UNIVERSITEIT TWENTE.

Faculty of behavioural, Management and Social Sciences

Making digital HRM work

A study in changes in perceived consequences of e-HRM in the past decade

Name
Dionne Démeijer

Supervisors
Prof. Dr. T. Bondarouk
Dr. H. Ruël

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Master Business Administration – HRM
Faculty of Behavioral Management, and Social Sciences
University of Twente
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MANAGEMENT SUMMARY

In the last decade, the adoption of Electronic Human Resource Management (e-HRM) increased due to the rapid development of Information Technology (IT). Every year, organizations spend a significant amount of their budget towards the investment of a digital HRM solution. The field is developing very quickly and an increasing amount of organizations keep on investing in e-HRM continuously. The implementation of e-HRM solutions has several consequences, which can be divided into operational-, relational-, and transformational. The operational consequences are related and have been commonly explored with outcomes of efficiency, effectiveness, and cost- and time reduction/ savings for HRM. The relational consequences imply improvements in the HRM service for management as well as employees, improved HR communication, HR relationships, and changes in the HR professional status. The transformational consequences are characterized by the focus on organizational change/ strategic reorientation, strategic knowledge management, strategic competency management, globalization, and HR scheduling.

The aim of this study is to get insights in the consequences of a digital HRM solution for an organization its HRM- and business performance. To achieve this aim, the central question is: *'What are the consequences of an e-HRM implementation"*? Additionally, we will look at the changes in the development of perceptions of e-HRM consequences in the last 10-12 years. Therefore, we have drawn the following sub-question: *"What are the changes in the development of perceptions of e-HRM consequences in the past decade"?*

In this study, a qualitative research method was used in 21 large Dutch organizations. In each participating organization were 3 interviews conducted: 1 with an HR professional, 1 with a digital HR professionals/ IT professional, and 1 with a Business / Finance leader. This was done so not only the different experiences between numerous organizations could be analyzed and compared, as well as the opinions in 1 and the same organization. For this study, there are in total 40 interviews conducted. We collected the data in this study with semi-structured interviews. Most interviews were executed with 3 persons: 1 senior researcher and 2 peer researchers. The analysis of all 40 interviews with 47 participants was done in 3 steps. In order to be able to make a comparison, we divided the respondents into 3 groups: HR professionals, IT professionals and Business leaders. Each group of respondents is analyzed in 2 or 3 steps and after each round we discussed the steps in a research team of 3 people.

The research analysis of the 32 HR professionals revealed 15 main themes and 43 perceived consequences. Most of the perceived consequences were positive formulated by the

HR professionals, but there are also some critical voices, which should be kept in mind. The research analysis of the 5 IT professionals presented 6 main themes and 11 perceived consequences. In general, the IT professionals are satisfied with the digital HRM solution in their organization. However, there were critical voices about the impersonalization of the digital HRM solution. The research analysis of the 10 Business leaders revealed 12 main themes and 35 perceived consequences. The business leaders were in general satisfied about the digital HRM solution. However, there were critical voices who said that there are more steps/ actions required for the managers and that the digital HRM solution was too much cost-driven based instead of service-driven. These perceived critical voices of the business leaders should be kept in mind.

This research was inspired by academic curiosity: what was going on 10-12 years ago, and how is the situation at this moment? From the findings we can conclude that the basic e-HRM consequences remain the same, but there are some nuances and new insights in some of these consequences. For example, whereas earlier studies found changes in the role of HR to a strategic business partner and change agent, the respondents of this study emphasize the change to the role of HR analytics. Or for instance, whereas earlier studies found an increase in responsibility of employees and managers in HRM administrative tasks, this study found also an increase in the responsibility of employees' their own development. Time past make it clear that some of the e-HRM consequences may be refined. In the past few years, these consequences were seen and experienced differently.

PREFACE

In April 2016, I was together with my fellow student from the Master Business Administration, Maartje Kuipers, invited to participate in the study of T. Bondarouk and S. van den Heuvel. In collaboration with Capgemini Consulting, the University of Twente conducts a research on digital HRM. In appendix A, the research flyer is shown. The results of this study were presented during the sixth International e-HRM Conference, which had the central theme 'From Digital to Smart Human Resource Management' in October 2016. The conference returned to the where it started 10 years ago: the University of Twente.

We have helped with conducting the interviews and the transcript of the interviews. In exchange for this help, we can do our own research for our master thesis to this topic. We divided this research topic in two parts. Maartje is focusing on the implementation of digital HRM and I am focusing with this master thesis on the consequences of a digital HRM solution.

Acknowledgements

I would like to thank some people for their support and guidance during my master thesis. I would first like to thank my thesis supervisor Tanya Bondarouk of the Behavioural Management and Social Sciences faculty at the University of Twente. The door to Prof. Bondarouk her office was always open whenever I ran into a trouble spot or had a question about my research. She consistently allowed this paper to be my own work, but steered me in the right the direction whenever she thought I needed it.

I would also like to acknowledge Dr. Huub Ruël, Lector International Business at Windesheim, Zwolle as the second reader of this thesis, and I am grateful for his very valuable comments on this thesis. Next, I would like to thank Dr. Sjoerd van den Heuvel for inviting us to take part in the interviews.

Furthermore, I would like to thank Jan Brouwer, Senior Vice president HR transformation, Anneke Zijlstra, MSc, MBA, Vice president, and Anita van Oss, LLM, MBA, Principal Consultant HR transformation of Capgemini Consulting for their collaboration and for their help in creating the first contact with the 21 organizations.

In addition, I would like to thank Marie-Christine Prédéry, Office Manager/Secretary Head of Department at the University of Twente for arranging all the interview appointments with the 47 participants. Furthermore, I am very grateful for all 21 organizations who happily welcomed us into their company in order to participate in the interviews.

I would also like to thank Maartje Kuipers for the wonderful collaboration. You supported me greatly and was always willing to help me. Finally, I deeply thank my family and friends for their unfailing support and continuous encouragement throughout my years of study and through the process of writing this thesis. This end result would not have been possible without them.

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1. INTRODUCTION

The world becomes increasingly complex and today's organizations manage this with the use of Information Technology (IT) applications (Ruël, Magalhães, & Chiemeke, 2011). The integration of IT is also increasingly being used in the Human Resource Management (hereafter called HRM) field, which has resulted in an extensive growth of the research into Electronic Human Resource Management (hereafter called e-HRM). The extent of the research has contributed to obtain an overview of the value creation of e-HRM (Ruël & Bondarouk, 2014; Ruël et al., 2011). Every year, organizations spend a significant amount of their budgets on the investment of a digital HRM solution (Centraal Bureau voor de Statistiek, 2014). The field is developing very quickly and increasingly more organizations are investing further into e-HRM (Bondarouk & Ruël, 2009). Some organizations are successful in managing the implementation of the digital HRM solution and let it contribute to HRM- and business performance, whereas other organizations are less or not successful in managing the implementation to the benefit of the organization. The reason for these variations remains often unclear.

Over the past few years, the use of IT for HRM processes has increasingly grown to achieve administrative- and strategic benefits (Strohmeier, 2009; Bondarouk & Ruël, 2009; Ruël & Bondarouk, 2014; Bondarouk, Parry, & Furtmueller, 2016). IT implementations started in the 1950s and 1960s as transaction processing systems and are now developed to cloud-based enterprise wide systems (Johnson, Lukaszewski, & Stone, 2015). IT is used to support all business functions within an organization. Examples are, production, finance, supply chain, marketing, and HRM is not an exception (Strohmeier, 2007; Johnson et al., 2015). IT has ensured a big change in how organizations recruit, select, train, retain, and motivate their employees (Stone, Deadrick, Lukaszewski, & Johnson, 2015). The use of e-HRM started decades ago, in the 1940s (Bondarouk & Furtmueller, 2012; Stone et al., 2015; Johnson et al., 2015). Initially, IT was used to only automate the administrative process, primarily for payroll (Bondarouk & Ruël, 2009; Johnson et al., 2015). However, in today's organizations, IT is used for all the areas of HRM in order to support their HR management and business management and include recruitment, selecting, training, performance management, and compensation (Beulen, 2009; Stone et al., 2015). E-HRM promises cost reduction, improvements in the strategic orientation of HRM, and improvements in the service delivery for management and employees (Lepak & Snell, 1998; Ruël, Bondarouk, & Looise, 2004; Ruta, 2005; Ruël, Bondarouk, & Van der Velde, 2007; Marler, 2009)

There are a lot of different definitions of e-HRM. To avoid confusion about the concept of e-HRM, this paper uses the definition of Bondarouk, Harms, & Lepak (2015). E-HRM is defined as *"the integration of IT and the HRM field of scholarly inquiry. This focuses on all the HRM content that is shared through IT that aims to make HRM processes distinctive and consistent, more efficient, high in quality and which create long-term opportunities within and across organizations for targeted users"* (Bondarouk et al., 2015, p. 2). In the early years, the term e-HRM was used under different names, such as HR Information System (HRIS), Intranet-based HRM, Computerized Information Systems in Personnel, Virtual HR(M), Personnel Systems, HR Portals or web-based HRM (Bondarouk & Furtmueller, 2012; Bondarouk & Ruël, 2009; Ruël et al., 2004). From all these different terms, HRIS is most intensively discussed (Ruël et al., 2004; Johnson et al., 2015). The most significant difference between HRIS and e-HRM is that HRIS is used for the people from HR itself in order to improve the HR-services, whereas e-HRM is used for the employees and managers, or in other words, the internal clients of HRM (Ruël et al., 2004; Johnson et al., 2015). This difference shows that in the last few years there has been a shift from the automation of HRM services towards the support of information through the use of IT (Ruël et al., 2004).

According to Lepak and Snell (1998) e-HRM can influence HRM in 3 different ways. First, the implementation of an e-HRM system has consequences for the operational aspects of HRM. These aspects include efficiency and effectiveness outcomes that provide cost reduction and alleviating administrative burdens for the organization (Lepak & Snell, 1998; Strohmeier, 2007; Reddick, 2009; Bondarouk & Furtmueller, 2012). Secondly, it has consequences for the relational aspects of HRM. This implies that it improves the service level for internal clients as well as external partners of HRM (Lepak & Snell, 1998; Reddick, 2009; Bondarouk & Furtmueller, 2012). Thirdly, e-HRM has consequences for the transformational role of HRM. This implies changes for the function and the scope of the HRM department, where strategic re-orientation and change management is important (Reddick, 2009; Bondarouk & Furtmueller, 2012).

The aim of this study is to get insight in the consequences of a digital HRM solution on an organization its HRM- and business performance. The consequences of an e-HRM implementation differ per organization. Many organizations invest in the implementation of a digital HRM solution, but it remains unclear why some organizations manage the

implementation of the digital HRM solution successfully and to let it contribute to HRM- and business performance, while other organizations do not successful in doing this. To, get insight in the consequences of a digital HRM solution the central question is:

"What are the consequences of an e-HRM implementation?"

Additionally, we will look at the changes in the development of perceptions of e-HRM consequences in the last 10-12 years. Therefore, we have drawn the following sub-question:
"What are the changes in the development of perceptions of e-HRM consequences in the past decade"?

This research paper focuses on the consequences of an e-HRM implementation and is set up as follow. In the next session, the theoretical framework, focused on the history of e-HRM and the consequences of an e-HRM implementation are discussed. The insights of e-HRM decades ago, compared with the results of this study will help to get insight in the development and changes of e-HRM the last 10-12 years. After that, the methodology section of this qualitative research study, based on grounded theory, starts with an overview of the research design, followed by the data collection, which discusses the organizations that participated in the project. In addition, the data analysis explains the methods of how the interviews were analyzed. Subsequent, the validation of the trustworthiness of this paper is described. Lastly, the results of this study are presented, followed by the discussion and thereby related conclusion.

2. CONSEQUENCES OF E-HRM IN ACTION: LITERATURE REVIEW

2.1 History

Insights in the history of e-HRM research has improved the understanding of the relationship between HRM and IT (Ruël & Bondarouk, 2014). Furthermore, it gives a clear overview about how e-HRM has developed over the years. With the insights of the history of e-HRM, a comparison can be made with insights of today's e-HRM solutions.

Since the 1940s, HRM is using IT but IT has only significantly affected the HRM processes and practices for the last 20 years, through the growing importance of IT (Johnson et al., 2015; Ruël et al., 2011; Beulen, 2009). In these 20 years, HRM has changed in various ways, and made use of different forms of IT to support the business function and to achieve its goals (Johnson et al., 2015). Over the years, IT has supported the HRM-function with different forms of IT, including mainframe computing in the 1940s till the mid 1980s, client-server computing from the mid 1980s till the mid 1990s, web-based enterprise resource planning systems from mid 1990s till 2010 and cloud-based software since 2010 (Johnson et al., 2015).

During the mainframe phase (1940s – 1980s) the digital HRM solutions were primarily implemented to automate the basic HRM-functions such as payroll and recordkeeping of the employees (Bondarouk & Ruël, 2009; Johnson et al., 2015). The focus during this period was on the operational consequences, which implies that digital HRM resulted in cost savings, capabilities for faster reporting, improved precision, increased workload without recruit more staff, generating information of reports previously unprocurable, and a decrease of the administrative burdens of the HRM departments (Tomeski & Lazarus, 1974; Bondarouk & Furtmueller, 2012; Johnson et al., 2015).

During the timeframe of client-server computing (1980s – 1990s), the adoption of the delivery of business applications commenced. These applications enabled HRM to provide important data for HR planning and crucial employment decisions to managers and HR professionals (Johnson et al., 2015). Similarly, the focus during this period was on the operational consequences, but also relational consequences and some transformational consequences, in the form of HR globalization were acknowledged (Bondarouk & Furtmueller, 2012; Johnson et al., 2015). This resulted in decreased administrative burdens for the HRM departments, improvement in the service delivery to managers and employees and integration of decentralized units (Lepak & Snell, 1998; Reddick, 2009; Bondarouk & Furtmueller, 2012; Johnson et al., 2015).

By using web-based enterprise resource planning systems (1990s – 2010) a lot of goals of the HRM department, including recruitment, selection, training, performance management and compensation were achieved (Johnson et al., 2015). In comparison with the previous decades, the research into e-HRM is growing since 2000 (Johnson et al., 2015). From this period, the term e-HRM is used, that promises improvements in the strategic orientation of HRM and improvements in the service delivery for management and employees (Ruël, Bondarouk, & Van der Velde, 2007; Marler, 2009; Bondarouk & Furtmueller, 2012). In this decade, the transformational consequences were entirely acknowledged, besides the operational- and relational consequences. This resulted in re-orientation of HRM, extensive access to the internal- and external stakeholders of HRM, improvement in the HR planning, increased knowledge management, and change management (Ruël et al., 2004; Reddick, 2009; Bondarouk & Furtmueller, 2012; Johnson et al., 2015)

In de past 7 years (since 2010), the Cloud-Based applications are being used (Johnson et al., 2015). This transition to cloud computing has resulted in an increased use of mobile and social technologies and applications by organizations (Johnson et al., 2015). As a consequence, the selection of potential employees is shifted to an electronic selection, with inter alia the increased use of social media (Johnson et al, 2015; Stone et al., 2015).

2.2 Performance

The implementation of e-HRM has several consequences, which can be divided into operational-, relational-, and transformational consequences. In the 1970s and 1980s, the focus was primarily on the operational consequences (Bondarouk & Furtmueller, 2012). In the 1990s, also relational consequences were acknowledged, besides the operational consequences. This implies that besides the HR effectiveness, HR efficiency and cost- and time savings, also improvements in the service delivery for management and employees was acknowledged (Bondarouk & Furtmueller, 2012). From the start of the new millennium until now, the consequences shifted to transformational consequences. This is characterized by the focus on organizational change, strategic knowledge management, strategic competency management, globalization, HR-scheduling, and strategic re-orientation (Ruël et al., 2004; Beulen, 2009; Reddick, 2009; Ruël et al., 2011; Bondarouk & Furtmueller, 2012). Through the increased focus on transformational consequences during the last decade, the role of the HR-professional is changed from an administrative character to a more strategic- and business oriented role (Gardner, Lepak, & Bartol, 2003). So, strategic HRM expertise is increasingly important in the changing role of an HR professional (Ruël et al., 2004). Wright and

McMahan (1992) define strategic HRM as "the pattern of planned HR deployments and activities intended to enable an organization to achieve its goals" (p. 298). With this change to a more strategic role is, according to Gardner et al. (2003), the focus of an HR professional more on issues including the strategy development, organizational wide issues, and change efforts of the organization.

This study is focusing on the operational-, relational-, and transformational consequences of e-HRM. The starting point for many organizations is the focus on the operational outcomes through the use of IT within HRM (Reddick, 2009). Automating and streamlining different tasks and practices can help to reduce costs and improve the productivity (Reddick, 2009; Marler, 2009). The operational impact is often one of the first arguments to obtain support or funding for a project (Reddick, 2009). Also, the use of IT within HRM has influenced the external HR relationships with other parties in the organization (Reddick, 2009). With the use of IT, HRM can improve the timeliness of HRM services. By providing management and employees access to the HR database, the internal communication increased and managers and employees can perform HRM activities by themselves, which decreases the response time (Reddick, 2009; Marler, 2009). Through the transformational consequences, the e-HRM solutions are more focused on a larger extent to internal customers, including management and employees (Bondarouk & Furtmueller, 2012; Marler, 2009; Reddick, 2009). Reddick (2009) states, "the transformational impact involves reengineering or aligning employee activities with the needs of customers or clients" (p. 21-22). This implies changes in the scope and function of the HRM department, whereas jobs are more flexible and not build around stable tasks but around projects, skills, and roles in a function (Reddick, 2009). Not only information sharing between employees inside the organization, but also with people outside the organization, across geographical boundaries, is important here. To manage these changes in an organization, an organizational change orientation is crucial (Ruël et al., 2011). In the following section, the different underlying aspects of the operational-, relational-, and transformational consequences of e-HRM are discussed in more detail.

2.3 Operational consequences

Mentioned previously, the operational consequences are related and have been commonly explored with outcomes of efficiency, effectiveness, and cost- and time reduction/ savings for HRM (Lepak & Snell, 1998; Strohmeier, 2007; Reddick, 2009; Bondarouk & Furtmueller, 2012). Several studies found different outcomes of efficiency due to the use of e-HRM.

