This results in increased workload as they have to manually deal with the same information multiple times. This is contrary to the possible goals of e-HRM since it is both time consuming and inefficient (Parry & Tyson, 2011). The general assumption was that it would be more user-friendly to have all data stored and analysed together (**LM1)**.

The CV tools was particularly criticized for being inflexible and time-consuming to operate. It was explained by several participants as almost paradoxical that an organisation highly dependent on

projects and internal recruitment did not have a CV system that supported this but instead almost hindered it.

> *We have lots of different things in different places. But they don't kind of flow, and maybe that's what missing, that you can link the different things that we have. Like if there was an easy way to import these CVs from the Intranet and Partner for a project or easily being able to update your profile so it's relevant for what it is needed for. And I think a lot of people don't necessarily update their profile because its tedious to do it* (**LM6**).

This quote emphasises the lack of integration between the systems, as similar things are present in different systems, but these systems do not seem to communicate. Several respondents emphasised how when being involved in internal recruitment situations they found it irritating that they could not create several versions of their CVs, even though their CV was updated in the Partner 2 project, they still had to save it as a PDF and upload it in ICIMS when applying for a job.

> *I know personally that CVs have been a nightmare for HR, cause we`ve had a CV in Partner a long time (...). But the problem is that you can't create other versions of it, e.g. you can't create it in other languages then English. So, in Norway for example if you want to give your CV to a Norwegian client you have to create it yourself, and you have to maintain two or more CVs simultaneously at different locations* [our translation] **(LM11).**

Both these quotes suggest a need for a more flexible and integrated CV system that can customise CV´s to specific projects and be easily accessible. Additionally, a focus was on how many employees did not have updated or visible CVs and that this was frustrating for the line managers in charge of recruitments. This emphasises the need for some type of alert to the employees regularly that they need to update their CV. All these aspects will be further examined in our second analysis. Altogether, this type of digitalization could highly improve the user-experience of the GSS HR´s customer.

5.1.4 Training

A problem recognized in relation to this could be the employee's lack of knowledge about the different tools. Even though the information was available for the employees, they did not always know how to access and use it.

> *The absence tool is a challenge. Of course, it is also still new for me, because it was introduced to me last summer. And I don't find it very friendly, but maybe it is a lack of knowledge from my side. (..) so I don't find it very friendly at this moment and maybe it will come later when I have more knowledge about the system* (**GSS5)**.

It was apparent that the aspect of knowledge, or rather the lack of it, was recurring in all the interviews. There was for example evidence of functionality that the employees simply did not know existed. In one case, one of the informants referred to interest tagging on their personal site as an answer to more visibility on internal and external courses. The other three did not know anything about it, but desired more information regarding this (**LM12)**.

This was also the case when it came to finding information at the Intranet, where the essential aspect was that you do not find anything unless you know where you can find it. A study has shown that HR professionals do not use the information that became available to support HRM services, one can assume that this is an outcome of lack of information or knowledge (Dery & Wailes, 2005). One study also discovered that to achieve intended outcomes such as efficiency from e-HRM, one necessary factor is sufficient training (Parry & Tyson, 2011, p. 340). Parry and Tyson (2011, p. 349) explain how employees and managers need to engage with the systems, thus, making it acceptable and used across the organisation. Therefore, one could argue that lack of this is a possible reason to why the customers has problems finding information. Thus, one can assume that in order to improve the user-experience, more sufficient coursing and engagement should be present.

Lacking knowledge about digital information services could also be due to the lack of time available to learn and one of the respondents made us acknowledge this:

> *I would really like to have more time to read and have more knowledge about say the Partner 2, or the parties of availabilities there are. I haven't been looking into that, I do not have the time to look into that, so to see what the system can do and can offer me (..) To have more time to get to know the processes (**GSS5**).*

Seeing it this way, the user-experience could be improved by giving the employees sufficient training and more time to get to know available information and services.

However, one can argue that if the systems have a good interface, training should not be necessary. The user should be able to understand everything immediately, due to the intuitiveness of the systems or tools. Training in this sense could be seen as a single-loop solution, where one is dealing with a recurring error, namely lack of knowledge, but where the organisation is not identifying the actual and underlying issue, which mirrors the concept of double-loop learning (Argyris (1982, p. 4). In this case, the issue seems to be that the systems are not intuitive enough, and that there is fundamental room for improvements in this area.

To sum up, we have identified several ways in which digital HR in terms of information features, can affect user-experience, both positive and negative. Positively regarding easy accessed information. Still, some information and documents were hard to search for. There are room for improvements and we have discovered that the main issues involve unintuitive interface, lack of integration between systems and the need for more knowledge and training. Some of these issues will be discussed more in depth in section 3, together with more concrete solutions.

5.2 Communication

Organisational communication can be defined as "the process by which individuals stimulate meaning in the minds of other individuals by means of verbal or nonverbal messages in the context of formal organisation" (Spaho, 2012; Richmond, et al., 2005). This definition characterises the organisational communication as an ever-changing process that stimulates and develops meanings amongst the people of an organisation. A joint understanding of the state of the organisation and its tools, through a reciprocal exchange of meanings, is useful for all levels of employees. Spaho emphasises the relationship building in order to achieve its strategic objectives as the most important role of organisational communication (2012, p. 310). The main findings on communication from the focus group interview concerns how the current performance appraisal tool (MIP), and process affects user-experience negatively. Our analysis will furthermore show a desire for a more continuous process with more feedback options. This debate will be discussed further using the theoretical framework regarding organisational learning.

5.2.1 Between Line Managers and Employees

One of the main findings from the focus group interviews was the frustration regarding the process of performance appraisal between line managers and their employees. Managing Individual Performance (MIP) was widely criticized for being discontinuous, static, and designed in a way that leads to unstandardized use of the tool. The fact that the employees set their performance goals once a year leads to "very much biased" (**LM4)** discussions, affected mostly by recent events, and that it is unable to adapt to the ever-changing character of the work. Consequently, it would be better off with a more continuous performance tracking. This is supported in Performance Feedback theory, that underlines that the probability of learning and performance development increases in line with continuous and immediate feedback. The distance between the actual performance and the feedback,

enhances the probability of diverging perceptions between the receiver and sender (Kuvaas, 2015, p. 181), which in order can lead to disagreement and disappointment regarding the feedback.

The MIP-process was also criticized for unstandardized practice amongst the line managers in method of feedback. Some line managers base their feedback on the number-rating and others focus on the qualitative feedback (**LM10**). This is problematic, especially when it affects their salaries. In addition, the quantitative feedback often leads to disappointment among the employee, even though they receive a score of 3, which is the average rating (**LM10**). One worrying consequence of the line managers being raters of employee performance, could be idiosyncratic rater effects, meaning that leaders are not capable of doing precise evaluations of their employees because of lack of information, in addition to cognitive and emotional biases. Kuvaas (2015, p. 170) argues that 60 % of the feedback can be explained by idiosyncratic rater effects, and that subconscious systematic errors leads the evaluation to be just as much an evaluation of the leader as of the employee. A certain amount of the correlation can probably be explained because the leaders naturally appreciate skilful employees, but if the purpose of the process is employee motivation and performance development, the MIP process can be argued to be unsuccessful. Even though the MIP tool is not a service provided by GSS HR our analysis showed that this was one of the most discussed features when it came to wanting improvements. Therefore, we saw fit to bring this into our analysis part as it might be useful knowledge for DNV GL overall. Changing this process would highly improve the user-experience for the line managers as they were generally displeased with the tool and how it was used.

5.2.2 Between Line Managers and GSS HR

A much-discussed topic of the interviews was the possibility, or rather lack of possibility, to give feedback on the HR systems. A more open communication regarding systems, based on feedback from the users, would make the tools more user-friendly and intuitive, something as mentioned accords with Parry and Tyson's potential goals of e-HRM (2011). In the focus group interview with the experienced line managers it was a common perception that the lack of feedback and communication was a hindrance for the efficiency and development of the company. The informants suggested a forum for discussion among employees to come up with solutions and improvements to the systems. They also suggested an implementation of a feedback option into the systems, where users can give direct ratings and comments. "It does not have to be a person involved, all systems should have a feedback option" (**LM12**). The discussion forum was presented as an arena to develop

and stimulate new ideas, and it seemed like the lack of dialogue between users of the HR systems prevented development and undermined the struggles with the HR systems.

This kind of reciprocal and continuous feedback corresponds to Argyris (1982, p. 4) concept of double-loop learning. It creates persistent solutions and an environment for organisational learning processes, which can lead to more efficient organisations. Instead of constantly dealing with a recurring error, double-loop learning identifies the underlying objectives of the error and solves it so it will not occur again. Instead of fixing the effect of the error, it fixes the cause of the error. It is about further reflections and thoughts outside existing framework conditions. Accordingly, one could argue that digital feedback options, as suggested by the line managers, would help GSS HR identify constraints and improvements to their services and systems. This can provide the organisation with valuable insight on underlying issues, creating a more efficient organisation and improving the individuals user-experience through more user-friendly and intuitive solutions.

However, to benefit from the feedback options, it is important to emphasise that the organisation should take feedback options into considerations. Egerdahl (2017) emphasised how in order for an organisation to learn they need to show through words and action that they value new propositions, possibilities and contributions in order to increase their own or others competency (p. 438). We identified a problem regarding this related to Yammer. Yammer is a social networking service and have been, in lack of other systems, used as a portal for feedback and communication among the employees.

> *It hasn't been designed in a way that... it's more of a people say things and you comment that "it's really cool", but there isn't a process where people can give feedback and that feedback is taken onboard and something has been done about it (**LM6**).*
>
> *And there is a lot of different people commenting on different stuff and it's more of a talk place and nothing else. If somebody comments on something I should pick up I don't pick it up because I don't go there because I don't have time to do it* (**LM9**).

Through these quotes one can see that even though Yammer has been used as a feedback portal, it appears more like a `talk-place´, and where feedback has not been taken onboard in any strategic process or been on any agenda when assessing systems and services. Thus, the feedback might appear more like a background noise. However, much of these problems might be because Yammer is not specifically designed to be a feedback forum. One can assume that such problems could be reduced

if feedback options were implemented into the tool, as it would become more user-friendly to both provide and assess feedback continuously. Providing the employees with a feedback solution could highly improve the employees user-experience when dealing with services and tools provided by GSS HR. In the analysis we saw the lack of a feedback solutions as a recurrent problem, and therefore we will discuss this aspect further in our second analysis section which revolves around digital suggestions.

To sum up, the focus group interviews gave an impression that the communication in DNV GL and GSS HR, suffers of a lack of reciprocal and continuous feedback on different levels. “A two-way feedback loop encourages innovation, greater trust and collaboration” (Coleman III, 2017, n.p.). The absence of this communication, results in inflexible systems and solutions, while making the job of both line managers and GSS HR employees harder because of unclear needs in different parts of the organisation. This clearly affects the user-experience of services provided by GSS HR. Improved channels for feedback in DNV GL and GSS HR, would work as a means towards improving the current HR-services and inspire for new HR-solutions in the future.

5.3 Management Empowerment

Kuvaas et al (2014) explain how enabling line managers through providing them with sufficient levels of autonomy and discretion can have several benefits. The line managers are likely to view autonomy as the organisation empowering them and consequently they feel trusted and are more willing to work towards organisational goals and feel responsible towards the people below them (Kuvaas et al, 2014). All the systems and processes the line managers felt provided them with more autonomy and thus made them less dependent on approvals and conversations with HR were viewed as positive. Parry and Tyson (2011) studied the desired goals when introducing e-HRM versus achieved goals in ten different organisations in the UK and found that in most organisations “the automation of processes and the direct entry of information by managers removed the need for duplicate keying of data by the HR administration team, meaning that the amount of time needed for transactions was reduced considerably “(p.340). Therefore, one can say that digitization of processes which facilitates this can improve user-friendliness and efficiency overall.

Both interviews with GSS HR and the line managers brought up this through what many called the `culture of self-service´.

> *I think making everything easier for us as managers and for the employees is what's important for digitalization of HR. More self-service without losing the help. And not on offloading everything onto us, as we do the HR job. But sort of making it easier to sort of fix things quickly when it's easier to fix it by a few buttons yourself instead of emailing people to having them do it **(LM9)**.*

That people now could resign through the systems, modify their working hours (**GSS5, GSS4**) and print out their own certificates (**LM4**) were brought up as providing the line managers and other employees with more autonomy. Less direct contact with GSS HR combined with less time spent on administrative tasks such as answering emails, frees up time for the GSS HR-employees to handle more complex inquiries (**GSS4**). Parry and Tyson (2011) found that most of the organisations they researched improved their service delivery to line managers through e-HRM and additionally allowed for the administrative HR to spend more time on "(...) complex or value-added tasks, and to spend more time advising managers" (p. 347). It was apparent in our research that these small digital solutions made GSS HR`s services more user-friendly.

However, several respondents felt that although the culture of self-service was moving in the right direction, aspect such as not being able to update all your information such as passport number (**LM4**) and bank information **(GSS4)** still hindered the efficiency flow. The line managers brought up the time-sheets at several occasions and how frustrating it was when people had forgotten to fill it in when they for example went on holidays and the line managers were unable to access the system for them (**LM7**).

Additionally, the aspect of getting internal and external job advertisements and how it required manual forms and approvals from different people were viewed as a time-consuming and little efficient process which could be improved if digitalized **(LM4, LM1, LM3**). Creating job descriptions was also viewed as a tiresome process: "(…) these days it takes one and a half hour to fill in a job description for a job application" **(LM2**). The process was regarded as inconvenient for them as employees at GSS HR and not user-friendly and was brought up as something which could be made more efficient.