Reddick (2009) found in his study that the use of e-HRM results in an increase of HR operating efficiency, an increase in automated routine aspects of different HRM duties, a decrease in administrative burdens, and the productivity of the HR employees increased. Similarly, reduction of the administrative burden, an increase in efficiency of the operating HRM, and an increase in the automation of different HRM duties were found in the study of Ruël et al., (2004). Furthermore, it was found that the use of e-HRM enhances the efficiency of the recruitment and screening system (hiring process) that an organization used (Buckley, Minette, Joy, & Michaels, 2004). Other researchers state that the use of e-HRM results in improved data/ reports accuracy by Human Resource Developers (Reddick, 2009) and to a higher HRM effectiveness (Ruta, 2009). In addition, some authors found evidence that the use of e-HRM results in a reduction of the costs for HRM (Ruël et al., 2004; Buckley et al., 2004; Ruta, 2005). From the literature it becomes clear that HR professionals can do their HR work with fewer personnel (Bondarouk et al., 2016).

2.4 Relational consequences

Besides the operational consequences for organizations, increasingly more relational consequences are acknowledged. The relational consequences implies improvements in the HRM service for management as well as employees, improved HR communication, HR relationships, and changes in the HR professional status (Lepak & Snell, 1998; Ruël et al., 2004; Reddick, 2009; Bondarouk & Furtmueller, 2012). With the use of IT, many HRM administrative tasks can be carried out through the use of self-service systems. So, managers and employees themselves perform and are more responsible for the HRM administrative tasks. With the use of self-service systems, the involvement of managers and employees within the HRM policies in the organization and the execution of the HRM policies has increased (Ruël et al., 2004; Beulen, 2009). Beulen (2009) documented that e-HRM is important and contributes positively to the retention of talented employees in the organization. Feldman and Klaas (2002) reported that e-HRM positively and indirectly influenced the branding of the organization and so improved the attractiveness of the company for employees. Furthermore, reduced response times to serve customers and clients, received HR staff acceptance of the IT systems, and improved quality and timeliness of services to employees was found in the study of Reddick (2009). Other researchers state that the use of e-HRM results in more and improved communication between employees and the HRM department (Ruël et al., 2004). In addition, e-HRM offers HRM tools and instruments that give employees the opportunity to participate in online-discussions and to be more

updated about the developments and changes in the organization, for example via the use of an intranet tool (Ruël et al., 2004). Reddick (2009) observed improvements in the working relationship of HR with the upper management in the organization.

The use of e-HRM has also influence on the attitude or behavior of the employees in an organization. It is important to understand that implementing e-HRM tools and instruments is foremost a change in the mindset and behaviors of the employees of the HRM department itself, the managers and the employees in the organization (Ruël et al., 2004). E-HRM can influence the attitudes of the employees in a positive way, but also have challenges to deal with. Different authors found positive outcomes due to the use of e-HRM tools and instruments. Through the use of e-HRM, the awareness, the appreciation, and the use of the HRM services and systems increased by employees in the organization (Reddick, 2009). Ruël et al. (2004) observed improvements in satisfaction of the manager and employee about the obtained HRM-service.

However, the use of e-HRM tools and instruments can be limited due to the lack of employees' willingness to adapt these tools and instruments (Ruël et al., 2004). Not all employees are willing to adapt the responsibilities of the e-HRM tools and instruments. For instance some employees believe that the responsibility of their personal career and so the initiatives of their career development activities is the task of their manager instead of themselves. In other words, it can be difficult to obtain support for the use of e-HRM from employees in the organization and so the human challenges should not be overlooked (Ruël et al., 2004; Ruta, 2005).

It was also found that e-HRM has influence on the attitude of HR professionals. In the study of Bell, Lee, and Yeung (2006) it was found that e-HRM allows HR professionals to focus more on the role of the strategic business partner. The attention of HR professionals shifts from performing only administrative tasks to a more strategic focus. With the use of e-HRM it becomes more important for HR professionals to possess knowledge of the business, to think strategically and analytically, and so to support the business and management with their decisions (Bell et al., 2006). With the shift to a more strategic role, HR professionals are more allowed to adopt new and specialized roles. These specialized roles require a high level of expertise from the HR professionals in specific HRM areas, such as training, performance management, and staffing (Bell at el., 2006).

2.5 Transformational consequences

Mentioned earlier, transformational consequences are characterized by the focus on organizational change/ strategic reorientation, strategic knowledge management, strategic competency management, globalization, and HR-scheduling (Bondarouk & Furtmueller, 2012; Ruël et al., 2011; Beulen, 2009; Reddick, 2009; Ruël et al., 2004).

Some researchers state that e-HRM results in an increase of the flexibility of HRM (Reddick, 2009). This flexibility improved the overall quality of HRM services, enabled HR employees to serve more on a strategic level and so can fulfill the role as strategic business partner in the organization (Reddick, 2009). The competences of the HR professionals are more directed in supporting risk taking and innovation (Ruël et al., 2004). In addition, Reddick (2009) found in his study that with the use of e-HRM, Human Resource Developers had the feeling that they were more enabled to become an effective manager. The digital HRM systems enabled HR professionals to adopt HR strategic decisions (Cronin, Parry, & Furtmueller, 2010). Haines and Lafleur (2008) add that HR professionals are more involved in change activities in the organization and are seen as a partner of the business and as change agent in the organization. With the transformation to a strategic level, HR professionals spend more time on issues organization-wide, strategy development and organization change effort, with other words the transformational activities (Gardner et al., 2003).

HR knowledge management is found important in today's organizations. Reddick (2009) observed an increase in knowledge management, i.e. creation, capture, transfer, and the use of knowledge. Similarly, Ruta (2009) found an increase of shared knowledge in organizations. Employees share their ideas and suggestions with colleagues in the organization, for example due to the use of internal blogs.

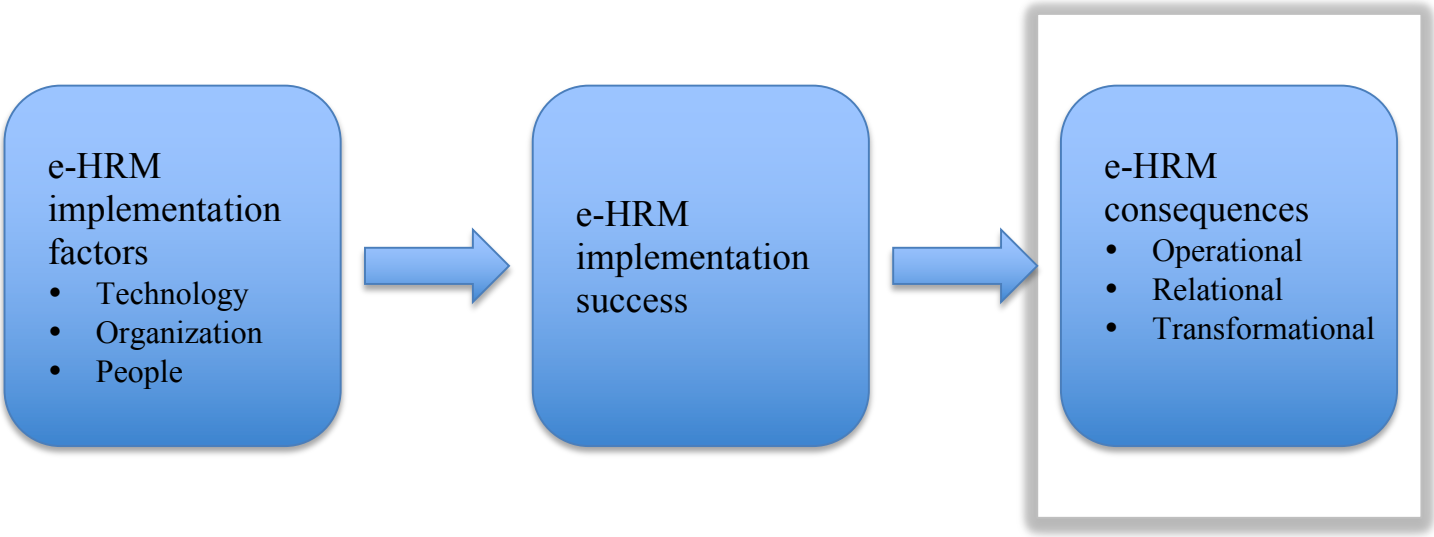
Concerning the HR scheduling in organizations, Beulen (2009) found in his study that e-HRM has positively affected the HR scheduling. Scheduling helps organizations to assign their employees to work that fits with their development. An example is job rotation, where the employees get new work/ roles every 18 to 24 months (Beulen, 2009). With these offers and improved scheduling, the organization creates interesting development and growth opportunities for employees and this helps to reduce the employee turnover in the organization (Beulen, 2009). There are different researchers who found other positive outcomes in the HR scheduling. Reddick (2009) state that more advanced functions for the recruitment process and the retention of people in the organization increased. The use of e-HRM has ensured an increase in transparency and flexibility in the internal labor market of

the organization (Ruël et al., 2004). Moreover, Buckley et al. (2004) found conservative savings due to reduced employee turnover.

Transformational consequences are also known in the form of HR globalization. Ruël et al. (2004) state in their study that the most important effect of the use of e-HRM is the strategic integration and alignment of HRM with the strategy, the structure and the culture of the organization.

Research map. Digital HRM environment-in-action

Based on the above-discussed literature, the following research map is drawn for this study. Mentioned earlier, this study will focus on the e-HRM consequences operational, relational, and transformational.



3. METHODOLGY

In this study, we used a qualitative exploratory research approach with semi-structured interviews. We have chosen for an exploratory research approach in order to seek for new insights into the consequences of the implementation of an e-HRM solution. With exploratory research, we are able to put consequences in a new light. Furthermore, the advantage of using exploratory research is that it is a very flexible research approach (Saunders, Lewis, & Thornhill, 2008). We have chosen for qualitative research design, which allows for an open, more informal setting during the interviews and it allows the interviewee(s) to participate in an active conversation. When conducting the interviews, we gave the interviewee(s) the possibility to create their own answer, based on their own perceptions (Myers & Newman, 2007). Furthermore, we gave the participant(s) the opportunity to think out loud in regards to the discussed themes during the interview (Amaratunga, Baldry, Sarshar, & Newton, 2002; Myers & Newman, 2007; Saunders et al., 2008). In this way, we could explore specific themes like: what does digital HRM mean in the opinion of the interviewee(s). Furthermore, goals that organizations want to reach with the e-HRM implementation, consequences for the organization after an implementation and organizations their most and least successful digital HRM solutions were discussed. With these different interview topics we gain insights in complete process from selecting e-HRM systems to implementing them, and finding out the impact of these digital HRM solutions organization-wide. By giving the interviewee(s) the possibility to express their opinion freely, we were able to collect very detailed and rich information for our research (Saunders et al., 2008). Furthermore, it allowed us to probe specific meanings of interviewee(s). This will add increasingly more depth to our obtained data (Saunders et al., 2008). Another reason that we chose to conduct face-to-face interviews, is that we preferred to have personal contact with the interviewee(s). Respondents of surveys feel that it is not appropriate to give sensitive and confidential information to someone who they never met. Conducting face-to-face interviews meant that the respondents saw us in person, and studies have shown that this type of interviewing results in a higher response than handing out surveys (Saunders et al., 2008).

The interviews all started with an introductory talk whereby the goal and the research question of this study were explained to the interviewee(s). At the beginning of the interview, we made it clear that all the results from the interviews are processed anonymous. After the interviewee(s) agreed to the terms, we started with the questions about e-HRM. Every interview started with the basal question; ‘what is digital HRM’? Digital HRM is initially

viewed as "the integration of IT and the HRM field of scholarly inquiry. This focuses on all the HRM content that is shared through IT that aims to make HRM processes distinctive and consistent, more efficient, high in quality and which create long-term opportunities within and across organizations for targeted users" (Bondarouk et al., 2015, p. 2). Moreover, we elaborated further on the history, the development and the goals of e-HRM in their organization. After these topics, we discussed the successful and less successful solutions of digital HRM. The discussion contained different elements: the implementation of a digital HRM solution, the contribution to HRM-performance and the contribution to business performance. For each topic, the interviewees were asked about the factors of prerequisites that contribute to the implementation, HRM- and business performance.

Then we moved to the next topic, which covered the experienced consequences of the e-HRM implementation. Consequences are initially viewed as "consequences of e-HRM are all phenomena that accompany and/or follow the application of IS in HRM, whether desired or undesired and whether expected or unexpected" (Strohmeier, 2009, p. 528). This study focused primarily on the consequences of digital HRM.

The interviews were finalized with a wrap up, where the key points of the interview were communicated back to the interviewee(s). Further, we mentioned that the transcripts of the interviews would be sent to the interviewee(s) for a member check. We also invited the interviewee(s) to the e-HRM conference, which was held at the end of October 2016 at the University of Twente. We ended the interviews with our thanks for their participation in this research project.

3.1 The Sampling technique

In this study, a qualitative research approach is used with 21 large Dutch organizations. Capgemini consultancy has arranged the contacts between the University of Twente and the 21 organizations. Whenever possible, we conducted 3 interviews in each participating organization: 1 with an HR professional, 1 with a digital HR professional/ IT professional and 1 with a Business / Finance leader. This was done as to compare the different experiences and opinions of a digital HRM implementation in a particular organization. For this study, a total of 40 interviews were conducted. The interviews took place in the period from March- till July 2016. All the interviews are conducted at the office of the participating organization, and the interviews lasted a maximum of 1,5 hour. Interviews were recorded and a transcription was made of each interview, which allowed for exploration of the opinions and perceptions of the interviewee(s) in detail.

3.1.1 Organizations

The participating organizations represent a range of different sectors. In this study the following type of organizations participated: 2 chemical companies, 1 consultancy company, 3 banking companies, 2 education companies, 1 energy supplier company, 2 government companies, 2 ICT companies, 3 insurance companies, 2 public services company, and 3 retail companies. The participating organizations are significantly varied in size and they differ from one another based on the status of their digital HRM implementation. From these 21 organizations, 10 are multinationals and 11 are local organizations.

Within each organization, we spoke with different people, each of them having different responsibilities. At the first chemical company, we interviewed a Project Manager. This company has 13 locations in The Netherlands, with 4,300 employees nationwide and a further 25,000 employees worldwide. This organization is headquartered in Heerlen, The Netherlands. At the second chemical company, we spoke with the Chief Human Resources Officer and the Global Director GBS People Services. This company has approximately 47,000 employees in 80 countries and is headquartered in Amsterdam, The Netherlands. At the consultancy company, we spoke with the Vice President HR. This company has approximately 180,000 employees in 40 countries and is headquartered in Utrecht, The Netherlands.

We spoke with 3 banking companies. At the first banking company, we spoke with an International Interim HR & Project Manager. This company has 24,341 employees in The Netherlands and 51.859 employees worldwide in 40 countries, and is headquartered in Amsterdam, The Netherlands. At the second banking company, we spoke with the General Manager HR, the Director HR Employment Conditions & Operations, and a Managing consultant. This company has more than 52,368 FTE worldwide in more than 40 countries, and is headquartered in Amsterdam, The Netherlands. At the third banking company, we spoke with the Director HR Policy & Innovation and the Manager Shared Services P&O. This company has 3,500 employees and is headquartered in Utrecht, The Netherlands.

In addition, we spoke with 2 education institutions in The Netherlands. At the first education institution, we spoke with the Director HR, the Manager HR Innovation & Administration, and with the Director Library, ICT Services & Archive. This institution has 2,948 employees and 9,614 students and is located in Enschede, The Netherlands. At the second education institution we spoke with the Director Corporate Human Resources and the Manager shared service center HR. This institution has 5,837 employees and 9,840 students and is located in

Wageningen, The Netherlands. Moreover, we spoke with 1 energy supplier. At this energy supplier, we spoke with an IT-Manager HR-systems, a HR-Executive, and an IT-Manager. This company has 7,000 employees and is headquartered in Arnhem, The Netherlands.

For this study we have conducted interviews with 2 different government companies. At the first government company, we spoke with the Department Manager HR and the HRM-Advisor. This company has 8,666 employees and is headquartered in The Hague, The Netherlands. At the second government company, we spoke with the Program Director and the Deputy Head of Service HRM. This company has 63,000 employees in The Netherlands.

2 ICT companies were part of this research project. At the first ICT company, we spoke with the Workforce Innovation Consultant and the Director HR. This company has 78,230 employees in more than 130 countries and is headquartered in Walldorf, Baden-Württemberg, Germany. At the second ICT company, we spoke with the Account Executive. This company has 6,200 employees in 30 countries and is headquartered in Pleasanton, California, United States.

For this study we also conducted interviews in 3 insurance companies. At the first insurance company, we spoke with the Director Group Human Resources & Business Development, the Senior People Development Professional, and a team leader. This company has approximately 6,700 employees in The Netherlands and Belgium and is headquartered in Amsterdam, The Netherlands. At the second insurance company, we spoke with the Director HR, a Senior Project manager and a manager Transitions. This company has 3,650 FTE and is headquartered in Utrecht, The Netherlands. At the third insurance company, we spoke with the Head of Global HR Operations. This company has 4,300 employees in The Netherlands, 31,530 employees worldwide and is headquartered in The Hague, The Netherlands. Furthermore, we spoke with 2 public services companies. At the first public services company, we spoke with the Director HR, the Senior Advisor HRM and the e-HRM Program Manager. This company has more than 34,000 employees and is headquartered in Utrecht, The Netherlands. At the second public services company, we spoke with the Director HR Commerce, the Program Manager Business Support (HR & Finance), and an HR Analytics and Innovation. This company has 49,000 employees and is headquartered in The Hague, The Netherlands.

Finally, we have spoken with 3 retail companies. At the first retail company, we interviewed the Senior HR Director Group HR, the Director Deployment, Corporate IT and a Region Manager. This company has 225,000 employees and is headquartered in Zaandam,

The Netherlands. At the second retail company, we interviewed the HR Business Development Manager and the Global Human Resources Manager. This company has 6,500 employees in The Netherlands, 155,000 employees worldwide in 43 countries and is headquartered in Leiden, The Netherlands. At the third retail company, we spoke with the Director HR, a Manager HR-Operations and the Head of Trade Marketing & E-commerce. This company has 650 employees and is headquartered in Enschede, The Netherlands.