> *Just to back up your point I think self-service is very important going forward. At least I have seen very little self-service so far. So I think that's very important, the user-experience is a key and I think it's a lack of that so far (**LM6**).*

This quote summarises what has been discussed above. Kuvaas and Dysvik (2016) defined user-friendly HR "as the degree in which the middle or line manager experiences the HR measure as contributing to him or her getting their work done through their employee" (p.233). They further explain how HR is user-friendly when it supports their line managers in conducting their tasks and at the same time is customised to local needs, line managers needs and the individual employee`s needs (Kuvaas & Dysvik, 2016, p. 233-134). Accordingly, it is vital that HR understands what can support and provide the line managers with added value when implementing e-HRM.

In one of our expert interview it was discussed how research shows that the line managers often spend a majority of their time on reports and administration, and that if some of these tasks can be digitalized, it can free up time so that the managers can have increased time being available for their employees **(E2)**. The user experience will in turn be dependent on the effective implementation of such systems, and to which degree the line managers perceive them as effective and helpful. Throughout our interviews what was apparent was that the line managers wanted HR to support them through empowering them more. This could highly improve their user-experience with the services provided by GSS HR. Altogether, these aspects and categories discussed above show different ways in which digitalization can affect the user-experience.

6 ANALYSIS 2

Our second focus area in this report is to draw lines from the analysis above and emphasis suggestions regarding the possibilities for DNV GL`s digital journey. This section will examine two main suggestions for digitalization within GSS HR which we believe would improve the GSS HR user-experience. These suggestions will consider creating a more integrated CV system, and a clear feedback system. However, it is important to emphasise that our first analysis contains several important aspects which can also be considered as suggestions e.g. how empowering the line managers could improve the overall user-experience of services provided by GSS HR. Nevertheless, we have chosen to emphasise the feedback and CV suggestions as we regard them as more tangible and feasible digital solutions. Additionally, we will explore and chart some new digital technologies in this section and address briefly what other companies are doing regarding digitalization within HR compared to DNV GL. Lastly, two considerations will be discussed when it comes to implementing e-HRM. These considerations will deliberate the human aspect of HR and data protection. Our

analysis of the interviews is the foundation of this section, with further theoretical and analytical supplements.

6.1 Digital Suggestion- Improving the CV-service

A summary from the discussions above regarding CV's is that the line managers in particular desired a more flexible, accessible and integrated internal CV solution. They wished for integration when it came to Partner and the iCims tool, they wanted accessibility when it came to conducting internal recruitment, and lastly, they desired flexibility when it came to customizing their CV. This type of solutions would, based on our analysis, highly improve the user-experience of GSS HR´s services. We will in the following sections provide two suggestions regarding how to create a more flexible and integrated CV solution.

Our first suggestion within this section would be to create better integration between the systems and tools which involves CVs. As was made clear in the analysis above the lack of integration between the different tools containing CVs was contributing to a negative user-experience for especially the line managers. One suggestion in order to improve this could be to develop a stand-alone tool with the sole purpose to manage and update CVs, then have this integrated into Partner and iCims. If technically possible this would be a good solution as people would be more efficiently able to move their CV across these two systems. This would directly deal with the challenges presented in analysis one.

Another possible solution is if the different tools like Partner and iCims could connect to a gathered CV database. We cannot know precisely what technical solutions would be possible, but an emphasis on these two systems communicating in one way or the other should be made. This would provide more efficient processes both for those involving themselves in internal recruitment processes and the recruiters. So, integrating the Partner tool and iCims we believe could provide a better user-experience of these services as it is apparent that this is viewed as a time-consuming and unnecessary job.

Our second suggestion considers creating a CV system or tool which enables flexibility and accessibility. This could be done through having a tool which supports customised CVs, and through creating a culture of updating CV information. When it comes to accessibility this mainly consists of the aspect of making competence visible. E-HRM should make accessible the comprehensive data-

material within HR (Spitzer, 2014), and one important data that DNV GL has is competence data. Thus, if there is no system or tool in place supporting and making accessible their competence this might have negative consequences for DNV GL overall. Egerdahl (2017, p. 414) explained how increasingly organisations "have realized that in order to succeed with organisational goals, strategy, and economy one has to ensure that the employees at all times have the right competence" [our translation].

An improved CV tool should make competence more accessible and thereby also making it easier for the organisation to chart and map out DNV GL`s competence in order to understand current and future recruitment needs. This was also emphasised by one of the line managers:

> *Everyone has extended knowledge and competence after some years, because of different projects etc. and this should be made visible for someone. For it is after all the gateway to new projects. So I think that highlighting the employees' competence would be important for HR as it would be documented what knowledge employees have so that when they leave HR knows what competence to replace* [our translation] **(LM11)**.

This feature of making competence available however, seems to be hindered by the systems rigidity. The same participant as above emphasised this aspect as well when discussing the rigidity of the current tools. "It is odd, because we are a competence company and in a competence company your competence should by definition be highlighted from your CV" [our translation] (**LM11**).

Another component our analysis showed, that also hindered the accessibility of the CVs, was the lack of flexibility regarding customisation. If people would be able to have several customised CVs available, their competence might be more highlighted, and this could in return make it simpler for the line managers to search for them. Several employees mentioned how the system was not creating agility, and that it created repetitive work in different circumstances.

> *I haven't seen in detail how the Partner 2 has changed with regards to CVs because that is of course extremely important in our day to day business to have access to good CVs and also the ability to easily you know... maybe have several versions that you can have to specialize the CVs for different kind of jobs and the agility in that is extremely bad. So that's maybe where the biggest potential for improving our process* **(LM7*)***

This argues for our suggestion to improve or alter the system so that it allows for customization. Other employees additionally outlined the need for having several customised CVs in order to highlight different competence.

However, for the competence to be highlighted it is also a necessity that all employees continuously update their information. This brings us to the suggestion of having continuous reminders related to updating personal CVs. Information about increased expertise is as discussed above fundamental for further endeavours within the organisation. Therefore, HR needs to play an active role in highlighting the benefits of employees updating their CV, as one can assume that they consequently would be more inclined to keep the information up to date. Several participants brought up the frustration of searching for employees, only to find that their information had not been updated in several years or that their CVs were not available. As discussed earlier, this makes competence inaccessible and thus HR should emphasise continuous updates from their employees. This also seems to correspond with the new data protection law stating that personal information has to be necessarily updated and correct (Datatilsynet, 2018). One suggestion to ensure updates could be continuous pop-up reminders within Partner or iCims related to updating their CVs, or regularly email alerts. However, this might be a single-loop solution as it perhaps is a more temporary solution (Zetterquist et al. 2014).

On the contrary a different solution, that would save time for the DNV GL employees, is an automatic updated CV-system that tailor relevant references of the employee to new projects. This is more similar to double-loop learning as it revolves around developing new more persistent solution which exist outside the existing frame of reference. The system could contain a database of all the project references, written by a participant of the specific project. The name of the participating members and keywords could be attached to the reference. When getting involved in a new project, the employee would then only need to access the system to retrieve their CV with relevant references, based on the content of the new project. If applying for a role in a specific project, the CV-system would generate a CV which included all relevant references. This could also make the recruitment of personnel to projects more time-efficient for the project managers, with all the references easily accessible.

To sum up, GSS HR should focus on integrating the Partner and iCims tool in order to create more efficient processes. They should additionally enable the creation of customised CVs to enhance the visibility of competence in their organisation. They also need to create an employee culture of continuous updating of CVs. Together these aspects would most likely improve the GSS HR´s customers user-experience.

6.2 Digital Suggestion- Facilitating Different Feedback Options

According to our first part of analysis, lack of accessible digital feedback channels was identified as a potential improvement area. Therefore, one of our main suggestion is related to feedback options. As suggested in the introduction HR is moving increasingly towards having to have strategies earlier associated with marketing and social media (Larkin, 2017). What is meant by this is that HR is becoming more customer-centric, trying to pulse what their `customers´ i.e. employees are demanding. This is highly visible within this project overall as GSS HR wants to know how digitalization can provide their employees with added value. This emphasises how the employee demands has received a larger role within HR then previously and why it is important to create a space where the line managers and other users of the GSS HR systems and tools can give feedback.

Following this idea, together with the findings in analysis 1, we have identified a third possible understanding of e-HRM which involves around: the *digitalization of HR services as enabling organisational learning through knowledge-sharing and feedback solutions*. This is opposed to the e-HRM definitions mentioned earlier in this report which simply treat e-HRM as enabling organisational goals and strategy etc, and instead emphasise a more `soft´ approach to e-HRM. This type of e-HRM definition corresponds more to the Nordic model which includes the idea of direct participation, meaning that the individual employee can perform direct influence on their work and shape one's own working conditions (Levin, 2012, p. 94). It also corresponds to Kuvaas and Dysvik's ideas regarding user-friendly HR as supporting the line managers in conducting their tasks (2016).
If the employees continually get to provide the organisation with feedback, this could be viewed as one way of influencing one's working life. In our focus group interviews it was evident that the line managers had many great ideas and feedback on the systems and if HR could find a way to easily obtain this data they could increase their services user-friendliness and thus improve the user-experience. The participants even had specific suggestions regarding how this feedback system could operate. These suggestions will be mentioned below in the different sections.

6.2.1 Suggestion 1. Pop-up Rating System.

In accordance to the feedback presented above and our first analysis we suggest that GSS HR could implement a pop-up rating system. One respondent specifically suggested this feedback solution by using the example of Facebook's Messenger video-chat function.

> *You always get a pop-up afterwards, a kind of rating system regarding how good the function is. And if you are a programmer for Messenger and always receive one star of five over time then you know that there must be some elements of improvement. This could have been done very easily* [our translation] ***(*LM12*).***

In this excerpt it is emphasised how the people behind the system would get a clearer view of how their system is working through this type of feedback. There are other examples of this type of rating systems as well. One clear example familiar for some of the Norwegian employees in DNV GL regarding this type of feedback is how the canteen at Høvik has this smiley terminal where people can physically press at smiley, indicating on a smiley scale how pleased they are with the service they have received. This type of smiley feedback is offered by a company called `Happy or Not´, and they also offer a web-based smiley panel where the organisation can "research the user-experience of their online-services" (Happy or Not, 2018).

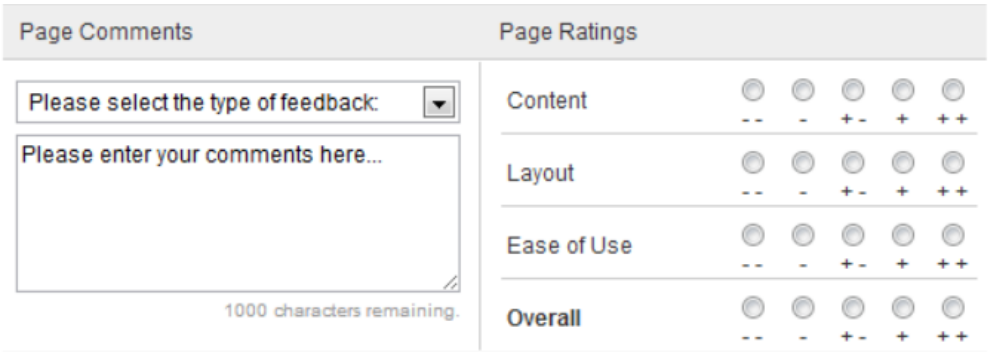
We suggest that a type of pop-up rating could appear when the employee is trying to exit a tool or system, and that one can choose to dismiss it or choose to leave a rating. This type of rating system would be beneficial, as it is simple and not tedious for the users, while it also provide GSS HR with an overview of the employees' perception regarding these systems. This could create a foundation for further action on improvements. A pop-up as well would require immediate attention which is something particularly one participant desired as it was viewed as necessary to unload the frustrations regarding systems immediately, before the thoughts drifted to other problems.

However, one concern regarding feedback pop-up tools, is the possibility of perceiving it as intrusive. Previous research found that online advertising techniques, such as pop-up and banners was seen by customers as annoying and disturbing which results in negative associations regarding the internet site (Mccoy et al. 2007). Thus, if this is the case, the feedback tool can prevent its intentions, namely negatively affecting the user-experience rather than positively. Another weakness of the design could be that the number ratings are hard to interpret.

Therefore, this suggestion might be most suitable in an early developmental stage or perhaps as a pilot programme. In this way the organisations would be able to map where there is most urgent need for improvements and where not. If GSS HR´s strategy is to improve the user-experience of their services, this way of implementing web technology-based channels could highly support this.

6.2.2 Suggestion 2. Feedback Comment Section

Nevertheless, suggestion 1 can possibly result in feedback that is hard to interpret, and regardless of the design of the feedback system, the quality of the data obtained is vital for the further processing of the feedback. Therefore, a comment section in addition to the number rating will result in more detailed feedback, and thus make it easier to aim solutions at the core of the problem, which corresponds to the principle of double-loop learning. The comment section should always be available for the employees when needed but could have a feature that allows for partially hiding when not in use in order to make it less disturbing. The purpose of this type of feedback solution would be to simplify the user feedback process and increase the amount of feedback, which can direct the system developers towards lasting solutions.



("Feedback Option" [Image], n.d.)

This could be a feature at the edge of the tool, implemented in one or several systems such as Partner. A tool like this, would seemingly provide the organisation with feedback on issues related to information, integration and management empowerment. This solution does also seem to accommodate some of the line managers requests. One participant expressed how the best suggestions for improvements are often created by someone with a great idea, *"but these people do not have the time to write this idea down on paper to then send it in to some type of forum, so they let it be* [our translation]*" **(LM11)**.* Further, one individual suggested specifically a tool like this when explaining how the Software department have an automatic process which allows them to provide a comment and then the comments gets created into a suggestion list which are sent to those making the decisions regarding the systems **(LM10).** The same individual stated, "this could also be relevant in a HR process/digital HR processes" **(LM10).** Therefore, it seems essential with a feedback tool, such as suggestion 2 where one can easily and immediately provide ideas and comments.