When categorizing the participants from all 21 organizations in different functions, the following distinction are made: 3 project managers, 16 HR-managers/directors, 1 managing consultant, 1 digital HR professional, 2 managers HR-operations, 5 managers HR-innovation, 4 IT-managers, 5 business support managers, 1 account executive, 1 region manager and 3 HRM-advisors. In most organizations, an interview was arranged with an HR-manager or director. When this was not the case, an interview with an HR employee that was directly linked to an e-HRM implementation was arranged. Appendix B, table 6 shows an overview of the different interviews and Appendix C, table 7 gives an overview of the different organizations and their e-HRM solutions.

3.2 The method of data collection

We collected the data in this study with semi-structured interviews. During most of the interviews three researchers were present: 1 senior researcher and 2 peer researchers. For each interview, we had a list of questions and themes to discuss. However, the order of the questions varied in each interview, due to the national flowing state of each conversation. This is also referred as an interview guide, which provides a written checklist of themes that we wanted to cover in the different interviews (Myers & Newman, 2007). We covered the following aspects in the interviews: the goals of the digital HRM solution, the successful and less successful digital HRM implementations, the consequences of an e-HRM implementation, prerequisites of a successful digital HRM implementation, the contribution of the digital HRM solution to HRM- and business performance, and the prerequisites to contribute to HRM- and business performance. The interview guide for this study is shown in appendix D. Most of the time, the senior researcher was guiding the interviews. We, as peer researchers were able to ask questions if desired, in order to obtain a better view of the situation in that specific organization.

Towards the respondents of this study, it is emphasized that the interviews were processed anonymously. If we wanted to use names of individuals or organizations,

permission has to be requested. No names of individuals or organizations are mentioned in the publication without obtaining the permission of the concerning individuals or organization.

3.3 Analyzing the data

This subsection is written in collaboration with Kuipers (2017). To analyze the data, the interviews are recorded and thereafter transcribed. In total the transcribing interviews have 739 pages of text. We put together a table with an overview of the participating organizations. In this table the following information is presented: sector type, number of employees, local/ multinational, operating countries, e-HRM tools, e-HRM experience, and HRM practices supported by e-HRM are presented. The table provides the opportunity to see at a glance to what degree a particular participating organization is evolved in terms of their e-HRM solution. Furthermore, the differences of digital HRM solutions between multinationals and local organizations can be examined, which is shown in appendix C, table 7.

For the analysis of the interviews, we first performed the method initial coding, also known as open coding (Sandaña, 2009), This method stimulates to reflect deeply on the specific contents of our data, and thereby creates ownership. The intention of initial coding is to have a starting point that provides us with analytic leads for further explorations, and to give us a direction in which to take our study. Before coding, we read and reflected on all interview transcripts first (Clarke, 2005). During this first step, we highlighted all relevant quotes and executed process coding, which entails labeling every quote to an e-HRM consequence topic.

Next, we performed second cycle coding. All labels developed during the first step were reorganized and reconfigured and then categorized into main themes. The reason that we had to reorganize the initial coding was because more accurate words and phrases were discovered for the original developed labels. A second cycle coding method that we used is focused coding, which follows initial coding. The coded data was categorized based on thematic similarities, leading to merged labels, since there were conceptual resemblances. We choose focused coding because it is appropriate for virtually all qualitative studies, but particularly for the development of major themes from the data (Salaña, 2009). It was important that the data should not be forced or selected to fit preconceived categories, to keep an already existing theory intact (Glaser, 1978).

TABLE 1
Steps of data analysis

Analysis step	Description	Goal
Initial coding	"Initial Coding is breaking down qualitative data into discrete parts, closely examining them, and comparing them for similarities and differences" (Strauss & Corbin, 1998, p. 102)	"To remain open to all possible theoretical directions indicated by your readings of the data" (Charmaz, 2006, p. 46)
Second cycle coding	"Second Cycle coding methods are advanced ways of reorganizing and reanalyzing data coded through First Cycle methods" (Saldaña, 2009, p.149)	"To develop a sense of categorical, thematic, conceptual, and/or theoretical organization from your array of First Cycle codes" (Saldaña, 2009, p.149)
Focused coding	Focused Coding searches for the most frequent or significant Initial Codes to develop "the most salient categories" in the data corpus and "requires decisions about which initial codes make the most analytic sense" (Charmaz, 2006, p.46, 57)	"To develop categories without distracted attention at this time to their properties and dimensions" (Saldaña, 2009, p.155)

The analysis of the 40 interviews with 47 participants is done in 3 steps. We divided the respondents in 3 groups: HR professionals, IT professionals, and Business leaders. Each group of respondents is analyzed in 2 or 3 steps and during each round we discussed the steps in a research team of 3 people. During the first level of analysis, it was important to develop themes as closely related to the text as possible. In order to get a clear overview, we used 3 colors to mark implementation-, consequences, or other important citations mentioned by the respondents.

Firstly, we started with initial readings of the transcripts of the 32 HR professionals. I discussed the analyzed transcripts of the HR professionals with my peer researcher. We had 90% consensus about the important remarks of the implementation and the consequences of e-HRM. 10% disagreement was accountable, for example, I found an implementation or consequence quote that my peer researcher had not found, and the other way around. Next, we noted all relevant quotes in an analysis table and linked them to a consequence from the literature. The analysis of the interviews shows 11 different consequence issues, which is shown in appendix E, table 8. After the discussion with the research team, we linked all the relevant quotes to more specific and concrete consequences, which were not based on the literature. The analysis of perceptions of the HR professionals about e-HRM consequences

showed 72 relevant quotes, which is shown in appendix F, table 9. For the third level reading, we categorized all the consequences with a similar subject to the same category. Furthermore, we combined similar relevant consequences to 1 consequence, which is supported with different relevant quotes. So, at the end the analysis showed 15 main themes and 47 relevant consequences, which is presented in table 10, appendix G

Next, we analyzed the transcripts of the 5 IT professionals. With the analysis of the IT professionals the discussion consensus became higher, 95% with 5% disagreement. All relevant quotes were noted in the analysis table and we linked it to different consequences. The analysis of perceptions from IT professionals showed 13 relevant consequences, which are show in appendix H, table 11. For the second level reading, we categorized all consequences with a similar subject to the same main theme. From the 5 IT professionals, 6 main themes are obtained and 13 relevant consequences are emerged, which is shown in table 12, appendix I. For the third level reading, we combined similar relevant consequences to 1 consequence, which is supported with different relevant quotes. The analysis showed 6 main themes and 11 relevant consequences, which are presented in appendix J, table 13.

Lastly, we focused on the analysis of the 10 business leaders. The discussion consensus with my peer researcher stated on a 95% level, with 5% disagreement. We linked all relevant quotes in the analysis table to different consequences. After this, we categorized all consequences with a similar subject to the same main theme. The analysis of perceptions of the business leaders about e-HRM consequences showed 12 main themes and 40 relevant consequences, which are shown in appendix K, table 14. For the second level reading, we combined similar relevant consequences to 1 consequence, which is supported with different relevant quotes. This analysis showed 12 main themes and 35 relevant consequences, which are presented in table 15, appendix L. Below, table 2 shows an overview of the number of themes and relevant consequences per respondent group.

TABLE 2
Number of themes per respondent group

Respondent group	Number of main themes	Number of consequences
HR professionals	15	47
IT professionals	6	11
Business leaders	12	35

3.4 Trustworthiness of the data collection and interpretations

By conducting interviews, we should consider some threats concerning the validity and reliability of our study (Dooley, 2001). The reliability of a study indicates the extent to which this study is consistent over time between different investigators and methods and the extent to which the measurement is free from random error (Van Aken & Andriessen, 2011, p. 153; personal communication, October 23, 2015). The validity of this study explains the extent to what the conclusions are meaningful based on the measured instruments (personal communication, October 23, 2015).

In order to increase the trustworthiness of the data collection and interpretations, several steps are taken. First of all, the interviews are recorded and transcribed. With the recorded interviews, we made the database for our research. On average, each interview lasted 58 minutes and 12 seconds. The transcribing of the interviews lasted on average 5 hours and 36 minutes. In total, the transcription of the interviews has 739 pages of text, this is on average 18 pages per transcribed interview. At last, there are on average 38 days between the date of the conducted interviews and the date of the transcribing. In table 6, appendix B, an overview is given of the time spends per interview and per transcription, including the total and average duration of the interviews and transcribing.

Secondly, for all interviews, verifications were made. All interview transcripts were sent by email to the participants. The transcriptions of the interviews were sent to the participants to give them the opportunity to confirm or disconfirm the transcript of their interview. Furthermore, it gave them the opportunity to add some more detail and important information or to clarify any information that was unclear/ vague (Harper & Cole, 2012). Sending the interviews to the participants gave us the certainty that we understood each other well. No interviews were returned with comments of the participants, so all the participants of this study approved the transcription.

Moreover, we have conducted the interviews with 3 researchers. During most of the interviews, we were with a senior researcher and 2 peer researchers. Directly after the interviews we reflected with the 3 of us how the interview went. Furthermore, we discussed points that we thought were interesting and remarkable in the interviews, in comparison with the previous interviews we conducted. Through the use of this strategy, we summarized the interviews and checked if everybody had understood the interviews in similar manner.

Another step we took to ensue the trustworthiness of the data collection and interpretations was the fact that within each participating organization we spoke with several

participants, all varying in functions and responsibilities. We conducted different interviews within the organizations to gain a better understanding of its operations and to be able to compare the different opinions of the different functions in an organization. Collecting all these different opinions and perceptions, we have a better understanding and obtained a better and a more clear view of e-HRM implementations in the different organizations.

Furthermore, we made notes during the interviews. This is for the trustworthiness of our interpretations. During the transcribing and later on in this study during the analysis of the transcripts, the notes can help to refresh our mind, and to interpret our results. The notes that we made during the interviews are used as a backup.

Lastly, the analysis of the transcripts is done in different steps. After each step, my peer researcher and I sent the findings to each other to compare our level of understanding of the transcripts. Next, we discussed these findings with our research team, consisting of 3 people. For analyzing the transcripts, we have not used predetermined codes, but consequences that are perceived from the HR professionals, IT professionals, and business leaders.

4. FINDINGS: PERCEIVED CONSEQUENCES OF E-HRM

This chapter presents the perceived consequences of e-HRM that are considered as important for the 3 respondent groups: HR professionals, IT professionals, and Business leaders. We elaborate on the perceived consequences per group of respondents.

4.1 Perceptions perceived by HR professionals

The research analysis revealed 15 main themes and 43 consequences as perceived by the 32 HR professionals, which are presented in table 10, appendix G.

1. Cost- and FTE reduction

The HR professionals recognize consequence issues from digital HRM as cost- and FTE reduction. They see that many HRM processes are digitized and this makes the processes more simplified, which in turn leads to cost- and FTE reduction for the organization. Some respondents argue that the digitalization has saved hundreds of thousands of euros in a few years. They see that some functions are lifted due to the digitalization of HRM processes and therefore less office space is needed. According to a few respondents the cost reduction does not only affect the organization itself, but also the contracts with their suppliers. In the opinion of the HR professionals, the quality of the HRM processes is increased and the costs are low. They try to optimize this process continuously. Further, they mention that reducing the costs is important, however business achievements should always be taken into account. As a HR professional of a banking organization said: *"You must be cost sensitive, but in terms what we want to achieve with each other"* (Resp. 8).

The HR professionals express that they can arrange the HRM processes easier, so that there is more time to focus on the important tasks in their function. It is perceived that digital HRM leads to time reduction in the HRM processes. They think that HRM processes can be made quicker for employees and managers, and so there is more time to perform the strategic role of HR and to focus more on the advisory role. They see that it results not only in time reduction for HR professionals, but also for managers and employees. As a HR executive of an energy supplier organization mentioned: *"Automated HR processes can add important contribution. Every second that we can save in the employees' or managers' time that they are busy with the HR system, we can use for other important things"* (Resp. 18).

2. Efficiency

The HR professionals do not only recognize cost- and FTE reduction as important e-HRM consequences. The HR professionals acknowledge efficiency as an important consequence of digital HRM. They mention that with the digitalization, increasingly more HRM processes are simplified for HR professionals, but also for managers and employees. They see that in the previous years people had to process 36 steps in different systems and now these steps are reduced and more simplified. As one of the HR professionals of a banking organization said: *"People must fill in 36 fields in six different systems. At the moment if someone is leaving the organization, they must fill in only three fields and everything is arranged"* (Resp. 8). It is perceived by the HR professionals that employees and managers are satisfied with these simplified changes in their processes.

Further, it is perceived that some organizations are quite advanced with the digitalization of their HRM processes, such as that declarations can be arranged by an APP on their smartphone. HR professionals are of the opinion that with these simplified processes the lead-time of a lot of HRM processes are quicker. They see, for example, that the duration from declaration to payment takes 4 or 5 days. They are of the opinion that this is a lot quicker than a few years ago and everyone in the organization considers that as normal.

Furthermore, the HR professionals mention that there are fewer documents to fill in and so the administrative burden for the business is decreased. They believe that the digitalization of different HRM processes has also ensured that the chance on mistakes decreased. HR professionals perceive that the processes ensure fewer mistakes of people, faster lead-times, and the systems are easier to understand. In addition, it is perceived that a lot of organizations have standardized their HRM processes, which has increased the efficiency. As an HR manager of a chemical organization mentioned: *"Previously you were busy with administrative tasks. Now you can spent the time to innovation to your internal clients, the business"* (Resp. 2).

Other opinions of the HR professionals show that e-HRM has improved the in- through- and outflow of employees in the organization. HR professionals think that the processes are more simplified and this makes it easier for managers and employees. Some of them argue that the workload in the different processes is reduced. One of the HR professionals of a banking organization said: *"In this case it is making the life of the employees and managers more easier"* (Resp. 9).

3. Service quality

Furthermore, HR professionals mention that the service quality of HRM is improved with the use of e-HRM. They see that employees and managers are more engaged and enthusiastic about the HRM service. They mention that easy questions are answered by the system and so the HRM department can reach a higher qualitative level. HR professionals perceived that people of the contact center can focus more on the difficult administrative question, and the advisors can focus more on questions on the strategic level and organization development. HR professionals think that these changes make HRM more able to improve their service level for the employees in the organization. The HR professionals mention that they are abler to respond on priorities, wishes, and needs of the business. They believe that employees and managers receive quicker and better answers on their questions to HRM. In addition, they see that these service improvements lead to a higher satisfaction about the digital HRM solutions. As a HR manager of an insurance organization said: *"We do the work with less people, but we have more quality and we are more appreciated"* (Resp. 30). Further, it is perceived by HR professionals that due to the higher engagement of the employees, the customer satisfaction in general is also increased.

However, some HR professionals were critical and state that the digital HRM system is not flexible and intuitive and so the usability for the employees and managers decreased. As an HR professional of a banking organization state: "*I see that there is a lot of negativity about HRM. This is because the system is very complex and works not very well. It takes a lot of time, it is not flexible and not intuitive. The people in the organization have the feeling that they have to do it, because they system say so. Their question is how does this system support me with the things that I have to do as a manager. The contribution of the system is not clear for them"* (Resp. 5). It is perceived by the HR professionals that it depends per organization how employees and managers respond to these e-HRM solutions.

4. Increased responsibility of employees and managers

Additionally, the HR professionals state that the digital HRM solution results in increased responsibility of the employees and managers in the organization. They believe that managers and employees arrange HRM processes by themselves as much as possible and HR supports them when needed. 1 of the HR professionals of a banking organization mentioned: *"Managers and employees arrange things by themselves and from HR we help and support*

them as much as possible (Resp. 8). They think that with this switch of responsibility, the employees and managers make their own decisions and can even implement it. It is perceived by the HR professionals that with the increase of responsibility, the self-service for HRM processes for both employees and managers will increase as well. As an HR manager of a public service organization argue: *"Earlier it was the task of the HR advisor. At this time, the managers do it by themselves. You can see that more and more people call themselves sick"* (Resp. 39). They argue that it is important to trust the employees and managers in this process.

On the other hand, according to different HR professionals it is not only the responsibility for administrative tasks of importance anymore, but as well the responsibility for employees their own development. As 1 of the HR professionals of a government organization said: *"We want to shift the responsibility to the employees in the organization. It are goals of their own responsibility and also the responsibility of their own development is very important"* (Resp. 23). They see that employees can manage their own development issues in consultation with their manager. HR professionals state that HRM should facilitate more on the self-service level of managers and employees to make this kind of changes possible in the organization.

5. Improved data

Further, from the opinion of some HR professionals it becomes clear that digital HRM solutions have ensured that the data quality of HRM improved. They state that it is easier to make connections between different kinds of data. They mention for example, connections between absenteeism in the organization and the involvement of employees. It is perceived by HR professionals that with the improved data, HR professionals are more capable to ask questions more deeply about different kind of situations. They think that certain situations can be better analyzed with the improved data quality. HR professionals mention that the improved data has ensured that they can quicker see where they have to intervene and so they can take quicker action to solve problems. As an HR professional of an insurance organization stated: *"You can perform the role of HR better. You can see quickly where to intervene and so you can take quicker action"* (Resp. 27).

Furthermore, HR professionals argue that it becomes increasingly important that they become owner of their own data. They call it e-Human instead of e-HRM. 1 of the HR professionals of an ICT organization said: *"So the point is that we are all become owner of our own data"* (Resp. 25). They believe that employees and managers feel more the

responsibility of their data instead of deposit the data to HRM. It is perceived by the HR professionals that employees and managers can look in their own data instead of asking this information to HRM. In their opinion, the added value as HR business partner is increased for the business. They believe that HRM is no longer necessary to maintain the data; employees and managers do that by themselves. They think that an HR business partner can perform the role as partner of the business better.

6. Changing role of HR

It is perceived by the HR professionals that the added value of HRM is increased due to the use of digital HRM solutions. They think that with the availability of more and better information they can provide other HRM services to the business and so they are able to give better advise. As an HR manager of a banking organization mentioned: *"The added value of HR is growing. The added value means that HR can give better advice based on facts and figures"* (Resp. 9).