Regardless of the comment section implemented in this suggestion 2 will clarify the argumentation behind the number rating, it could also be unmotivating for the respondents because it is time consuming. Still, if the management are continuously highlighting the value of these propositions, one can assume that the employees will in return value providing them with new ideas (Egerdahl, 2017, p. 438).

6.2.3 Suggestion 3. Feedback Forum

Whilst, suggestion 1 and 2 are focused on improvement on feedback attached to certain systems or tools, our third suggestion revolves around a more customised feedback forum where the employees could meet for discussion, online or offline. Even though this suggestion is not necessarily a digital one our impression from the interviews was that the employees had many suggestions for improvement of the digital HR-services, but either lacked the correct channels, time or motivation to communicate their ideas. This could be advantageous as it gives the employees opportunities to draw on each other when sharing and bringing new ideas, which could help identifying new innovative solutions. Such a forum seemed to be requested by one of the line managers, who emphasised that the organisation needs a place to express one's ideas together with others, and where these ideas are getting brought up by the management (**LM11)**. The same disadvantages as mentioned in suggestion 2 is also relevant here.

6.3 Taking Feedback into Account

Independent of which feedback suggestion one chose, the organisation needs to show through words and action that they value these new propositions, possibilities and contributions (Egerdahl, 2017, p. 438). One of the main problems regarding Yammer addressed in our first analysis was that people did not see any outcomes of the feedbacks they provided. This problem was also addressed regarding being involved in pilot projects on systems or tools.

> *People have been given the opportunity to give feedback, so you participate in working groups and you participate in pilot projects and you have given so many feedbacks. I think the frustration is that they don't really see that anything has been done with the feedback. I think there we can improve a lot* ***(LM1).***

This is a necessary thing to address for an organisation to learn. This also emphasises an important aspect for GSS HR. If they are to take this suggestion into account, they need to make sure they have

allocated resources so that the feedback is turned into action. Otherwise this type of suggestions could negatively affect the user-experience. If the feedback the employee`s provide the organisation with is taken into consideration, one could assume that the user-experience would be positive. By responding through words and actions that they have valued their feedback and turned it into action could emphasis a turn towards a softer HR, where the employees are valued and given responsibility through feedback. We are aware that these feedback suggestions might cause additional work if they receive a large amount of feedback, especially for suggestion 2 and 3. However, there might be digital solutions such as Robotic Process Automation (RPA) or Artificial Intelligence (AI) (more information below) for sorting and categorizing the feedback so that GSS HR can save time and resources on this type of project.

To summarise, we have suggested that a pop-up rating system could be beneficial to map out current areas of improvement within the current services GSS HR offer. Another suggestion is to implement a feedback comment section in order to fully understand the underlying problems. A third suggestion is to create an online or offline forum. Some negative aspects have also been addressed regarding all these features.

6.4 Digitalization in HR at Other Companies

As underlined in the introduction part of this report, the HR department has not remained unaffected by the changes following the so-called *Industry 4.0.* and the needs thereafter.
New technologies are reinventing and disrupting HR services, through new “apps, floods of data, real-time communication, and increasing use of artificial intelligence (AI), cognitive bots, and intelligent predictive software” (Bersin, 2017, p. 2). This part of our report will try to engage with some specific examples of digitalization within HR in other organisations than DNV GL. Allowing them to further understand the landscape of digital opportunities within HR.

6.4.1 Virtual Reality

Virtual Reality (VR) is a technology providing “the creation and experience of environments” where the “participant is placed in an environment that is not normally or easily experienced (...) through head-mounted displays” (Butterfield and Ngondi, 2016, n.p). This technology has the possibility to transform the way training and learning is conducted at different organisation as it allows HR to simulate `real-life experiences´ and thus prepare employees for different situations they might

encounter. DNV GL has already taken advantage of this technology within sales training, however, there are countless of opportunities within HR as well.

Attensi, which is one of the main provider of these solutions in Norway, explain how it can be used in e.g. on-boarding processes, leadership training and enterprise resource planning (ERP). All these aspects can be interesting for GSS HR. Hydro, and Sintef, in collaboration with the research council of Norway, has applied Attensi`s technology for training their operators at Karmøy in decision-making and the plan is to use this technology at all smelting facilities in the future (Tonseth, 2017). The hospital in Østfold used Attensi in order to prepare their hospital employees for the new location they were moving to (Andersen and Nordli, 2012).

There exists flux of opportunities for this technology within HR, and as is apparent this is a technology many different organisations have already taken advantage off. One of the experts we interviewed highly emphasised new technology such as VR as having tremendous opportunities within HR as it revolutionizes the way training and development functions **(E2) "**I think you can create simulation which capture relevant daily-experiences on a much larger scale then before as it allows you to put more facets of competence and skills to play, as a supplement to more traditional training" **(E2).** Even though VR was not something our analysis showed GSS HR customers wished for, this might if taken onboard successfully provide their customers with a greater user-experience.

6.4.2 Chatbots

A chatbot is "a computer program designed to simulate conversation with human users, especially over the Internet" (Stevenson and Lindberg, 2015, n.p). Several organisations have created different versions of chatbots in order for their customers or employees to receive answers quickly regarding a multitude of inquiries. There are several examples of these chatbots being used within customer-service delivery, judicial issues, IT-issues et al (Foosnæs, 2017). However, the possibilities for chatbots within HR are equally vast, branching from supporting recruitment, on-boarding, administrative inquiries etc. Monsen (2018) explained how Anchor Trust, an English company, has used a chatbot in order to attain and keep contact with the candidate during the entire recruitment session. Sticos, a Norwegian company, introduced a chatbot last year called `@else´. This chatbot is designed to deal with HR questions and tasks (Hamnes, 2017). Even though she is still under development they reckon that she will be able to answer almost all basic HR inquiries and save

administrative time and allow for HR to spend more time on the developmental part of HR (Hamnes, 2017).

Therefore, chatbots can be very relevant as a solution for GSS HR. In the wake of the #MeeToo campaign another interesting chatbot has appeared that enables people to "report workplace harassment and discrimination without talking to a human" (Spot, n.d.,n.p). At the end of the conversation, the "user can choose to download a timestamped PDF with an organized transcript of their conversation and then choose whether to use it to raise a complaint at their company or not" (Wen, 2018, n.p). Both CNN, Forbes and BBC have advocated this free-to-use website chatbot to their employees (Spot, n.d., n.p). These are just some examples of the organisations which has constructed chatbots in order to support or substitute HR functions. It is believed that this market will grow tremendously over the next couple of years (Bersin, 2017).

6.4.3 Performance Management Tools

"One of the most pervasive transformations we've seen in HR over the last decade is the reinvention of performance management" (Bersin, 2017, p. 10). According to Bersin (2017) one clear change that has occurred is that organisations want to remove themselves from rigid systems towards performance management systems that are more project-friendly. These systems can be frequently updated, have regular employee-manager check-ins, pulse-surveys, and developmental multi-directional feedback (Bersin, 2017). Bersin (2017) explain how organisations such as Alliance Enterprises, BetterWorks, TINYpulse, NEOGOV's Perform, Zugata, and others are offering solutions to back this transformation up (p. 11). Cappelli and Tavis (2016) support this and explains how companies such as Microsoft, IBM, Accenture, PwC and Adobe have moved away from traditional performance management such as annual reviews towards these more continuous feedback systems. The head of HR at GE has explained how "businesses no longer have clear annual cycles. Projects are short-term and tend to change along the way, so employees' goals and tasks can't be plotted out a year in advance with much accuracy" (Cappelli and Tavis, 2016, n.p.). Bersin (2017) explain how feedback solutions have also become prominent within new digital HR solutions, he mentions Glint as an example of an organisation that offers an "comprehensive employee experience platform that stores data from onboarding, new-hire experience, ongoing pulse surveys, and open interviews" (p. 14). Some examples of Glint`s customers are IKEA, LinkedIn and SKY (GlintInc,

n.d.). DNV GL could perhaps take some of these ideas onboard when considering their MIP tool as it was highly criticized for some of the aspects abovementioned.

6.4.4 Robotic Process Automation (RPA)

Robotization does not necessarily entail the present of a physical robot but can also involve the use of robotic process automation (RPA). Hydro has engaged in this type of technology in order to automate their onboarding and offboarding processes (Haaland, 2018). They called their `robot´ Robert and he is productive 24/7, is consistent, accurate, cost-effective, loyal and secure (Haaland, 2018). With Robert they were able to reduce the time spent on onboarding processes from 50 minutes to 1 minute, and the termination or extension of contingent workers process from 20 minutes to 30 seconds (Haaland, 2018). However, Haaland explained how RPA in order to work sufficiently needs clear processes that are highly standardized (2018). Statoil as well has applied RPA and created `Roberta´, which has automated the process of "verifying that equipment ordered by our plants all over the world has arrived and is ready for collection" (Statoil, 2018). Hydro explained how they used blueprism when implementing RPA (Haaland, 2018), this organisation specializes in RPA and when you check out their websites their customers range from Coca Cola to Pfizer (Blueprism, n.d.). DNV GL has licenses for blueprism, and inhouse competence so this could be beneficial to take advantage of. RPA offers tremendous opportunities for HR to automate their repetitive and monotonous tasks, which might allow them to focus on other more complex and engaging tasks, hence making it an attractive option for GSS HR.

6.4.5 Blockchain

As we are aware of DNV GLs latest collaboration with Vechain, a blockchain platform, we have included a short overview over some reported opportunities for this technology within HR. Brown and Smit (2017) at Deloitte has created a list of some exciting opportunities for blockchain to be applied within HR. The first example is within payroll activities overseas. Brown and Smit (2017) explain how overseas payroll payments are time-consuming and expensive as it involves intermediary banks and changes in exchange rates. The same authors explain how the service Bitwage offers a solution which focuses "solely on facilitating cross-border payments by using bitcoin as a payments rail; employees ultimately get paid out in their local currency, and Bitwage handles the conversion of bitcoin to local funds" (Brown and Smith, 2017). Their second examples revolve around certification, or more precisely verifying CVs. They explain how "entrepreneurs are

working hard with blockchain in order to offer the future fraud proof solution for certification" (n.p). This is thus, not an actual solution yet, but a possible way of implementing blockchain technology within HR. Another example they bring Brown and Smith (2017) discuss is its possibilities within digital process management, and smart contracting, explaining how this has already been a hot topic within the music industry.

6.5 Considerations

Even though we have suggested some new digital solutions for GSS HR, we have also identified two main considerations that are essential to acknowledge. These revolve around the human aspect of human resources, and data privacy. Both these aspects should be taken into consideration when implementing new digital solutions. When discussing the `human´ aspect in HR we will touch upon areas such as interaction, discretion and attitudes. In the data privacy section, we will discuss issues related to digitalization when considering data protection laws. These considerations will in the following section be briefly presented in accordance to our theoretical and empirical framework presented above.

6.5.1 The `Human´ in Human Resources

6.5.1.1 Human interaction

The aspect of human interaction was one of the problems identified in our analysis related to digital HR. One of the main features was connected to the possible disadvantages of losing physical human interaction. One of the experts brought this up:

> *There is a certain danger that one gets systems that start living their own lives and that the line manager experience this as less user-friendly because it puts them in an almost marionette function, and they have no one to talk to any more or get messages from, they can't go to a HR director or talk to a manager, if you disagree with something you have to discuss it with the computer* **(E2)**.

This discussion from the expert emphasises how when all interaction gets reallocated from the physical to different software or systems this might has a negative effect on the user-experience. Voerman and van Veldhoven (2007, p. 277) explained how as electronic communication increases, daily communication and face-to-face communication reduces, and consequently, overall organisational communication reduces.

This is an important consideration to discuss, as many individuals might feel that physical interaction with their colleagues provides them with added value in their daily life and that removing this might

cause a negative mindset towards the organisation, or the HR staff (Andersson & Thorell, 2017). This was particularly brought up by a participant as a consequence of the implementation of the global centre in Poland. It was explained how before if people did not get a reply to their email they would just go to the person at the office and ask for help, but after the global centre this physical contact has been removed. “They are struggling with that because of course the contact is really different than before and sometimes they are a little bit complaining so that’s what we hear” **(GSS5).**

Regardless of this, one of the other experts diminished these concerns and emphasised how the fear of losing human interaction might not be a problem. He explained how when the communication technology improves, this will make communication easier as people today are spending much time on inefficient online communication **(E1)**. He also emphasised how when organisations become more digital this might free-up more time and in return allow for even more physical communication and interaction **(E1)**. This argument seems equivalent with Cöster och Westelius (2016, s.116-117) who emphasised how care and interpersonal contact does not diminish due to digitalization.

6.5.1.2 Human Discretion

Another concern related to the human aspect of HR was brought up, namely what could happen when too many of HR functions become automated and standardized. The expert explained if this happens “you lose the possibility to make discretionary decisions” [our translation] (**E2)**. He further emphasised how one of the main elements of effective management is being able to make individual considerations and that there is a danger that the systems “becomes so rigid that it removes any room for manoeuvre to make human evaluations” [our translation] **(E2).** This was also emphasised by one line manager who explained how when digitalization is transformed to taking a lot of data for the purpose of making better decisions, there is suddenly an element of losing the benefit of human judgement **(LM2).** Especially this element of human discretion or judgement was brought up as a discussion to some of the recruitment processes.

6.5.1.3 Employee Attitudes

Nevertheless, the customer concerns related to the human aspects (or maybe concerns in general) of HR, could also be due to their mindset towards e-HRM. This brings us to the next consideration. It is not necessarily the systems and what they do with the humans that are problematic, but rather what kind of associations the employees have related to this (Voermans & Veldhoven, 2007). This reasoning seemed to be supported by one of the line managers:

> *It very easily becomes something negative regarding the concept of digitalization, many believe it will take our jobs from us, and that sort of focus. This we are working very hard on trying to change, this attitude* [our translation] ***(LM12)***.