There are also voices that say they have more time and focus to pursue the people agenda. They believe that with the digitalization of HRM processes, HRM would no longer be bothered with operational issues. The HR professionals mention that they are now more able to perform the role of HR strategic business partner. They think that they can focus more on the quality for the business and on organization-wide activities to add more value to the organization. There are also voices that say that HR advisors should be able to work more with HR analytics. 1 of the HR professionals of an insurance organization said: *"That means that my advisors need to show more progress. They should be able to conduct a strategic discussion with more analytics skills"* (Resp. 30). Most of them state that this will be the focus for the next few years, to create highly skilled HR-analytics people. They believe that they will become more capable to add value to the organization with HR-analytics.

7. Change management

The HR professionals mention that after the implementation of a digital HRM solution and so the consequences are known, change management remains important. It is perceived that the digital HRM solutions would be developed further in the future, so specific attention to change management remains continuously important. The analysis of the transcripts shows that they believe that the people in the organization should change their mindset. They think that employees and managers should be open-minded for changes, at the moment and in the

future. As an HR professional of an insurance organization said: *"It is important to have another mindset. You must be open-minded to things that are differently than before"* (Resp. 27).

Some HR professionals mention that they have a mental program in the organization for both employees and managers. In this program, they receive intensive trainings to prepare them for the new way of working in the organization. This HR professional thinks that this program has contributed to the changing mindset of the employees and managers in the organization.

8. New different competences

Furthermore, the HR professionals express that the need for new high-graded competences is growing in organizations. They mention that they try to develop competences, which they have not in the organization yet. The HR professionals state that they need another type of employee, which are educated on a different level, with other competences. They believe that they need people who have a total overview and are capable to bring different things together as 1 component. Further, they think that they also need people with communication skills, advisory skills, people that can perform a scenario planning, and can look forward. 1 of the HR professional of a chemical organization stated: *"We are developing new competencies that we do not have. People should be able to act between the business and the technology. It is a new breath of people. It is not HR, it is not IT, it is in-between"* (Resp. 3). Furthermore, it is perceived by the HR professionals that employees who do not have the right competences are offered help with their development to improve their skills and knowledge that they can use both in- or outside the organization.

9. Look to the future

It is perceived by HR professionals that a clear vision towards the future should be made visible for the employees in the organization. They mention that it is important to show what their vision is about the HR-model, the role of HR, the managers, and about their employees. 1 of the HR professionals explained that they have a shared their vision and mission in training sessions. After these sessions, employees indicate that they understand the change, and the vision behind the change better. This HR professional thinks that these sessions create more support from the employees and managers. Further, some of the HR professionals state that a more informed succession planning is important to determine if they have enough high-qualified employees in the organization. An HR manager of a government organization

mentioned: *"It is a quality improvement to look at the future with different questions like: Do I have enough qualified people in the organization? With this kind of question the quality of your organization becomes better"* (Resp. 20).

10. Connection with the strategy of the organization

Furthermore, the HR professionals express that it is important that digital HRM solutions must fit with the strategy of the organization. They mention that it is important that the digital HRM solution and the strategic goals of the organization are in the same direction and complement each other.

11. Inclusiveness of practices

It is perceived by the HR professionals that it become easier to increase the employability of the employees in the organization. They believe that it also becomes easier for the employees with a disability. They state that the employees are more in their strengths in all places in the organization.

12. Workforce planning

The HR professionals express that the digital HRM solutions has improved the workforce planning. As 1 of the HR professionals of a government organization said: *"It is also one of the resources that helps to shape your tasks. We do not want to bully them with again another system. We want to help them, to facilitate them from HRM. We want to help them with a system"* (Resp. 20). They mention that the improved workforce planning helps with the realization of the cost reduction in the organization.

13. Interaction between employees and managers

Some of the HR professionals mentioned that digital HRM has ensured that the interaction between employees and managers increased. It is perceived that for the mid-review and final review employees can give him/herself feedback for each goal that is realized, and managers can see this in the system. According to the HR professionals results the increased interaction between employees and managers to more and better collaborations and the understanding of the organization generally becomes larger.

14. Integrative management

From the opinion of the HR professionals it becomes clear that managers are more able to manage their team in an integrative manner. They believe that this is due to the fact that managers have directly access to important information about their employees. They think that in this way a manager can perform the role of an integral manager. An HR director of a retail organization said: *"It enables managers to manage the teams more on an integrative manner. They manage not only on the daily things that have to happen, but also on talent planning and performance management"* (Resp. 45).

15. Making time free

Furthermore, HR professionals state that e-HRM enables them to make time free for employees. With this time reduction they can spend it to more important things, such as innovation, growth and their own development. As a HR director of a chemical organization argue: *"We go to the end user and measure how much time the spent on their activities. We put targets for time reduction. We give time back for innovation and growth"* (Resp. 3). Further, they mention that HRM is able to realize this changes due to the simplified HRM processes.

Overall, there are 15 main consequences of e-HRM perceived by the HR professionals. Most of the perceived consequences are positive formulated by the HR professionals, but there are also some critical voices, which should be kept in mind.

4.2 Perceptions perceived by IT professionals

The research analysis revealed 6 main themes and 11 consequences as perceived by the 5 IT professionals, which are presented in table 13, appendix J.

1. Efficiency

The IT professionals acknowledge that there are a lot of advantages with the use of a digital HRM solution. They mention that the HRM processes are more simplified and that makes the HRM process easier and faster for the different employees in the organization. It is perceived by the IT professionals that the logistics in the organization are quicker due to the use of digital HRM solutions. 1 of the IT professionals mentions that in previous years the purchases of computers took two months. At the moment, it takes a week or sometimes two days to get a

new computer/ laptop. So, they believe that HRM processes are more quickly arranged in the organizations. As an IT professional of an education organization said: *"Earlier, the purchase of computers took two months. At the moment it takes a week or sometimes two days to have your computer"* (Resp. 13). In addition, IT professionals believe that the simplified processes make it more enjoyable for HR professionals, but also for the employees and managers to occupy with the different HRM processes. 1 of the respondents mentions a new tool for the selection of new employees. The IT professional of a banking organization argues: *"It has a matching functionality. There is a vacancy and different CVs are sent, and with this tool you can already do a rough selection. They get 500 till 600 CVs per month. So the matching functionality saves money, but it is also efficient. It is a beautiful tool and it makes the work of the employee more fun"* (Resp. 6).

2. Increased responsibility of the employees

Furthermore, the IT professionals mention that the responsibility of employees and managers has increased the last few years. They see that the employees and managers become increasingly more self-supported in performing HRM processes. It is perceived from the IT professionals that this is the result of the higher level of self-service for the employees and managers. They see that a lot of operational tasks of HRM shifted to the employees and managers in the organization. As an IT professional of an education organization said: *"For example, to reset a password or something like that, you can arrange that by yourself. Besides the savings, the advantage is that it is available 24/7"* (Resp. 13). They mention that with this change, HRM can focus more on the value added processes. In addition, the IT professionals express that the employees and managers are satisfied with the increased self-service and that they can arrange HRM processes without the help of the HR business partner. An IT manager of an energy supplier organization stated: *"I do not want to call. On that moment I do not want a Business partner. I want to click and be done. That is what I like about it"* (Resp. 19). Further, it is perceived by the IT professionals that more centralized HRM processes are shifted to different other links in the organization.

3. Development employees

Additionally, the IT professionals mention that digital HRM gives more opportunities for managers by the appraisals and development of their employees. They see that with the use of digital HRM, more information becomes digital and managers and employees have easily access to this information due to the digitalization. The IT professionals argue that they have

longitudinal and long-term insights of development employees. As an IT professional of an education organization argues: *"It is good to record the results of the employees online. With this tool you can see the development of different employees through the years"* (Resp. 13). They think that providing more challenges to the employees and to make them aware of the different development opportunities, the sustainable employability of the employees increases. It is perceived by the IT professionals that the development of the employees is not only professionally, but can also focus on a better collaboration with other employees in the organization or can focus on the soft skills of employees.

4. Impersonalization

Some of the IT professionals were critical about the appraisal talks. They mention that since the digitalization of a lot of HRM processes, the appraisal talks become more impersonal. It is perceived by the IT professionals that they have difficulties with the new way of working for the appraisals with their employees. They mention that in earlier years, during the appraisal talks, the manager and employee filled in together the different forms on paper. Now, everything is digital and the managers consider this as impersonal. An IT manager of an energy supplier organization said: *"I found the changeover with the appraisals difficult. Having a conversation with my employee with a laptop is not working in my opinion"* (Resp. 19).

5. Insights in the HRM processes

Furthermore, the IT professionals mention that e-HRM makes it possible that managers have longitudinal and long-term insights in important information about their employees. They believe that the added value for managers becomes increasingly higher in for example, the appraisal process or the development of the employees. As an IT professional of an energy supplier organization states: *"That means that it is very transparent. We can look at it, from both sides; the employee and the manager. Recently I got a new role. To appraise my new employees, I look in the system to their appraisals from their former managers of the last two years. That was not possible with paperwork"* (Resp. 19).

6. Alignment HRM processes (for MNCs)

The IT professionals state also that the digitalization of different HRM processes have ensured that more HRM processes in different organization all around the world are aligned. They mention that the digital HRM solution must also fit with brother organizations in the

world. An IT manager of a banking organization said: *"So, everything that was conceived in The Netherlands, must also apply for the world. So, that was continuously taken into account"* (Resp. 6). They argue that this made it more difficult, but now there is consistency of the digital HRM solutions for all the organizations. It is perceived by the IT professionals that the HRM processes are replicable between the different organizations in the world.

In short, there are 6 main consequences of e-HRM perceived by the IT professionals. In general, the IT professionals are satisfied with the digital HRM solutions in their organization. However, there are some critical voices about the impersonalization as result of the digital HRM solutions.

4.3 Perceptions perceived by Business leaders

The research analysis revealed 12 main themes and 35 consequences as perceived by the 10 Business leaders, which are presented in table 15, appendix L.

1. Increased self-service for employees and managers

It is perceived by the business leaders that e-HRM has ensured an increase in the self-service level for employees and managers. They mention that employees and managers become more self-sufficient in performing HRM processes. They experience that they can arrange a lot of HRM processes by themself without the help of the HR business partner. They see that with this change, the responsibility of employees and managers increased a lot. The business leaders express that the system creates openness and transparency in the communication between employees and managers. They state for example that employees can evaluate themselves and managers can see this in the system. As 1 of the business leaders of an insurance organization mentioned: *"It is more open and transparent what the manager and employee do in the system. Employees can give themselves an evaluation in the system and a manager can see that"* (Resp. 31).

2. Cost reduction

Furthermore, the business leaders recognize cost reduction as a consequence of digital HRM. There are some critical voices saying that the digital HRM solution was only cost-driven and not service-driven. The business leaders have not experienced the service-driven results of the digital HRM solution. One of the business leaders of an insurance organization states: *"In my*

opinion it was more cost-driven. We have made the change from different forms on paper to record it in the system. And this saves a lot of time. But it is not very service-driven. In my opinion, they have not included questions like what kind of services they can give to us or in which is a high demand. That is not included" (Resp. 32). According to them, the organization has not looked at what is important for the business and what their important questions are. They hope that this will change in the coming few years.

In addition, they mention that the digital HRM solution has lead to FTE reduction in the organization. But they argue also that the FTE reduction is the beginning of the consequences of the digital HRM solution. As one of the business leaders of an ICT organization states: **"***On FTE, it is a huge win, but this is only the beginning of the consequences of e-HRM. This is only the cost factor and the processes that are made very short"* (Resp. 24). They acknowledge that there are many other consequences to recognize in the organization.

3. Efficiency

From the opinion of the business leaders it becomes clear that efficiency is also an important e-HRM consequence. They mention that the HRM processes are easier, faster, and you can perform HRM processes place independent. It is perceived by the business leaders that employees and managers can retrieve their information at home or other places and not only at the office. In addition, they pronounce that HR professionals can offer HRM services to more people in the organization with less people due to the automation of increasingly more HRM tools. 1 of the business leaders of an ICT organization mentioned: *"For example, if the number of employees is growing, they can serve us with the same HR population. That are savings and an efficiency boost that you realize"* (Resp. 26).

It is perceived by the business leaders that the digital HRM solutions lead to more standardization of HRM processes. They state that with the standardization of HRM processes they experience not only the advantage of an attractive employer, but can also hire better and highly skilled people. They mention also that they can develop their employees quicker and can bind more people to the organization. Business leaders from MNCs express further that their HRM processes are standardized for a lot of different countries. They state that they all have the same standardized processes, for example the payroll. This makes the process a lot easier and quicker. They think that HRM tools should be as simple as possible for the different employees in the organization. They argue that not only the younger employees must

understand the tool, but it is also important that older employees in the organization understand the changes in HRM processes.

4. Better insights in the working population of the organization

Furthermore, the business leaders mention that the digital HRM solutions have resulted in better insights in the working population of the organization. They argue that they have more and better insights in the potential of employees their competences. It is perceived by the business leaders that there is more information available about the employees, and so managers have better insights in their potential. As one of the business leaders of a retail organization said: *"I have better insights in my potential. With this I can place people on important functions"* (Resp. 42).

In addition, the business leaders mention that HRM information is better recorded in the system. They state that in previous years a lot of information was processed in Excel sheets that the people filled in by themselves and send it to HRM. Now, they experience that a lot of information can be found in the system and people have a better overview of the information. They think that this reduced the time of gaining and searching the right information about employees. The business leaders state that due to the availability of more information, the type of questions towards HRM are changing. They see that HR business partners receive more questions about how the business leaders can increase the performance in their teams.

5. More steps/ actions required for managers

The digital HRM solution has resulted in some critical voices saying that managers must run through more steps/ actions in the HRM process. The business leaders express that they have to fill in more forms and that the digital forms in the system consists of more steps than before, when all the forms were on paper. A business leader of a chemical organization said: "*Manager self-service is fun, but it all takes a lot of time"* (Resp. 1). It is perceived by the business leaders that this takes a lot of valuable time, which they can better spend towards other important things in their function. 1 of the business leaders of a government organization states: *"An employee justified his/her hours and I must approve that. I am really not doing that. That does somebody else for me, because I have no time for that"* (Resp. 22). The business leaders mention that there are more variations and actions to fill in the different forms in the system. They see that for every exception a new form has to be developed. Business leaders state that during previous years, the paper forms had more flexibility than

the digital forms now. It is perceived by the business leaders that these forms should be filled in the prescribed manner, otherwise it is not going well and errors arise in the systems.

6. Availability of information

Furthermore, the business leaders acknowledge advantages of the digital HRM solutions. They mention that the employees are better informed than before. They see that there is more information available for employees and managers and so both are better informed. It is perceived by the business leaders that with this information employees are more capable to perform their work better on a higher level. They mention that the information is very quickly accessible. They see that that information becomes accessible immediately for employees. As a business leader of an education organization argues: *"The time that you get to important information goes very fast. That is reduced to instantly. I have instantly access to my information and I can see changes real-time, without that somebody must implement it manually"* (Resp. 12). The business leaders argue that the information is not only accessible on the computer but also via Apps on the smartphones of employees. With this information, the business leaders say that they have a better and clearer overview of the organization. They can see easily and quickly an overview of the organization, who reports to whom and which employees are managed by which manager.

7. Changing role of HR

Additionally, it is perceived by business leaders that the role of HR is changing increasingly. They see that the automation of a lot of HRM processes has ensured that the role of HR is changing to a more tactical or even strategic level in the organization. They argue that organizations try to decrease the work of HRM on operational level, this due to move the responsibility of these HRM processes to the employees and managers. A business manager of an insurance organization said: *"Earlier, we had time for operational support. That person performed operational tasks for the team managers, but that is phased out. Now, the team managers must do it by themselves"* (Resp. 32). In addition, the business leaders state that with this change, HRM can perform a more advisory role on a tactical or strategic level in the organization. They mention that the HR role is not only changing to a more advisory role, but also to the role of strategic business partner. It is perceived that with this role HRM can add more value to the management and organization.

In addition, the business leaders express that the automation and standardization of the different HRM processes become very important for the strategy of the HRM. They see that nowadays HR professionals must have knowledge about tools and the digitalization of HRM processes. The business leaders think that HRM can realize their HRM strategy with this knowledge. A business leader mentions that in previous years there were a lot of IT people on the HR Tech World Congress. Nowadays, they see more and more HR professionals on the HR Tech World Congress. It is perceived by the business leaders that increasingly more HR professionals are interested in the IT-tooling for their processes. They state that this is a big difference than with a few years ago.

Furthermore, business leaders argue that the digital HRM solutions have more contribution for the long term of HRM. They state that in previous years the contribution was for a short period of time, for example a cost reduction at that moment. Nowadays, business leaders see that the contribution of the digital HRM solution can be extended on the long-term for the organization. They argue that this contribution should be part of the HRM policy in the organization.

8. Development employees

There are also voices of business leaders who say that the digital HRM solution has contributed to the development of the employees in the organization. They see that with the digital HRM solutions, employees gain more and different learning opportunities to expand their knowledge and skills. It is perceived by business leaders that employees can participate in rotation programs for both horizontal- and vertical directions to learn new knowledge and skills within a few months. Business leaders mention that with the new focus on the development of employees, HR is becoming visible again. As 1 of the business leaders of an insurance organization states: *"HR is visible again. They spent a lot of time to the development of employees. If employees want something, almost everything is possible"* (Resp. 31). They see that employees gain more opportunities to develop themselves and everything can be arranged easily via the digital platforms of HRM. They pronounce that almost everything is possible for the employee.

9. Recruitment is simplified

It is perceived by business leaders that digital HRM solutions have contributed to the recruitment system of the organizations. They mention that job applications became easier for the candidates in- and outside the organization. They see that the recruitment process is more

simplified and people can apply easily via their smartphone. They state that with this simplified recruitment process they receive more applicants. One of the business managers of a public service organization mentioned: *"We ensure that they can apply easier. So, you can apply with you smartphone. A computer is not necessarily needed. That makes it more easier and we have more candidates and maybe even better candidates"* (Resp. 38). There are voices saying that due to the digitalization of the recruitment process it takes less time to select a suitable candidate for the job. Further, they mention that due to the digitalization, the process becomes very thoroughly. With this changes better candidates apply and in turn, they gain better and more skilled new employees in the organization.