In addition to this fear of losing their job, negative attitudes towards e-HRM could also be due the fear of losing human contact with HR staff (Andersson & Thorell, 2017). Furthermore, a negative attitude could be related to loss of human discretion. This could bring implications for the GSS HR department. According to Voermans & Veldhoven (2007), if the employees' image towards e-HRM is poor, the process of implementing e-HRM requires a slow process of gaining trust. Therefore, the implementers should shed light on the benefits and the utility when applying new e-HRM systems or services (Voermans & Veldhoven, 2007).

This seems to be supported by another study, which found that e-HRM delivers results when employees are actively involved in the implementation of it. They found that the employees perceptions on e-HRM quality were determined by the involvement and awareness of the goals of the change, the content and impact it has on their lives. In their case, the employees' involvement and awareness outweighed the impact of their usage of the technology in determining their perceptions of HRM service quality (Bondarouk et al. 2015). Additionally, Kuvaas & Dysvik (2010) found that the more support the employees experience from their leader, the more positive they experience the organisation's HR tools. The authors further explained how the quality of the HR measures would only be as good as the quality of the line managers perception of it. Thus, this emphasises how organisations needs to include line managers and employees when implementing and utilising e-HRM services to improve their overall impression and attitude towards them.

However, it could be important to have in mind *how* organisations communicate new digital solutions. It seems that if the expectations of new digital solutions are too high, it could create negative attitudes. One of the line managers acknowledged this:

> *In Partner 2 there was no so good expectation-management. Many people have expected much more so I know that they were disappointed when they finally came online delayed with all the matters we discussed earlier* ***(LM4).***

Overall this consideration section has tried to emphasise the need to consider the human aspect of interaction, discretion and attitudes when digitalizing the organisation. When technology starts to have an impact on certain aspects which employees' values such as physical interaction and

discretion this can in return negatively affect their attitudes towards both the technology and the organisation.

6.5.2 Data Privacy Considerations

Data privacy is the second consideration we will briefly discuss in our report. This is yet another aspect which can have an impact and perhaps limit the digitalization within HR. One specific example of this revolves around information accessibility. Even though many of the participants felt that information should become e.g. more transparent, some information's availability is highly dependent on what this information entails. An example of this could be that it involves personal or sensitive information.

We saw multiple examples in the interviews where employees were struggling with the integration of different systems due to different reasons. In one of the interviews one problem we identified was related to privacy.

> *We have a vendor for the healthcare and we are working in their health care system for the registration of all the sick leave, and unfortunately there is no interface between the healthcare system at the vendor and Partner* ***(GSS5)*** .

As indicated by the informant there is a lack of integration and interconnectivity between this specific local healthcare system managing the sick leave, and the Partner tool used in DNV GL. Even though the informant wished for these systems to be integrated this could be a data privacy issue due to the nature of the data within the healthcare system. Herold (2002, p. 256) explain how "organisations now expect the capability to transmit large quantities of documents and data", however, "certain information (e.g. business and medical documents) must be transmitted confidentially". These types of considerations are becoming increasingly important for organisations to pay attention to, as both local and global regulation regarding data protection are becoming more rigid. This year every organisation has to comply with the GDPR (The General Data Protection Regulation). The GDPR "expands the scope of data protection so that anyone or any organisation that collects and processes information related to EU citizens must comply with it, no matter where they are based or where the data is stored. Cloud storage is no exception" (Tankard, 2016, p. 5).

Data protection and data privacy was something both the line managers and the GSS HR employees seemed to be concerned about. There was not always an agreement regarding what personal

information should be visible and accessed, and the respondents had different views on preferred level of personal information access. Their user-experience was clearly being affected by the new data protection laws as employees now have to make sure that their actions are in accordance to the law. An example which was brought up was how to circulate personal data such as CVs.

> *We struggle with how to pass the CVs to a specialist without adding him or her to the ICIMS recruitment tool and without sending the CV by email. Of course, it is easier to send the CV in an email attachment but actually it is against the data protection law and that is something that I am struggling with* ***(GSS3)***.

Another example of problems related to this was CV transparency. It was mentioned on several occasions that the Germans had their own rules for data handling, which allowed them to `hide´ their CVs so that they were not accessible to the line managers. In this case, the user-experience for some were negatively affected because it was hard to search for people when doing internal recruitment. However, if this is based on local laws this aspect might not be able to be improved and employees should be informed about this.

Altogether, we propose that data protection might influence how digital HR can evolve, and how e.g. integrated systems can be. It is important to consider data protection when digitizing or digitalizing e-HRM. HR is a part of the organisation which handles most of the personal data and thus, are at risk of violating some of the existing or future laws if it becomes to transparent or integrated.

7 CONCLUSION

The purpose of this project was to examine how new digital HR solutions in DNV GL can improve efficiency and quality within the organisation, while also providing the customers with added value and a more user-friendly experience. Altogether this report has tried to answer our research question; "*How does digitalization affect GSS HR's services and the user-experiences of their customers?*". Through conducting four focus group interviews with employees in DNV GL and two in-depth expert interviews, we captured interesting findings regarding customers user-experience and based on this has brought forward some digital suggestions. In the analysis of the focus group interviews we were able to identify some main patterns which could be classified into three categories i.e. information, communication and management empowerment.

Through the interviews it was clear that the customers of GSS HR services were generally positive towards digitalization and its potential. The digitization of paper-based information was referred to as an improvement to their user-experience. However, there are still shortcomings in the services, particularly regarding the intuitiveness of some tools and systems. The lack of intuitiveness in the interface of the services provided by GSS HR, negatively affected the user-experience because of the impact it had on accessibility and availability of information. In addition to this, the absence of integration between the systems and tools affected their user-experience negatively, as it leads to double-work regarding searching and adding the same information multiple times. Within this category training has also been discussed as lack of knowledge regarding the systems were apparent within our interviews. However, if the service`s interface is improved training should not be necessary as the systems and tools will be inherently intuitive and no further knowledge would be required.

Another way in which digitalization could improve the user-experience of the systems provided by GSS HR is through enhancing organisational communication. We found for instance that the MIP tool was criticized and that the employees perceived it as discontinuous, static, and designed in a way that lead to an unstandardized use of the tool. This clearly affects the user-experience and had an impacted on the line-manager's communication towards the employee. What was further discussed was that the organisational learning and development of user-friendly services suffers due to a lack of reciprocal and continuous feedback. A two-way feedback loop and implementation of this feedback in the development of the services, would probably improve the user-experience. Lastly, digitalization could positively affect the user-experience if it provided the line managers with more self-service tools and autonomy. This idea has been supported by our analysis and additional research. It was regarded as a `win-win situation´ as GSS HR could focus on more complex inquiries when line managers where enabled through more self-service tools. Thus, empowering the line managers through digitalization can be briefly summarised as an improvement.