10. Willingness of the people in the organization to work with digital HRM

The business leaders mention that the willingness of the employees to work with digital HRM solutions is very important for the success of the system. They argue that a system does not solve everything in the organization. They state that it is also very important that the employees in the organization want it too. It is perceived by the business leaders that it is important that HRM develop a strategy for HRM, which is supported by the people in the organization. They argue that if the employees are not satisfied with the direction of the organization, the willingness to work with it is often low. The business leaders mention that it is important to involve the employees, also when it is implemented, that the consequences are commonly known.

11. Engagement

There are also voices of business leaders saying that the engagement of employees in the organization increased. They see that employees and managers are more engaged and enthusiastic about the HRM service. The business leaders mention that they are more satisfied about the service quality of HRM due to the use of digital HRM solutions. As 1 of the business leaders of an insurance organization states: *"Do you know the phenomena 'engagement score'? We have been doing that for a few years and this year the engagement score is increased. Everybody is happy"* (Resp. 31). They argue that the employees in the organization are more satisfied and this has an effect on the customer satisfaction. They mention that they see that also the customer satisfaction increased for their organization.

12. Time registration

Further, the business leaders mention that the digital HRM solution has ensured that the time registration is improved. They state that the system takes into account who has to work, based on the working hours of the employees. Further, they mention that the system is also able to go back in time, to see the working pattern of the employees. For example, 1 business leader mentions that they have a lot of part-time employees. He states that if part-time employees work more than 12 hours, they have to pay surcharges. With the new HRM system, they can reduce that surcharges of these employees. He argues that the system determine if someone is deployed in the organization based on their working hours. With this system, the surcharges can be reduced, which saves a lot of costs for the organization.

Overall, there are 12 main consequences of e-HRM perceived by the business leaders. The business leaders are in general satisfied about the digital HRM solutions. However, there are critical voices that say that there are more steps/ actions required for the managers and that the digital HRM solutions were too much cost-driven instead of service-driven. These perceived critical voices of the business leaders should be kept in mind.

From the 3 respondents groups, a lot of important consequences of digital HRM solutions are perceived. Below, in table 3 an overview is given of all the main themes that are perceived by the 3 respondents groups: HR professionals, IT professionals, and Business leaders. In this overview, you can find the similarities and differences in main themes between the different respondent groups.

TABLE 3

Overview of perceived consequences of e-HRM

e-HRM consequences		
HR professionals	**IT professionals**	**Business leaders**
Efficiency	Increased efficiency	Increased efficiency
Responsibility of employees and managers	Increased responsibility employees	Increased self-service employees and managers
Cost reduction/ FTE reduction		Cost reduction
Improved data	Insights in HRM processes	Availability of information
New different competences	Development employees	Development employees
Changing role HR		Changing role HR
Service quality		Engagement
'Stand-alone' e-HRM consequence		
Change management	Alignment HR processes	Better insights in the working population of the organization
Look to the future	Impersonalization	More steps/ actions required for managers
Connection with the strategy of the organization		Recruitment is simplified
Inclusiveness of practices		Willingness of the people in the organization to work with digital HRM
Workforce planning		Time registration
Interaction between employees and managers		
Integrative management		
Making time free		

5. DISCUSSION

The aim of this study was to get insights in the consequences of digital HRM on an organization its HRM- and business performance, and to get insights in the changes in the development in perceptions of e-HRM consequences the last 10-12 years. The perceived consequences of e-HRM by the 3 respondent groups (HR professionals, IT professionals, and business leaders) have shown both similarities and contradictions. Table 4 shows the perceived main consequences of e-HRM, related to specific explanations per respondent group.

TABLE 4

Overview of the perceived e-HRM consequences

Consequences	HR professionals	IT professionals	Business leaders
1. Efficiency	Efficiency	Efficiency	Efficiency
2. Responsibility	Responsibility employees and managers	Responsibility employees	Self-service employees and managers
3. Cost reduction	Cost- and FTE reduction	–	Cost reduction
4. Data availability	Improved data	Longitudinal and long term insights in data	Instantly information
5. Skills and competences	High-graded new competences	Longitudinal and long term insights in development of employees	Different learning opportunities for employees
6. Role HR	Strategic business partner	–	Strategic, tactic and advisory role
7. Service experience	Better service quality	–	Increased engagement
8. Change management	Change mindset	–	–
9. Future insights	Succession planning	–	–
10. Strategy	Connection with the strategy of the organization	–	–
11. Inclusiveness	Inclusiveness of practices	–	–
12. Workforce planning	Strategic workforce planning	–	–

TABLE 4

(Continued)

Consequences	HR professionals	IT professionals	Business leaders
13. Interaction	Interaction between employees and managers	–	–
14. Integrative management	Integrative management	–	–
15. Making time free	Innovation and growth	–	–
16. Alignment	–	Alignment of HRM processes	–
17. Impersonalization	–	Impersonalization in appraisal talks	–
18. Insights in the organization	–	–	Insights in working population
19. Manager self-service	–	–	More steps/ actions for managers
20. HRM processes	–	–	Recruitment is simplified
21. Willingness	–	–	It is not only the system
22. Time registration	–	–	Transparency in time registration

Referring to the e-HRM goals presented in the introduction of this research, such as cost reduction, improvements in the service level for internal clients as well as external partners of HRM, and the strategic re-orientation of HRM, we found support for most of these goals by the respondents of this study. Efficiency is one of the consequences that is recognized by all the respondent groups. All 3 groups agree that efficiency consists of different underlying themes. The respondents in all groups mention that digital HRM made the HRM processes easier, faster and more simplified. Moreover, HR professionals add that the system is more flexible. In comparison with the consequence service experience, some of the business leaders and HR professionals say the opposite about this. Some of the respondents, who recognized the consequence efficiency, mention that the HRM process is easier, simplified, more flexible, and that the administrative burden is decreased, what corresponds with the findings of Ruël et al. (2004). Other respondents argue that the digital HRM system is not flexible and intuitive and so the usability for the employees and managers has decreased. There are also voices of

business leaders who say that managers must run through more steps/ actions in the HRM process. This supports the results of the study of Martin and Reddington (2010), who found that more administrative steps shift to the line managers in the organization and so the workload increases. This is in contrast with the voices saying that the system is easier, simplified, and more flexible. This contrast can be explained by the fact that these voices are from different organizations, so it depends per organization how the respondents react on the consequences of digital HRM solutions. Some organizations recently started with the digital HRM solution, whereas other organizations have implemented the digital HRM solution many years ago. Organizations that just started faced some teething problems and should develop their system further. While organizations with more experience have already developed their system to a higher level and should face less problems with their systems.

Additionally, this study found many support by HR professionals and business leaders for cost- and FTE reduction due to a digital HRM solution. The IT professionals did not mention this consequence. There are strong disagreements among researchers about cost savings. Reddick (2009) did not found support for the cost savings due to a digital HRM solution, which corresponds with the perceived consequences of the IT professionals. While Ruël et al. (2004) and Ruta (2005) did find support for cost savings. Buckley et al. (2004) are the only researchers that provided numerical data for cost savings due to a digital HRM solution. In addition, HR professionals in this study state that despite the fact that their organization has saved a lot of costs, the quality of HRM remains the same. In contrast, the business leaders say that the digital HRM solution was only cost-driven and not service-driven. They state that HRM has not focused enough attention to what is important for the business and what their important questions are. This can be explained by the fact that cost reduction was one of the important goals for HRM. The goal of cost reduction is for most of the organization achieved, and now HRM can focus more on the service-driven side of their digital HRM solution.

Furthermore, Cronin et al. (2006) found a reduction in time for managers spending time on HRM processes and a reduction in time for HR professionals in performing administrative tasks. The HR professionals and business leaders of this study confirm these findings. HR professionals mention that the time reduction in HRM processes is clear and good to validate. While business leaders argue that time reduction is difficult to validate. This can be explained by the fact that HR professionals in their role focus more on the validation of time reduction. They are constantly looking at where they can realize time-savings and how they can manage this time with other important activities, such as innovation or growth.

Business leaders focus more on the business outcomes, and so they have fewer insights in the validation of time reduction.

Whereas in the 70s and 80s only operational consequences were recognized (Bondarouk & Furtmueller, 2012), there is an increase of focus on the relational and transformational consequences in today's organizations. In this study it becomes clear that operational consequences are acknowledged, but that relational- and transformational consequences become increasingly important. This means a change in the role of HR. The use of IT enables HR professionals to a greater involvement in strategic roles, which is supported by different researchers (Haines & Lafleur, 2008; Reddick, 2009). Bell et al. (2006) add that the administrative competences of the HR professionals become less important and repositioning their role to a more strategic level. This study confirms these results, with evidence for the changing role of HR to a more strategic level and the change to strategic business partner. The HR professionals and the business leaders both mention changes in the role of HRM. The HR professionals observe this change specifically for the role of strategic business partner, while the business leaders also observe a change towards a more tactic- and advisory role. This can be explained by the fact that HR professionals are more convinced about the fact that they are performing the tactic- and advisory role already, without the implementation of an e-HRM system. With a digital HRM solution, they see especially the change towards becoming the strategic business partner. HR professionals add that they are performing the role of advisor differently and that they can add more value with this change. Further, they think that with the availability of more and better information they can provide other HRM services to the business and so they are able to give better advise. The HR professionals observe also the need and the change to HR analytics. They state that the creation of highly skilled HR-analytics people is the focus for the coming few years. They believe that they are with HR-analytics more capable to add value to the organization. Further, business leaders mention that knowledge about tools and the digitalization of HRM processes becomes increasingly important for HR professionals. They see that increasingly more HR professionals are interested in IT-tooling for their processes. These findings confirm the study of Gardner et al. (2003), who found that HR professionals spend more time on IT support activities in the organization.

Responsibility is also 1 of the consequences that is recognized by all respondent groups of this study. Whereas HR professionals and IT professionals focus more on the increased level

of responsibility, business leaders focus more on the increased level of self-service that they receive. These findings confirm the findings of the study from Reddick (2009) and Beulen (2009), who both found that the involvement of managers and employees within the HRM policies and the execution of the HRM process increase. Ruël et al. (2004) found improvements in satisfaction of the manager- and employee about the obtained HRM-service. While Cronin et al. (2006) found an increase in the satisfaction related to the HRM processes. This study can confirm this result, with the finding that most respondents are satisfied with the HRM processes, the e-HRM services, and the opportunities that they receive. However, some business leaders are critical about the increase of self-service. This can be explained by the fact that there are more steps and actions required since more HRM processes shift towards them. They experience more actions to go through and so they spent more time to HRM processes instead of focusing on other important activities. Besides this, some respondents mention that it is not only the system, but also the willingness of the people is very important. This confirms with the findings of Ruel et al. (2004), who found that the use of e-HRM tools could be limited due to the lack of employees' willingness to adapt these tools. So, it is important to focus not only on the system but also on the human challenges (Ruël et al., 2004).

Whereas some studies found an increase in sharing knowledge in the organization (Ruel et al., 2004; Ruta, 2009), another study found an increase in knowledge management i.e. creation, capture, transfer, and the use of knowledge (Reddick, 2009). The 3 respondent groups in this study all mention changes in skills and competences of employees. They recognize this consequence all in a different way. The HR professionals emphasize highly-graded new competences of employees, who are educated on a different level, with other competences. They state that today's organizations need people who have a total overview and are capable to bring different things together as 1 component. Further, they need people with communication skills, advisory skills, people that can perform a scenario planning and can look forward. While IT professionals focus more on the longitudinal and long-term insights of the development of employees and business leaders particular emphasize the new different learning opportunities for employees and the visibility of HRM. This difference can be explained by the fact that HR professionals focus more on new competences that are crucial for the future and that fits with the strategy of the organization. To gain a competitive advantage in the future, organizations need different and highly-graded new competences. IT professionals emphasize the development of employees from a different perspective. They

focus more on the advantages and opportunities of the HRM system. With the HRM system, they gain longitudinal and long-term insights in the development of employees. On the other hand, business leaders focus more on new learning opportunities for their employees, as a result of the digital HRM solution. They mention that due to the digital HRM solution, employees get more opportunities to expand their knowledge and skills.

Ruel et al. (2004) found in their study that HR supports risk taking and innovation in the organization. This study adds that HRM makes time free for employees, which they can spend to more important things, such as innovation, growth, and their own development. So, respondents of this study mention that HRM supports not only innovation, but also growth and the development of the employees.

In addition, data availability is a consequence that is perceived differently by all 3 respondent groups. The IT professionals emphasize that the HRM system has ensured that they have more, longitudinal, and long-term insights in the HRM processes and are convinced that they can add more value with these insights. The IT professionals emphasize the consequences in terms of what it means for them. The business leaders express these consequences in terms of what it means for their employees. They state that their employees are better informed and are able to perform their work better. This confirms with the findings of Panayotopoulou, Vakola, and Galanaki (2007), who found that employees have improved access to HRM information. Similar, HR professionals express this consequence also in terms of improved data for the business and not only for themselves.

Further, business leaders state that the recruitment process is more simplified and job application is easier for candidates both in- and outside the organization. HR professionals add that the in-, through-, and outflow of employees are increasingly faster. These results support the findings of Reddick (2009), who found that the recruitment system could improve due to the use of a digital HRM solution.

This study contributes to new insights in the e-HRM field. 1 of the remarkable results perceived by the respondents of this study, is that improved data and data availability becomes increasingly important in organizations. It is important that people in organizations need to become owner of the data. This result contributes to the findings of a case study concerning self-service systems reveals increased accuracy of data and results (Hawking, Stein & Foster, 2004; Reddick, 2009).

Reflection 'TOP' framework

Since this research is part of a larger project, were 2 co-researchers are involved, this part is written together with Kuipers (2017). The table below shows similarities of themes between the 2 co-researchers of this study. These themes are categorized into technological-, organizational-, and people factors (hereafter called components), as discussed in the article from Bondarouk & Furtmueller (2012). Under the 3 components, implementation factors are noted as 1, and consequences as 2. For example, data quality was perceived as important for the implementation of e-HRM as well as for the consequences of e-HRM. However, in the case of implementation factors the respondents talk about data cleaning and in the case of the consequences the respondents talk about improvement of the data. These two themes are linked to each other, because they both refer to data quality. We have done this for every theme in the table. Even though, Bondarouk & Furtmueller (2012) claim that every theme can be categorized under 1 component, it is interesting to see that not all themes perceived from the interviews, can be categorized under 1 specific component.

TABLE 5

Overlap between e-HRM implementation factors and consequences

	Technological	**Organizational**	**People**	
Implementation (1)				**Consequences (2)**
Simplification	1 & 2			Efficiency
Standardization	1 & 2			Alignment HRM processes
Change management			1 & 2	Change management
Skills & Abilities			1 & 2	Skills & Competences
User experience	1		1 & 2	Service improvements/ engagement
Goal orientation		1 & 2		Look to the future/ Connection with the strategy
Data cleaning		1 & 2		Improved data
Business case		1 & 2		Cost- & FTE reduction
Human side			1 & 2	Impersonalization

TABLE 5
(Continued)

Technological	Organizational	People	
Implementation (1)			**Consequences (2)**
Warminization	2	1 & 2	Interaction between managers and employees

Notes: The implementation factors are marked in the table as 1, and the consequences as 2.

The first implementation factor *simplification* and consequence *efficiency* are combined. These are related because the simplification of processes due to the implementation of a system leads to efficiency in the HRM processes. Both are categorized under the technological component as they refer to the e-HRM system.

Next, *standardization* and *the alignment of HRM processes* are linked, because they are both considered as important implementation factor and consequence. Respondents mention that there first should be an alignment between HRM processes before a system can be implemented, therefore considered as an implementation factor. While other respondents see the alignment of HRM processes as a consequence due to standardization made possible by the implementation. Again, both can be categorized under the technological component as they are linked to the e-HRM system.

Both considered as an implementation factor and consequence is *change management*. This refers to the willingness of employees to change their way of work, therefore categorized under the people component. Examples are, that people have to be prepared for the upcoming changes. This can help the people with changing their mindset.

The same accounts for *skills and abilities* (implementation) and *skills and competences* (consequences). Working digitally requires new skills and employees have to be prepared for this, before implementation. However, after the implementation, organizations recognized that a new type of employee is needed, possessing new competences. Both are recognized under the people component.

The implementation factor *user experience* is considered as important because the respondents perceived that it is crucial for organizations to implement a system that focuses on- and creates a positive user experience. When there is a positive user experience, the *engagement* will increase, as recognized by the respondents. This leads to a higher level of satisfaction, and employees even experienced *a higher level of HRM service*. The user experience can be categorized both under the technological as well as the people component,

while the consequences are only categorized under the people component. The reason that the user experience is also considered as a technical component is because the systems allows for the user experience to increase.

Next, *goal orientation* (implementation) and *look to the future* together with *the connection with the strategy of the organization* (consequences) are linked. Respondents mention that a clear vision and the reason behind the implementation should be shared by the organization. Other respondents add that also after the implementation a clear vision to the future should be made visible for the employees and should be linked to the strategy of the organization. This can create more support from the employees in the organization. Therefore, these themes are both categorized under the organizational component.

Data cleaning is considered as an implementation factor because respondents believed that all data should be sorted and ordered first before an implementation can take place. Further, *improved data* was recognized as a consequence because due to the e-HRM system, organizations gain better insights into the data, can see relations and make connections more easily, and have more data available. All together, both are linked to the organization component.

The respondents of this study mention that it is important that the *business case* is balanced for the implementation of an e-HRM system. It is important to focus not only on the costs but also on the qualitative aspects. As consequences, a lot of respondents argue *cost- and FTE reduction* as an important aspect to take into consideration. Also as a consequence it became clear that even though cost reduction is important, but the service-driven side should be kept in mind. Both themes are categorized under the organizational component.

The *human side* of e-HRM should be taking into consideration when implementing a new system. Systems are seen as only a facilitator and respondents believed that humans were still important. A consequence of e-HRM related to the human side is *impersonalization*. Due to the automation of processes, conversations between managers and employees become impersonal, because of the use of a computer. This creates a barrier for an open conversation, and that is what employees still need, according to the respondents. Therefore, both are related to the people component.

The focus on social interaction, also considered as *warminization* (implementation), is important according to the respondent in order to gain involvement and to create dynamic talks between managers and employees. Also, this is recognized as a consequence of e-HRM: *interaction between managers and employees*. It is argued that the level of interaction increases because both managers and employees have insights in, for example, appraisal talks,

and this creates space for an open conversation. Both are registered under the people component. However, the consequence can also be considered under the technology component because due to the system, this interactive level of communication is possible.

Our findings confirm that people are acknowledged as a key successful factor, and the awareness for the human aspect improved during the last couple of years (Bondarouk & Furtmueller, 2012). However, it does not solely depend on the people component, as the respondents recognize the technological component as an important one as well. The combination of both is considered as inevitable.

Extra findings

Not all implementation factors and consequences could be linked to each other. This is because of the fact that some implementation factors and consequences have different meanings and cannot be related to the same overall factor. These 'stand-alone' implementation factors and consequences can be seen in table 4, at the beginning of this chapter.

Limitations

There are some limitations of this study that should be taken into account. First of all, the information received from this explorative research is judgmental and therefore subject to bias. To overcome this problem I discussed every step first with my peer-researcher to see if we were on the same line and after this we discussed these findings with our senior researcher. So, every step was constantly discussed with 3 researchers. The second limitation of this study is that we have conducted only interviews with HR professionals, IT professionals and business leaders. Since the interviews were arranged before we entered the project, we were not able to say something about the type of employee who was invited. Unfortunately, we could not change anything about this during our research, but it is recommended to take this into account for future research. The last limitation of this study is that we did not specify our findings based on for example, industry or type of organization (public/ private).

Future research

Based on the limitations of this study, we have some recommendations for future research. In the first place, future research should conduct interviews with employees from diverse levels

in the organization. With this, researchers gain more different perspectives about consequences of e-HRM. Further, a comparison about the experience of the e-HRM systems can be made between the higher- and lower levels in the organization. In addition, our research indicates that there are some differences between industries. Future research should examine the similarities and differences in consequences, based on industry or type of organizations (public/private). So, the next step in this research is to go back to the quotes of the respondents and to see whether there some clustering emerge between industries. With this we can see which consequences are typical for a specific industry or type of organization (public/ private).

Additionally, future research can rank the consequences based on level of importance. With this step, researchers gain insights in the consequences that have priority based on the perceptions of the respondents and which consequences can wait. At last, future research can dive again into the data of this research, in order to compare the way how people talk. What is their language, their image of e-HRM and their expression about e-HRM consequences? People create their reality based on the way how they talk and their beliefs about consequences.

For this research project, we also spoke with Patrick Willer, who works at the ICT company SAP. We discussed our most important findings of this research project and he added some interesting recommendations for the future. The expectation is that a lot of operational HRM processes disappear due the continuous digitization of HRM processes. 1 of Patrick his recommendations for future research is to look at what the obstacles are that impeded the further digitalization of these operational processes.

Furthermore, at today's organizations there is less insight in the behavior of the different groups present in the organization and their success. Patrick states that at the moment the focus is primary on the flows of the groups in the organization. For the future, it is important to get insights in, and to manage this behavior of groups and their success. However, at the moment there are no systems or HR analytics that record or examine these data. Patrick recommended to look at how the future will deal with the changes.

6. CONCLUSION

We started this research with the idea to find out what is going on in the e-HRM field, compared to 10-12 years ago. We started to read different overview papers that were available discussing the developments of the implementation factors and consequences of e-HRM. This research was inspired by academic curiosity: what was going on 10-12 years ago, and how is the situation at this moment? This research was commissioned by Capgemini consultancy. This collaboration with Capgemini was not a commercial commission, but only developed based on research interest. Capgemini consultancy has arranged the contacts between the University of Twente and the 21 organizations, so that we could conduct the different interviews.

From the findings it becomes clear that the basic e-HRM consequences remain the same, but there are some nuances in some of these consequences. Earlier studies found that e-HRM ensured that many HRM administrative tasks could be carried out by managers and employees themselves, with the use of a self-service system. This study found that not only responsibility for administrative tasks is of importance anymore, but as well the responsibility for employees their own development. The respondents see that employees can manage their own development issues in consultation with their manager. The responsibility of the employees and managers about HRM processes expanded during the last few years. Further, nowadays employees can easily arrange, for example declarations by an APP on their smartphone. So, the consequence efficiency has been expanding in the last recent years.

Furthermore, whereas earlier studies state that e-HRM ensured that reports and data are more accurately and that employees have improved access to HRM information. The respondents of this study add new insights with that they have more, longitudinal and long-term insight in the HRM processes. Further, they state that improved data and data availability becomes increasingly important in organizations. It is important that the people in organizations become owner of their own data. They emphasize that data ownership is increasingly important in today's organizations.

In addition, from earlier studies it becomes clear that they observed changes in the role from HR to strategic business partner and to a change agent. Besides this, the respondents of this study emphasize the change to HR analytics. It becomes very important to have highly skilled HR-analytics people in the organization. The respondents believe that they, by performing HR-analytics, become more capable to add value to the organization. It also became clear that the development of employees is more important than before. HRM is not

only supporting risk and innovation, but also supports the development and growth of employees intensively.

To conclude, the basic e-HRM consequences stay the same, but there are some nuances in these basic e-HRM consequences. Time past make it clear that the above-mentioned e-HRM consequences may be refined. In the past few years, these consequences are seen and experienced differently.

REFERENCES

Amaratunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002). Quantitative and qualitative research in the built environment: application of "mixed" research approach. *Work study, 51*(1), 17-31.

Bell, B. S., Lee, S. W., & Yeung, S. K. (2006). The impact of e-HR on professional competence in HRM: Implications for the development of HR professionals. *Human Resource Management*, *45*(3), 295-308, doi: 10.1002/hrm.20113.

Beulen, E. (2009). The contribution of a global service provider's human resources information system (HRIS) to staff retention in emerging markets: comparing issues and implications in six developing countries. *Information Technology & People, 22*(3): 270-288, Doi: 10.1108/09593840910981446

Bondarouk, T., & Furtmueller, E. (2012). Electronic Human Resource Management: Four Decades of Empirical Evidence. *Proceedings of the Academy of Management*. Boston, USA, Aug 3-7, 2012.

Bondarouk, T., Parry, E., & Furtmueller, E. (2017). Electronic HRM: four decades of research on adoption and consequences. *The International Journal of Human Resource Management*, *28*(1), 98-131.

Bondarouk, T., & Ruël, H.J.M. (2009). Electronic human resource management: challenges in the digital era. *International Journal of Human Resource Management, 20*(3), 505-514. doi: 10.1080/09585190802707235

CBS, Centraal Bureau voor de statistiek (2014). *ICT Kennis en Economie 2014.*

Clarke, A. E. (2005). *Situational analysis: Grounded theory after the postmodern turn*. Thousand Oaks, CA: Sage.

Cronin, B., Morath, R., Curtin, P., & Heil, M. (2006). Public sector use of technology in managing human resources. *Human resource management review*, *16*(3), 416-430, doi:10.1016/j.hrmr.2006.05.008.

Dooley, D.D. (2001). *Social Research Methods*. New Jersey: Prentice Hall

Gardner, S. D., Lepak, D. P., & Bartol, K. M. (2003). Virtual HR: The impact of information technology on the human resource professional. *Journal of Vocational Behavior, 63*(2): 159-179, doi:10.1016/S0001-8791(03)00039-3

Glaser, B. G. (1978). *Theoretical sensitivity.* MillValley, CA: Sociology Press.

Haines, V. Y., & Lafleur, G. (2008). Information technology usage and human resource roles and effectiveness. *Human Resource Management*, *47*(3), 525-540, doi: 10.1002/hrm.20230.

Harper, M., & Cole, P. (2012). Member checking: Can benefits be gained similar to group therapy? *The Qualitative Report, 17*(2), 510-517. Retrieved November 10, 2016, from http://www.nova.edu/ssss/QR/QR17-2/harper.pdf

Hawking, P., Stein, A., & Foster, S. (2004). E-HR and employee self service: a case study of a Victorian public sector organization. *Journal of Issues in Informing Science and Information Technology*, *1*, 1019-1026.

Johnson, R., Lukaszweski, K.M., & Stone, D.L. (2015). The Evolution of the field of Human Resource Information Systems: Co-Evolution of Technology and HR processes. *Communications of the Association for Information Systems, 38*(28), 533-553.

Kuipers, M.C.M. (2017). *From digital HRM to Performance* (Master thesis, University of Twente).

Lepak, D. P., & Snell, S. A. (1998). Virtual HR: Strategic human resource management in the 21st century. *Human Resource Management Review, 8*(3), 215-234.

Marler, J. (2009). Making human resources strategic by going to the Net: reality or myth? *International Journal of Human Resource Management. 20*(3), 515-527, Doi: 10.1080/09585190802707276

Martin, G., & Reddington, M. (2010). Theorizing the links between e-HR and strategic HRM: a model, case illustration and reflections. *The International Journal of Human Resource Management*, *21*(10), 1553-1574, doi: 10.1080/09585192.2010.500483.

Myers, M. D., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and organization, 17*(1), 2-26, http://dx.doi.org/10.1016/j.infoandorg.2006.11.001

Panayotopoulou, L., Vakola, M., & Galanaki, E. (2007). E-HR adoption and the role of HRM: evidence from Greece. *Personnel Review*, *36*(2), 277-294.

Reddick, C. G. (2009). Human resources information systems in Texas city governments: scope and perception of its effectiveness. *Public Personnel Management, 38*(4): 19-34, Doi: 10.1177/009102600903800402

Ruël, H.J.M., Bondarouk, T.V., & Looise, J.K. (2004). E-HRM: Innovation or irritation. Explorative empirical study in five large companies on web-based HRM. *Management Revue, 15*(3), 364–380.

Ruël, H.J.M., Bondarouk, T.V. & Van der Velde, M. (2007). The Contribution of e-HRM to HRM effectiveness. *Employee Relations, 29*(3), 280-291, http://dx.doi.org/10.1108/01425450710741757

Ruël, H.J.M., Magalhães, R., & Chiemeke, C.C. (2011). Human Resource Information

Systems: An integrated Research agenda. *Electronic HRM in Theory and Practice, 8,* 21-39, http://dx.doi.org/10.1108/S1877-6361(2011)0000008006

Ruta, C. D. (2005). The application of change management theory to HR portal implementation in subsidiaries of multinational corporations. *Human Resource Management, 44*(1), 35-53.

Saldaña, J. (2009). *The coding manual for qualitative researchers*. Londen: Sage.

Saunders, M., Lewis, P., & Thornhill, A. (2008). *Research methods for business students* (5th ed.). Harlow: Pearson Education

Stone. D. L., Deadrick, D. L., Lukaszewski, K. M., & Johnson, R. (2015). The influence of information technology on the future of Human Resource Management. *Human Resource Management Review*.

Strohmeier, S. (2007). Research in e-HRM: review and implications. *Human Resource Management Review, 17*(1), 19-37, Doi:10.1016/j.hrmr.2006.11.002

Strohmeier, S. (2009). Concepts of e-HRM consequences: a categorization, review and suggestion. *The International Journal of Human Resource Management*, *20*(3), 528-543, doi: 10.1080/09585190802707292.

Tomeski, E. A., & Lazarus, H. (1974). Computerized information systems in personnel. *Academy of Management Journal, 17*(1): 168-172.

Van Aken, J., & Andriessen, D. (2011). *Handboek ontwerpgericht wetenschappelijk onderzoek*. Boom Lemma uitgevers: Den Haag.

Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management, 18*, 295–320.

APPENDIX

Appendix A – Research flyer From Digital HR of Performance



Every year, organizations spend large amounts of money on the implementation of Digital HR. Within some organizations such an implementation simply concerns the digitization of personnel files, while at others in concerns the introduction of and e-earning module, the expansion of direct access opportunities for managers, or the cloud-based integration of social media in the recruitment process. Whatever the Digital HR solution is, the goal is always the same: contribute to HRM and business performance.

But can we take that contribution for granted? No... on the contrary. On a regular basis we read headlines about IT projects that were delivered too late or which exceeding budgets. And even when the implementation was successful, that does not automatically mean that the Digital HR solution actually contributes to HRM and business performance. Consequently, the project is sometimes even terminated after several months.

It remains largely unclear why some organizations do manage to successfully implement Digital HR and let it contribute to HR and business performance, while others don't. Of course, a blueprint for success does not exist, if only because of the major differences between organizations in terms of the specific HR practices that have been digitized or outsourced, or the maturity of the HRM function in general. From a scientific perspective, also little is known yet about how organizations can actually make Digital HR contribute to HRM and business performance.

In collaboration with Capgemini Consulting, the University of Twente therefore explores the research question:

'What are the prerequisites for Digital HR to contribute to HRM and business performance?'

Capgemini Consulting

From Digital to Smart Human Resource Management

In October 2016 the results of the study will be presented during the sixth International e-HRM Conference which has the central theme *'From To Digital Smart Human Resource Management'*. After editions in Marseille, Bamberg, Nottingham and New York City, the conference returns to the where it started 10 years ago: the University of Twente. The conference brings together international scientists, business leaders and consultants to exchange the latest ideas and insights in the field of Digital HR.

About the research

The University of Twente and Capgemini Consulting are looking for 25 large Dutch organizations willing to participate in the study. Within each participating organization, three interviews will be conducted: one with an HR leader, one with a Digital HR leader and one with a Business / Finance / IT leader. The interviews will be conducted from January to March 2016. Each interview lasts 1,5 hours max, and will be audio recorded for the purpose of analysis. The interviews will be processed anonymously. Names of participating individuals or organizations will not be mentioned in the publications, and results cannot be traced to specific individuals or organizations, unless explicit permission has been granted.

Why participate?

The insights of the research will help organizations to help develop effective Digital HR strategies and to select effective interventions before, during and after the implementation of Digital HR. Participating organizations receive a detailed research report and (if desired) a personal explanation of results by the researchers

How to participate?

When you agree to participate in the study, the University of Twente will contact you and your colleagues to schedule the interviews. We strive to schedule all the interviews within one organization on the same day and the same location.

Contact

hrm. TECHNOLOGY & INNOVATION

Prof dr. Tanya Bondarouk
Full Professor HRM
+31 (0)53 489 3666
t.bondarouk@utwente.nl

Dr. Sjoerd van den Heuvel
Assistant Professor HRM
+31 (0)53 489 3494
s.r.h.vandenheuvel@utwente.nl

Capgemini Consulting

Jan Brouwer
Senior Vice President HR Transformation
+31 (0)6 1503 0008
jan.brouwer@capgemini.com

Anita van Oss
Principal Consultant HR Transformation
+31 (0)6 1503 0138
anita.van.oss@capgemini.com



Appendix B – Overview interviews

TABLE 6
An overview of the interviews

Sector	Function interviewee(s)	Date of interview	Date of transcribing	Time between date of interview and transcribing date (In days)	Duration of interview (In hours:min:sec)	Duration of transcribing (In hours)
Chemical company A	Project Manager & team Leader	11 March 2016	3 May 2016	53	1:12:24	7
Chemical company B	Chief Human Resources Officer & Global Director GBS People Services	6 April 2016	23 May 2016	47	0:43:25	4,5
Consultancy company A	Vice President HR	11 April 2016	20 May 2016	39	0:12:58	1
Consultancy company A	Vice President HR	11 April 2016	20 May 2016	39	0:44:24	4
Bank company A	International Interim HR & Project Manager	3 March 2016	28 April 2016	56	1:30:44	10
Bank company B	Managing Consultant	16 March 2016	31 May 2016	76	1:03:01	6
Bank company B	General Manager HR & Director HR Employment Conditions & Operations	16 March 2016	1 June 2016	77	1:04:29	6
Bank company C	Director HR Policy & Innovation	24 March 2016	26 April 2016	33	1:04:29	6
Bank company C	Manager Shared Services P&O	24 March 2016	1 May 2016	38	1:09:24	6,5
Education company A	Manager HR Innovation & Administration	25 April 2016	7 June 2016	43	0:56:37	5
Education company A	Director Library, ICT Services & Archive	25 April 2016	7 June 2016	43	1:10:35	6
Education company A	Director HR	25 April 2016	6 June 2016	42	1:04:57	5,5
Education company B	Director Corporate Human Resources	15 July 2016	22 July 2016	7	0:59:28	5
Education company B	Manager shared service center HR	15 July 2016	22 July 2016	7	1:07:26	5,5
Energy supplier company A	IT-Manager HR-systems	7 March 2016	26 May 2016	80	1:05:20	6,5
Energy supplier company A	HR-Executive	17 May 2016	3 June 2016	17	0:48:24	5
Energy supplier company A	IT-Manager	17 May 2016	6 June 2016	20	0:56:02	6

TABLE 6
(Continued)

Sector	Function interviewee(s)	Date of interview	Date of transcribing	Time between date of interview and transcribing date (In days)	Duration of interview (In hours:min:sec)	Duration of transcribing (In hours)
Government company A	Department Manager HR & HRM-Advisor	29 April 2016	1 June 2016	33	1:20:33	8
Government company B	Program Director	3 May 2016	27 May 2016	24	1:03:52	6
Government company B	Deputy Head of Service HRM	26 May 2016	30 May 2016	4	0:58:09	5
ICT Company A	Workforce Innovation Consultant & Director HR	10 June 2016	14 June 2016	4	0:58:42	5
ICT Company B	Account Executive	13 June 2016	20 June 2016	7	0:56:25	5
Insurance company A	Director Group Human Resources & Business Development	10 March 2016	27 May 2016	78	1:00:21	6
Insurance company A	Senior People Development Professional	8 April 2016	30 May 2016	52	0:59:33	6
Insurance company A	Team Leader	8 April 2016	3 June 2016	56	1:09:19	7
Insurance company B	Director HR	7 April 2016	10 May 2016	33	0:38:48	4
Insurance company B	Senior Project-manager	7 April 2016	8 May 2016	31	0:26:09	2,5
Insurance company B	Manager Transitions	23 May 2016	29 May 2016	6	0:56:29	6
Insurance company C	Head of Global HR Operations	21 April 2016	2 June 2016	42	1:02:47	7
Public services company A	Director HR, Senior Advisor HRM & E-HRM Program Manager	3 March 2016	24 May 2016	82	0:56:02	6
Public services company B	HR Analytics and Innovation	5 April 2016	3 May 2016	28	1:03:43	6
Public services company B	Program Manager Business Support (HR & Finance)	5 April 2016	8 May 2016	33	0:54:34	5
Public services company B	Director HR Commerce	26 April 2016	26 May 2016	30	0:53:39	5,5
Retail company A	Senior HR Director Group HR	24 March 2016	22 May 2016	59	1:01:15	6
Retail company A	Director Deployment, Corporate IT	24 March 2016	13 May 2016	50	1:16:17	7
Retail company A	Region Manager	25 May 2016	8 June 2016	14	1:04:18	6