Based on these three categories we were able to draw lines and present digital suggestion for the future development of GSS HR`s services. Even though our first analysis contains underlying suggestions, the recommendation of our second analysis are more tangible. The suggestions we have provided GSS HR consist of improvements to their CV solution, and a system for continuous feedback. These are based on our interpretation of the interviews, analysis and relevant literature,

and are intended to provide input to and assist the development of efficient and user-friendly systems, and thus improve the organisational learning of GSS HR and DNV GL.

We have also in this report tried to address what other companies do in regard to digitalization in HR, mainly focusing on Virtual Reality, Chatbots, Performance Management Tools, Robotic Process Automation and Blockchain. Trying to briefly introduce the landscape of digital opportunities within HR. As a last part of our report, two main considerations have been addressed which revolve around data privacy and the human in human resources. These aspects have been discussed in order to provide some reflection regarding the limitations of digitalization.

8 FURTHER DISCUSSIONS

Industry 4.0 has as mentioned profoundly affected HRM. Digitalization of HR is an ongoing trend, which is not only impacting DNV GL but other organisations too. Thus, our findings could also be interesting for other organisations. However, we do acknowledge that because we only had seventeen respondents our findings might not be representative of all the customers of the GSS HR services. Regardless of this we still think a lot of our findings and suggestions are fundamental and interesting to consider both for DNV GL in general, but also for other organisations. This paper highlights important ways that digital HR can affect user-experience, positively and negatively, and includes specific recommendations. Hopefully this will bring consciousness and inspire other companies to see the relevance of the topic.

Additionally, our project has also provided with theoretical contribution to the field as it recommends a third understanding of e-HRM which revolved around digitalization of HR services as enabling organisational learning through knowledge-sharing and feedback solutions. Future research regarding digitalization in HR is however recommended as this field is still rather uncharted territory and is something which will have a tremendous impact on organisations and particularly how HR will operate in the future. Especially research regarding the role of HR in a digital workplace should be emphasised. Also, our research has been limited to one organisation as the sole research subject. Therefor using our method of focus group interviews on multiple organisations to see if the same challenges and possibilities with e-HRM emerges across multiple organisational subjects could prove to be beneficial to the society.

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10 ATTACHEMENTS.

10.1 Attachment 1

Name/Abbreviation	Function
Electronic Personnel Files (EPF)	Their personnel files were previously paper-based. However, now everything is electronic.
Managing Individual Performance (MIP)	Tool for goal setting dialogue between line managers and their employees, with coaching and feedback. Consist of three steps: Goal setting (Jan-Feb): annual goals (AG), normal job expectations (NJE), career development, individual development plan (IDP) Mid-year review (Jun-Aug): Formal progress review Assessment (Dec-Jan): Performance vs AG and NJE, additional achievements, calibration meeting, rating to the employee.
Partner	Partner is the single source of people, competence and\ organisational data in the organisation. Here is where the employees and line-managers can update their personal information, CVs, and view the organisational chart. Additionally the line-managers can do performance reviews and propose salary adjustments and spot awards, as wells as changing basic employee data. Partner is administered by GSS HR.
Applicant Tracking System for recruiters and managers (iCims)	This is a portal for job applications. The managers or recruiters can view applicants, CVs and other documents and conduct the screening process.
Peakon	Employee survey tool (mainly for BA Maritime), every 4 week (the frequency will possibly change). The results are conducted by the Danish company Peakon, and returned to DNV GL groups of >5 respondents.
Case Management System (CMS)	One common entry point for all cases to GSS HR. Before this was done through different email addresses. New systems create continuity in handling requests in the event that a GSS HR colleague is absent.
Oracle Finance	A global common finance system currently being rolled out. Line managers use this to approve time and expenses and to find informations regarding their teams. GSS HR employees use Oracle to support employees and line managers for absence and some aspects of payroll activities.
People Engagement Process (PEP)	Annual engagement survey that provides feedback on drivers within employee engagement. The results provide input to the annual People Engagement Process which managers use to create strategies and priorities.
MyLearning	Here an overview over personal courses and training are present. Employees are able to track the progress of their courses from enrollment through to completion. Managers are able to see the learning history of their employees, follow up enrollments and run reports.
Yammer	Social networking service used for private communication within organisations (Source: Wikipedia).

10.2 Attachment 2

Request for participation in research project "DIGITALIZATION IN HR- DNV GL"

Project Manager	**Morten Sars** -Global Process Owner Compensation Benefits (GSS) DNV GL E-mail: morten.sars@dnvgl.com Mobile +4795205942 **Lars Klemsdal** Førsteamanuensis - Institutt for sosiologi og samfunnsgeografi E-mail lars.klemsdal@sosgeo.uio.no Telephone +47-22857089
Research carried out by: (Master students at the University of Oslo)	Helene G. Kristoff- E-mail: helenegk@student.sv.uio.no Lasse J. Adrian Bjarne Tautra Hoen Victoria Marie Stang

Background and Purpose:

We are four master students from the university of Oslo whom are currently conducting a project on behalf of DNV GL. Therefore, we want to get in touch with candidates whom are willing to participate in group interviews. The projects main research question is; how can digitalization improve GSS HR`s employee user-experience in DNV GL. In order to investigate this, we need to understand what added services can provide more quality, efficiency and other benefits and thus need to get in touch with relevant employees. The aim of the project is to find solutions to help DNV GL become more digital within the field of Human Resources. The project will explore current state of the art digitalization within HR, but also look towards future possibilities. A project report will be delivered 23d of May that will act as a basis for further developing the digital HR strategy for DNV GL in general, and the GSS HR department specifically.

What does participation in the project require from you?

We are hoping to conduct 4 group interviews with 4-5 people in each group. The interview session will consist of 8-10 open questions which main objective is to facilitate a natural discussion within the group. The session will last no more than 1 and a half hour. The interviews will be recorded, but the recordings will be anonymized in the transcription phase and then deleted. Anything discussed or said during the interview will not affect your employee relationship with DNV GL.

What will happen to the information about you?

All personal data will be treated confidentially. The project group will be the only one with access to the personal data before the anonymization phase. The recordings from the interviews will be stored on a personal computer protected by username and password. Participants will not be recognizable in the publication of the report.

Voluntary participation

It is voluntary to participate in the interviews, and you can at any time choose to withdraw your consent without stating any reason. If you decide to withdraw, all your personal data will be deleted. If you do not wish to participate in the interviews, this will not affect your relationship with your employer.

If you would like to participate or if you have any questions concerning the project, please contact Helene G. Kristoff at helenegk@student.sv.uio.no or Morten Sars at morten.sars@dnvgl.com. The study has been notified to the Data Protection Official for Research, NSD - Norwegian Centre for Research Data.

Consent for participation in the study

- I agree that the information about me may be collected from an interview.
- I am aware that all the information will be anonymized and deleted after the project has ended. The information will therefore not be used for purposes other than those described above.
- I am also aware that participation in the project is voluntary and that at any time, I may ask to delete the information that has been registered about me during the course of the project.

I have received information about the project and I am willing to participate:

(Signed by participant, date)