TABLE 6
(Continued)

Sector	Function interviewee(s)	Date of interview	Date of transcribing	Time between date of interview and transcribing date (In days)	Duration of interview (In hours:min:sec)	Duration of transcribing (In hours)
Retail company B	HR Business Development Manager	13 April 2016	24 May 2016	41	0:10:51	1
Retail company B	HR Business Development Manager	13 April 2016	24 May 2016	41	0:45:41	4,5
Retail company B	Global Human Resources Manager	13 April 2016	23 May 2016	40	0:41:56	4
Retail company C	Director HR	24 May 2016	31 May 2016	7	0:21:04	1,5
Retail company C	Manager HR-Operations	24 May 2016	31 May 2016	7	0:19:56	1,5
Retail company C	Head of Trade Marketing & E-commerce	25 May 2016	31 May 2016	6	0:49:39	5,5
Total time				**1525**	**38:44:56**	**222,5**
Average time				**38**	**0:58:12**	**5,6**

Appendix C – Overview participating organizations

TABLE 7
Participating organizations and their e-HRM tools

	Sector	Number of employees	Local/ Multinational	Operating countries	E-HRM Tools	E-HRM experience	HR practices supported by e-HRM
1	Chemical (A)	25,000	Multinational	± 50	SAP Success	1 April 2014	Leave application, absenteeism, payroll, performance management
2	Chemical (B)	47,000	Multinational	± 80	Oracle platform; Oracle Taleo		Recruitment, performance management, succession management, learning management
3	Consultancy (A)	180,000	Multinational	± 40	Own Apps, MyPath, Successs is coming end of 2016	Success is coming end 2016	Performance management, trainings
4	Bank (A)	51,859	Multinational	± 40	Peoplesoft for International and SAP for The Netherlands		Payroll, performance management
5	Bank (B)	52,368	Multinational	± 40	At the moment Peoplesoft and Workday from July 2016		Recruitment, performance management, learning/training, talent management, absenteeism, payroll, assessment process.
6	Bank (C)	3,500	Local	-	Profit from AFAS	1999, 2004, 2008	All processes and practices except
7	Education (A)	2,948	Local	-	Oracle	2006/2007	Performance modules, recruitment, promotion
8	Education (B)	5,837	Local	-	ADP		
9	Energy supplier (A)	7,000	Local	-	Peoplesoft (but are negotiating with Oracle, Success, Workday and Raet)	1996	Talent management, payroll, absenteeism, reviews, recruitment, learning management, performance management
10	Government (A)	8,666	Local	-	P-Direkt Purple HRM	2009 2015	Salary, strategic personnel planning
11	Government (B)	63,000	Local	-	Own Cloud and Youforce from Raet	1 January 2015	Own details check, study applications, recovery after illness
12	ICT (A)	78,230	Multinational	± 130	SAP		All processes and practices
13	ICT (B)	6,200	Multinational	± 30	Workday	Established in 2005	All processes and practices

TABLE 7
(Continued)

	Sector	Number of employees	Local/ Multinational	Operating countries	E-HRM Tools	E-HRM experience	HR practices supported by e-HRM
14	Insurance (A)	6,700	Local	-	Raet	1 January 2013	Payroll, reviews, performance management, absenteeism, development,
15	Insurance (B)	3,650	Local	-	Oracle	4 April 2016	Talent management, succession-planning, assessment, sick leave, salary administration
16	Insurance (C)	31,530	Multinational	± 20	Used to have Peoplesoft. Now Workday - Implementation phase in The Netherlands	November 2015	All processes localized first, then digitalized core processes
17	Public Services (A)	34,000	Local	-	SAP Successs		Recruitment
18	Public Services (B)	49,000	Local	-	SAP Successs	2015	Performance management, recruitment, On-boarding
19	Retail (A)	225,000	Multinational	± 6	SAP Successs	2012	Performance management, payroll, training, succession planning
20	Retail (B)	155,000	Multinational	± 43	ADP provider on a SAP basis	July, 2006	Payroll, training
21	Retail (C)	650	Local	-	Global Template SABMiller	October, 2015	Performance management, recruitment

Appendix D – Interview guide

Van Digital HR naar Performance

Onderzoek

hrm. TECHNOLOGY & INNOVATION UNIVERSITY OF TWENTE.

Algemene Introductie

- *Voorstelrondje (mostly – tointroduce the research, less – personal)*
- *Hoofdvraag: Wat zijn de randvoorwaarden voor Digital HR om bij te dragen aan Business en HRM performance? (Digital HR = e-HRM). Presentatie op e-HRM conference, oktober, UTwente.*
- *Vertrouwelijkheid: De interviews worden volledig anoniem verwerkt. Namen van deelnemende personen of organisaties zullen in principe niet in de publicaties vermeld worden, en resultaten kunnen niet worden herleid naar specifieke personen of organisaties. Maar graag willen we organisaties vermelden in publicaties / rapporten, maar dan zullen we hier nadrukkelijk toestemming voor vragen.*
- *Opname: Ten behoeve van analyses nemen we interviews op: akkoord?* ***Recorder aan!***

Inhoudelijke introductie

- Wat is Digital HR voor jullie en wat doen jullie op dit gebied? Historie / ontwikkeling? / how far are you, in your estimation, etc.
- Wat zijn jullie **doelen** met Digital HR?

Bespreken meest en minst succesvolle Digital HR oplossingen

- Wat zijn meest succesvolle en minst succesvolle Digital HR oplossingen?
- Wat maakt dat jullie deze als meest of minst succesvol beoordelen → wat zijn criteria?

Implementatie (schetsen implementatie – digital HR solution – performance)

- Hoe succesvol was de implementatie op zich meest en minst succesvolle Digital HR oplossingen?
- Wat zijn de specifieke indicatoren dat de implementatie wel of niet succesvol was?
- Welke factoren (**randvoorwaarden**) hebben positief en negatief bijgedragen aan de implementatie van de Digital HR oplossing? Op welke manier? Waarom? Wat was uniek? How did you resolve negative issues?

HRM performance

- Hoe draagt deze Digital HR oplossing bij aan HRM performance?
- Wat is voor jullie in dit verband HRM performance? Hoe meten jullie dit? Hoe weet je zeker dat dit toe te schrijven is aan de Digital HR oplossing?
- In welke mate is de bijdrage van de digital HR solution aan HRM performance expliciet gemeten?
- Welke factoren (**randvoorwaarden**) spelen een rol bij deze bijdrage? Welke rol? Hoe?

Business performance

- Hoe draagt deze Digital HR oplossing bij aan Business performance?
- Wat is voor jullie in dit verband Business performance? Hoe meten jullie dit? Hoe weet je zeker dat dit toe te schrijven is aan de Digital HR oplossing?
- In welke mate is bijdrage digital HR solution aan Business performance expliciet gemeten?
- Welke factoren (**randvoorwaarden**) spelen een rol bij deze bijdrage? Welke rol? Hoe?

Wrap up

- *Uitwerking interview toesturen (membercheck) (na 2 weken geen reactie, dan aanname akkoord)*
- *Eventueel benaderen voor toestemming quote en/of foto in rapport*
- *Uitnodiging 27-28 oktober – e-HRM conference, Herfst Rapport toesturen*
- *Visite kaartjes & Cadeautje*
- *Wie spreken als 1) HR leider, 2)Digital HR leider, 3) business, IT, finance, relevant voor onderzoek? Totaal: 3 persons per organisatie)*
- *Dank!*

Appendix E – First level analysis of perceptions of HR professionals

TABLE 8
First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
1. Initial reading	**HR cost reduction/ savings**	20	Resp 2: "En die is van hoge kwaliteit en lage kosten. En dat zal steeds verder geoptimaliseerd worden".	Bringing down the costs of the function. More than 20% of the FTE is reduced. This had bringing down the usability of the internal customers.
			Resp 5: "Omdat je natuurlijk heel veel kosten bespaard, omdat het online is".	Processes online, reduction of FTE
			Resp 8: "Dus ja je moet kosten sensitief zijn, maar wel vanuit wat willen wij bereiken met elkaar".	Cost reduction is important, but not to each maximum. Furthermore, standardization of the primary process. It is easier to maintain the system.
			Resp 10: "Maar het was ook vanuit het oog van efficiëntie, op een andere manier samenwerken binnen de collega's en er zat ook een kosten besparend plaatje aan, omdat je dan gewoon minder dure vierkante meters kantoorruimte nodig hebt".	FTE reduction
			Resp 16: "Ja voorheen koste dat anderhalve FTE en uiteindelijk koste alleen dat onderdeeltje, toen we het helemaal geautomatiseerd hadden, 1 FTE. Die hebben we niet meer nodig".	FTE reduction
			Resp 21: "Eigenlijk is het hoofdzakelijk toch kosten reductie".	Simplified, FTE reduction, cost reduction of 50 million in the next 4 years
			Resp 23: "En dat moet ook gewoon duidelijk zijn, die kostengedrevenheid dat is de oorsprong geweest, de allereerste oorsprong".	Cost reduction of 250 million on an annual basis, FTE reduction in the whole organization. From 3300 FTE to 1800 FTE.
			Resp 29: "Wat je ziet, wij zijn op 1 januari 2013 overgegaan op het nieuwe systeem. En vanaf dat moment hebben wij ongeveer 900.000 euro op jaar basis bespaard aan kosten".	Cost reduction of administrative costs, FTE reduction. First, there were 7 employees working by the service center, at the moment there are working 3 employees by the service center.

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
			Resp 39: "Kostenbesparing zit vaak ook in de contracten met leveranciers of FTEs die je niet meer nodig hebt".	Reduction of productivity
	HR time reduction/ savings	11	Resp 3: "We gaan nu echt naar die eindgebruiker toe en we gaan gewoon meten hoeveel tijd ben je kwijt nu en wij zetten gewoon targets voor time reduction. Want wij gaan jou tijd terug geven voor innovatie, voor groei om op tijd met het gezin thuis belangrijke dingen te kunnen doen".	Giving time back due to simplifying.
			Resp 11: "Dus dat zijn eigenlijk, die tijd wordt vrijgemaakt en doordat wij aan de achterkant zeg maar het werk van de HR-consulant weghalen".	
			Resp 16: "Dat is nu allemaal gedigitaliseerd, Dus we hebben nu een Workflow proces, we hebben nu een beeld van wie welke handtekeningen digitaal mag zetten en wij kijken naar centraal of de wet op de loonbelasting, want daar komt het eigenlijk op neer, correct wordt toegepast. Zo ja, hopla klaar en uitbetalen. Dat heeft in een enorme tijdwinst opgeleverd".	Between the 10% - 15% time savings. 1 till 1,5 FTE is not filled by natural turnover. The expectation is that this the next 2 years will continue.
			Resp 18: "En daar kan ook een HR, een geautomatiseerde HR processen kunnen daar een belangrijke bijdragen aan leveren, want elke seconde of minuut dat een medewerker of een teamleider bezig is met iets inregelen in een HR systeem, alles wat we daarin kunnen besparen kan die gebruiken voor andere belangrijke dingen".	At the moment the time-savings are not clear
			Resp 20: "Nel hoeft zich nu ook niet meer met allerlei futiliteiten bezig te houden, dus heeft meer tijd voor organisatie-breed dingen".	
			Resp 40: "Uh staf op een hoofdkantoor is een ander verhaal. Alle uren die we hier besparen in de support naar de winkels, kunnen we wel degelijk verzilveren en doen we ook".	Business case is quantifiable on the headquarters.

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
	Quality improvements	9	Resp 3: "Alleen maar bezig houden met die value added kwaliteit en activiteiten".	Increase of the productivity
			Resp 20: "Dus het geeft al een kwaliteitsslag gewoon naar de toekomst te kijken met zo'n vraag heb ik wel voldoende mensen en voldoende gekwalificeerde mensen in huis, maakt dat je je organisatie kwalitatief beter maakt als je het ook uitvoert he".	
	Efficiency outcomes	22	Resp 2: "Tijd die je kan besteden aan innovatie aan je klanten, business etc. waar je voorheen misschien administratieve taken aan het doen was".	The administrative burden decreased.
			Resp 4: "Een efficiëntie slag heeft plaatsgevonden. The next step die ik wil is dat het nog efficiënter werkt, dus nog sneller".	Reduction of FTE, reducing actions
			Resp 5: "Dat je standaardisatie krijgt in een global organisatie, dat je standaardisatie van een aantal processen hebt waardoor je ook veel efficiënter kan werken".	1 system instead of different kind of systems
			Resp 7: "Ja dat kennis wordt ondersteund, ondersteunende informatievoorziening. Je added value processen die effectiever laten verlopen".	Improvement of Digital HR, simplified, cheaper.
			Resp 8: "Maar daar moesten mensen eerst 36 velden invullen in 6 verschillende systemen. En nu als iemand uit dients gaat, vul je nog maar 3 velden in en dan wordt het verder allemaal geregeld".	Increased efficiency, simplified steps.
			Resp 9: "Daarmee wordt het bedrijf ook efficiënter en dan heb je ook gewoon minder mensen nodig om alles te checken en te dubbel checken".	
			Resp 10: "Dus als je het hebt over de doorlooptijd, is dat absolute efficiëntie, maar het is ook voor leidinggevenden gemakkelijker, want die hoeft niet al die facetten van het bedrijf zelf te pakken".	Decreased administrative burden, less mistakes, less documents, minimize the time.

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
			Resp 12: "Veel sneller dat de doorlooptijd veel sneller gaat. Dat we niet omslachtig zaken op papier afhandelen en dat we dus geen fouten maken en dat we veel minder administratieve rompslomp hebben".	Decreased administrative burden, less mistakes, faster, better traceable.
			Resp 14: "Echt zorgen dat je daardoor dan betere antwoorden krijgt, sneller je antwoord krijgt, betere vraag en oplossing dat werkelijk helpt, dat je dan wel, ja	Decreased administrative burden, intuitive,
			Resp 18: "De IT ontsluiting van het proces zal anders worden. Maar van hoe we dat dan in het IT systeem vastleggen, dat zal een stuk flexibeler worden".	Faster, simplifying, usability and flexible are important requirements. Not all the systems and tools meet these requirements.
			Resp 27: "Dan kun je zeggen de rol van HR kun je betere dingen doen, want dan kun je sneller zien waar je moet interveniëren en kun je dus sneller actie ondernemen".	Better insights in the data and relationships.
			Resp 39: "Vroeger deed de HR adviseur dat, nu doet de manager dat en nu zie je zelf een beweging ontstaan dat mensen zichzelf kunnen ziekmelden".	More efficiency. At the moment the efficiency is in the basic processes. The intention is to extend this. Less people needed and increased returns.
			Resp 40: "Kijk uh digital betekent het einde van de oude HR BPO's. Dat is over. Het is niet meer nodig om een service provider in te huren om je basis administratie te doen. Het is niet meer nodig om je service provider in te huren die voor jou transsectionele processen gaat uitvoeren".	Decreased administrative burden, less mistakes,
			Resp 45: En ik heb niet meer 6 formulieren, 6 versies van de doelstellingen formulieren, maar ik het gewoon allemaal op dezelfde plek zitten".	More efficiency, more focus on the added value.
	Effectiveness outcomes	7	Resp 3: "We hebben onze basis data gestandaardiseerd, onze processen zijn gestandaardiseerd, we hebben governance, dus een HR operating model geïmplementeerd".	The basis is now done, but this had consequences for the usability of their internal customers. They experienced the disadvantages, but the advantages not yet.
			Resp 9: "Makkelijker verbanden leggen eigenlijk. Als je ergens een hoop verzuim constateert, kun je dan een relatie zien met een lage medewerkers betrokkenheid".	Link between different reports or information

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
			Resp 34: "Vanaf het moment van indienen van de declaratie tot uitkering tot het op je bankrekening staat, dat heeft een doorlooptijd van 4 of 5 dagen. En die is gewoon gegarandeerd in control. Dat vinden we nu al doodnormaal".	Wide standardization in the organization.
	HR service improvements for management as well as employees	25	Resp 3: "Meer selfservice door de platformen".	We have too go back to the trust aspect
			Resp 4: "Ik geloof heel erg in de verantwoordelijkheid bij de mensen leggen".	Own responsibility and employability of employees and managers.
			Resp 8: "We willen zorgen dat de gedachten achter onze service delivery model, maximaal ondersteund wordt".	Managers and employees do as much as possible things by themselves and HR helps as much as possible. With this people can make their own decisions and even implement their decisions. Responsibility of Managers and employees.
			Resp 9: "Dat is in dit geval dat het leven makkelijker wordt van leidinggevenden en medewerkers".	With e-HRM as ESS/MSS a lot of processes are simplified for the employees and the managers.
			Resp 10: "He dus in plaats van dat er allerlei losse afspraakjes zijn is dat gewoon zeg maar in één keer geclusterd. Dus als je het hebt over de doorlooptijd, is dat absoluut een efficiency, maar het is ook voor de leidinggevende gemakkelijk want die hoeft niet al die facetten van het bedrijf zelf te pakken".	Increased simplified process of the introduction program of new employees.
			Resp 23: "We willen het veel meer naar de medewerker brengen dat die daarmee, ik zei al er zitten doelstellingen van eigen verantwoordelijkheid, dus ook eigen verantwoordelijkheid voor je ontwikkeling".	Self-service for both the managers as the employees. Own responsibility,

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
			Resp 25: "Dus het gaat erom dat wij met zijn alle veel meer eigenaar worden van onze eigen data".	Increased self-service. The responsibility of the data is shifted to the employees and managers.
			Resp 29: "Gaan ze nu naar een systeem toe, ze hebben de bonnetjes vaak al gescand, fotootje gemaakt met de telefoon en ze tikken even in wat het is en de bonnetjes voegen ze erbij en ze sturen het toe. Ook daar durf ik te beweren dat workload is verminderd".	Simplified process, less workload for employees, decreased administrative burden for the business.
			Resp 30: "Dus waar het toe bijdraagt is vervolgens een betere service vanuit HR als wij het kostenaspect hebben geadresseerd".	Simplifying for employees and managers to give them a better service level.
			Resp 35: "Maar aan de andere kant vind hij het wel weer prettig dat hij zeg maar gewoon achter de pc allerlei dingen gewoon kan raadplegen in plaats van drie deuren verder naar zo'n HR adviseur te lopen die een dag later met het overzichtje komt".	Managers and employees have insights in the data of the organization. This reduces time to get answers. ESS/MSS.
			Resp 39: "De kliks zijn veel eenvoudiger en dat is met liefde ontvangen. Oh wat fijn, hoef ik niet meer met die papiertjes, hoef ik niet meer in Word gewoon. Dus dat is, nu is het eigenlijk bij wijze gewoon een leeg vel waarmee je alleen maar je aantekeningen in kan tikken en dat gaat heen en weer".	Simplified process.
			Resp 40: "Dus daar zit ook interactie in, want je hebt je mid review, final review, ja kan zelf kijken, je kan je feedback achterlaten voor elk van de gerealiseerde doelen. Het leuke is je kan je persoonlijke profiel erin zetten, zie je al de supermarktmanagers dat ook doen".	It increased the interaction between employees and managers, more collaborations, understanding of the organization becomes larger.
			Resp 45: "Dat stelt managers veel meer in staat om als integrale manager een team te sturen. En niet alleen maar op de dagelijkse dingen die moeten gebeuren maar ook op talent planning, op performance management".	Direct access to data of employees. Managers have more insights in their data. Managers fulfill more the role in integral manager. New way of working.

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
	HR Attitude	11	Resp 3: "Vanuit het onderzoek lijkt het zo te zijn het de engagement van werknemers kan verbeteren als ze om zich heen in de touch points die zij hebben met hun manager maar ook met de systemen en processen".	The usability is decreased
			Resp 5: "Maar dat is een hele andere invalshoek is dat we mensen er nog wel een beetje blij mee moeten maken. Dat mensen blij worden van je dienst".	The digital HR systems are not working well. It is not flexible and intuitive.
			Resp 8: "Het heeft de tevredenheid verhoogd".	Increased engagement and employees are enthusiastic.
			Resp 10: "Het is ook gewoon fijn om te merken dat wij binnen HR gewoon dik een 8 scoren binnen de organisatie over de klanttevredenheid van alle onderdelen binnen ons bedrijf".	Increased engagement.
			Resp 30: "Terwijl we met minder mensen, hebben we meer kwaliteit, zijn we beter gewaardeerd".	Increased engagement about the service.
	Change management/ strategic re-orientation	23	Resp 3: "Je krijgt simpelweg aan de ene kant de up scaling van je strategy van HR, dus veel meer het drijven van de people agenda".	People to need have a different mindset.
			Resp 5: "Aandacht voor change management is heel belangrijk"	At the moment there is not enough attention for change management
			Resp 9: "Ik denk wel dat de toegevoegde waarde toeneemt".	HR on a strategic level
			Resp 10: "Dat is helemaal opnieuw ingericht met voor een heel groot deel op nieuwe bemensing, om dus meer die rol van strategische gesprekspartner te kunnen pakken".	HR more strategic.
			Resp 11: "Ja, mensen voorbereiden op datgene wat er anders gaat en ze daarop wijzen wat de voordelen daarvan zijn".	Mental training for employees to change the mindset.
			Resp 12: "Maar je bent als HR totaal, als HR-kolom ben je nu wel in staat om die FTEs op een andere manier in te gaan zetten en om ander personeel te gaan zoeken. En om een andere dienstverlening te verzorgen".	HR more strategic.

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
			Resp 14: "Dus de primaire eerste insteek is van doordat goed te doen kun je veel dingen heel efficiënt doen, kun je standaards introduceren en dat soort zaken waardoor er tijd overblijft om eindelijk eens een keer echt die, die strategische plek in te vullen".	HR should earn a seat at the table.
			Resp 15: "Andere type mensen, op een ander niveau opgeleid, met andere competenties".	Competencies like interviews skills, consulting skills, looking forward and scenario planning are important.
			Resp 23: "En om ook het zeg maar in de beleving ook anders te krijgen en tegelijkertijd de technische mankementen eruit te halen".	Culture change. Expected change in behaviors of employees.
			Resp 27: "Dus je moet een andere mindset hebben. Dus ook bepaalde open minded om dingen anders te doen".	The changed mindset is not there yet. The willingness to change is not there yet.
			Resp 30: "Dat betekent dat mijn adviseurs een nog grotere stap moeten maken, want die moeten een meer strategische discussie kunnen voeren en met analytics".	HR advisors need to have a strategic re-orientation to be able to perform their function.
			Resp 33: "Maar je toegevoegde waarde als, als HR-business partner kan heel anders zijn omdat namelijk jouw partner, jouw business partner al de dataset heeft. Dus die hoef jij niet voor hem te onderhouden".	Other discussions with the business, take other business decisions. The HR role is changing to a more strategic role.
			Resp 35: "En wat toen der tijd ook onze beweging beoogd werd, was zeg maar de focus van HR ook wat meer te maken van zeg maar administratieve bezigheden naar value added. Dus veel meer de rol van wat tegenwoordig de business partner heet om die te gaan versterken".	The change to strategic business partner was difficult and went slowly.
			Resp 45: "We moeten ook her en der de visie waar we naartoe willen laten zien. Dus wij hebben de trainingssessies gebruikt door ook wat is de visie op het HR-model, wat is de visie op de rol van HR, de manager, de backoffice zeg maar en de medewerker zelf, wat kan de medewerker ook zelf in ESS".	Clear vision about the future. What does that mean for the role of HR, manager, employee? A change in the way of working.
	Globalization	5	Resp 5: "Het is belangrijk dat het aansluit op de strategisch doelstellingen".	Alignment of HR with the strategy of the organization.

Continuing: First level analysis of perceptions of HR professionals about e-HRM consequences

Analysis step	Goal	Frequency	Examples (quotes)	Results
	HR-scheduling	5	Resp 9: "Dat betekent dat we veel inspanningen doen om mensen met een arbeidsbeperking hier een duurzame plek te geven".	Increased employability. The employees are in their strengths in all places in the organization.
			Resp 23: "Daar zijn systemen die gevoed worden uit onze HR-systemen, waarbij zeg maar toekomstprofielen in kunt voeren waardoor je ook een personeelsprognose over tien jaar kunt maken en dan kijken wat betekent voor de inname voor nieuw personeel".	Strategic workforce prognosis
	Strategic competency management	9	Resp 3: "We gaan nieuwe competenties ontwikkelen die we nu nog niet hebben".	It is important to have people with competencies between HR and IT.
			Resp 20: "Dat is ook een van de middelen die jou gaat helpen om ook die taakstelling vorm te geven".	Improved strategic Workforce Planning
			Resp 29: "Je wil ze aankondigen, over 2 jaar heb jij geen baan meer, aar we kunnen je helpen om je te ontwikkelen naar een andere niveau, hetzij binnen organisatie X, hetzij erbuiten".	Sustainable employability. The employees have to need different competencies.

Appendix F – Second level analysis of perceptions of HR professionals

TABLE 9
Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
High quality of HRM and low costs	Resp 2: "En die is van hoge kwaliteit en lage kosten. En dat zal steeds verder geoptimaliseerd worden".	Bringing down the costs of the function. More than 20% of the FTE is reduced. This had bringing down the usability of the internal customers.
Cost reduction	Resp 5: "Omdat je natuurlijk heel veel kosten bespaard, omdat het online is".	Processes online, reduction of FTE
Cost reduction	Resp 8: "Dus ja je moet kosten sensitief zijn, maar wel vanuit wat willen wij bereiken met elkaar".	Cost reduction is important, but not to each maximum. Furthermore, standardization of the primary process. It is easier to maintain the system.
Cost reduction	Resp 10: "Maar het was ook vanuit het oog van efficiëntie, op een andere manier samenwerken binnen de collega's en er zat ook een kosten besparend plaatje aan, omdat je dan gewoon minder dure vierkante meters kantoorruimte nodig hebt".	FTE reduction
FTE reduction	Resp 16: "Ja voorheen koste dat anderhalve FTE en uiteindelijk koste alleen dat onderdeeltje, toen we het helemaal geautomatiseerd hadden, 1 FTE. Die hebben we niet meer nodig".	FTE reduction
Cost reduction	Resp 21: "Eigenlijk is het hoofdzakelijk toch kosten reductie".	Simplified, FTE reduction, cost reduction of 50 million in the next 4 years
Cost reduction	Resp 23: "En dat moet ook gewoon duidelijk zijn, die kostengedrevenheid dat is de oorsprong geweest, de allereerste oorsprong".	Cost reduction of 250 million on an annual basis, FTE reduction in the whole organization. From 3300 FTE to 1800 FTE.
Cost reduction	Resp 29: "Wat je ziet, wij zijn op 1 januari 2013 overgegaan op het nieuwe systeem. En vanaf dat moment hebben wij ongeveer 900.000 euro op jaar basis bespaard aan kosten".	Cost reduction of administrative costs, FTE reduction. First, there were 7 employees working by the service center, at the moment there are working 3 employees by the service center.

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Cost reduction	Resp 39: "Kostenbesparing zit vaak ook in de contracten met leveranciers of FTEs die je niet meer nodig hebt".	Reduction of productivity
Making time for innovation and growth	Resp 3: “We gaan nu echt naar die eindgebruiker toe en we gaan gewoon meten hoeveel tijd ben je kwijt nu en wij zetten gewoon targets voor time reduction. Want wij gaan jou tijd terug geven voor innovatie, voor groei om op tijd met het gezin thuis belangrijke dingen te kunnen doen”.	Giving time back due to simplifying.
Making time free for the HR consultant	Resp 11: “Dus dat zijn eigenlijk, die tijd wordt vrijgemaakt en doordat wij aan de achterkant zeg maar het werk van de HR-consulant weghalen”.	
Cost reduction – Time reduction	Resp 16: “Dat is nu allemaal gedigitaliseerd, Dus we hebben nu een Workflow proces, we hebben nu een beeld van wie welke handtekeningen digitaal mag zetten en wij kijken naar centraal of de wet op de loonbelasting, want daar komt het eigenlijk op neer, correct wordt toegepast. Zo ja, hopla klaar en uitbetalen. Dat heeft in een enorme tijdwinst opgeleverd”.	Between the 10% - 15% times reduction. 1 till 1,5 FTE is not filled by natural turnover. The expectation is that this the next 2 years will continue.
Cost reduction – Time reduction	Resp 18: “En daar kan ook een HR, een geautomatiseerde HR processen kunnen daar een belangrijke bijdragen aan leveren, want elke seconde of minuut dat een medewerker of een teamleider bezig is met iets inregelen in een HR systeem, alles wat we daarin kunnen besparen kan die gebruiken voor andere belangrijke dingen”.	
More time for organization-wide activities	Resp 20: “Nel hoeft zich nu ook niet meer met allerlei futiliteiten bezig te houden, dus heeft meer tijd voor organisatie-breed dingen”.	

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Time reduction at the head office	Resp 40: “Uh staf op een hoofdkantoor is een ander verhaal. Alle uren die we hier besparen in de support naar de winkels, kunnen we wel degelijk verzilveren en doen we ook”.	Business case is quantifiable on the headquarters.
The change to strategic business partner	Resp 3: “Dat slaat het pad al in van strategische business partner. Alleen maar bezig houden met die value added kwaliteit en activiteiten”.	Increase of the productivity
Succession planning	Resp 20: "Dus het geeft al een kwaliteitsslag gewoon naar de toekomst te kijken met zo'n vraag heb ik wel voldoende mensen en voldoende gekwalificeerde mensen in huis, maakt dat je je organisatie kwalitatief beter maakt als je het ook uitvoert he".	
Decreased administrative burden	Resp 2: "Tijd die je kan besteden aan innovatie aan je klanten, business etc. waar je voorheen misschien administratieve taken aan het doen was".	The administrative burden decreased.
To work more efficiently	Resp 4: "Een efficiëntie slag heeft plaatsgevonden. The next step die ik wil is dat het nog efficiënter werkt, dus nog sneller".	Reduction of FTE, reducing actions
Standardization of processes	Resp 5: "Dat je standaardisatie krijgt in een global organisatie, dat je standaardisatie van een aantal processen hebt waardoor je ook veel efficiënter kan werken".	1 system instead of different kind of systems
Efficiency of value added processes	Resp 7: "Ja dat kennis wordt ondersteund, ondersteunende informatievoorziening. Je added value processen die effectiever laten verlopen".	Improvement of Digital HR, simplified, cheaper.
Less fragmentation	Resp 8: "Maar daar moesten mensen eerst 36 velden invullen in 6 verschillende systemen. En nu als iemand uit dienst gaat, vul je nog maar 3 velden in en dan wordt het verder allemaal geregeld".	Increased efficiency, simplified steps.

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Less people needed to check	Resp 9: "Daarmee wordt het bedrijf ook efficiënter en dan heb je ook gewoon minder mensen nodig om alles te checken en te dubbel checken".	
Faster turnaround	Resp 10: "Dus als je het hebt over de doorlooptijd, is dat absolute efficiëntie, maar het is ook voor leidinggevenden gemakkelijker, want die hoeft niet al die facetten van het bedrijf zelf te pakken".	Decreased administrative burden, less mistakes, less documents, minimize the time.
Decreased administrative burden	Resp 12: "Veel sneller dat de doorlooptijd veel sneller gaat. Dat we niet omslachtig zaken op papier afhandelen en dat we dus geen fouten maken en dat we veel minder administratieve rompslomp hebben".	Decreased administrative burden, less mistakes, faster, better traceable.
Better HRM Service quality	Resp 14: "Echt zorgen dat je daardoor dan betere antwoorden krijgt, sneller je antwoord krijgt, betere vraag en oplossing dat werkelijk helpt, dat je dan wel, ja".	Decreased administrative burden, intuitive,
Increased flexibility in the work	Resp 18: "De IT ontsluiting van het proces zal anders worden. Maar van hoe we dat dan in het IT systeem vastleggen, dat zal een stuk flexibeler worden".	Faster, simplifying, usability and flexible are important requirements. Not all the systems and tools meet these requirements.
Better insights in the data and relationships	Resp 27: "Dan kun je zeggen de rol van HR kun je betere dingen doen, want dan kun je sneller zien waar je moet interveniëren en kun je dus sneller actie ondernemen".	The more information the faster we can intervene
Responsibility employees	Resp 39: "Vroeger deed de HR adviseur dat, nu doet de manager dat en nu zie je zelf een beweging ontstaan dat mensen zichzelf kunnen ziekmelden".	More efficiency. At the moment the efficiency is in the basic processes. The intention is to extend this. Less people needed and increased returns.
People do it themselves	Resp 40: "Kijk uh digital betekent het einde van de oude HR BPO's. Dat is over. Het is niet meer nodig om een service provider in te huren om je basis administratie te doen. Het is niet meer nodig om je service provider in te huren die voor jou transsectionele processen gaat uitvoeren".	Decreased administrative burden, less mistakes,

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Simplified process	Resp 45: En ik heb niet meer 6 formulieren, 6 versies van de doelstellingen formulieren, maar ik het gewoon allemaal op dezelfde plek zitten".	More efficiency, more focus on the added value.
Standardization	Resp 3: "We hebben onze basis data gestandaardiseerd, onze processen zijn gestandaardiseerd, we hebben governance, dus een HR operating model geïmplementeerd".	The basis is now done, but this had consequences for the usability of their internal customers. They experienced the disadvantages, but the advantages not yet.
Data management	Resp 9: "Makkelijker verbanden leggen eigenlijk. Als je ergens een hoop verzuim constateert, kun je dan een relatie zien met een lage medewerkers betrokkenheid".	Link between different reports or information
Faster turnaround	Resp 34: "Vanaf het moment van indienen van de declaratie tot uitkering tot het op je bankrekening staat, dat heeft een doorlooptijd van 4 of 5 dagen. En die is gewoon gegarandeerd in control. Dat vinden we nu al doodnormaal".	Wide standardization in the organization.
More self-service of employees and managers	Resp 3: "Meer selfservice door de platformen".	We have too go back to the trust aspect
Increased responsibility of employees	Resp 4: "Ik geloof heel erg in de verantwoordelijkheid bij de mensen leggen".	Own responsibility and employability of employees and managers.
Increased responsibility of employees	Resp 8: "En daar zit echt in, managers en medewerkers doen dingen zelf en wij helpen vanuit HR zoveel mogelijk zodat mensen zelf hun beslissing laten nemen en zelf uitvoering te geven aan hun besluiten".	Managers and employees do as much as possible things by themselves and HR helps as much as possible. With this people can make their own decisions and even implement their decisions. Responsibility of Managers and employees.
Simplified HRM processes	Resp 9: "Dat is in dit geval dat het leven makkelijker wordt van leidinggevenden en medewerkers".	With e-HRM as ESS/MSS a lot of processes are simplified for the employees and the managers.
Simplified HRM processes	Resp 10: "He dus in plaats van dat er allerlei losse afspraakjes zijn is dat gewoon zeg maar in één keer geclusterd. Dus als je het hebt over de doorlooptijd, is dat absoluut een efficiency, maar het is ook voor de leidinggevende gemakkelijk want die hoeft niet al die facetten van het bedrijf zelf te pakken".	Increased simplified process of the introduction program of new employees.

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Increased responsibility of employees	Resp 23: "We willen het veel meer naar de medewerker brengen dat die daarmee, ik zei al er zitten doelstellingen van eigen verantwoordelijkheid, dus ook eigen verantwoordelijkheid voor je ontwikkeling".	Self-service for both the managers as the employees. Own responsibility,
Data ownership	Resp 25: "Dus het gaat erom dat wij met zijn alle veel meer eigenaar worden van onze eigen data".	Increased self-service. The responsibility of the data is deposited by the employees and managers.
Simplified HRM processes	Resp 29: "Gaan ze nu naar een systeem toe, ze hebben de bonnetjes vaak al gescand, fotootje gemaakt met de telefoon en ze tikken even in wat het is en de bonnetjes voegen ze erbij en ze sturen het toe. Ook daar durf ik te beweren dat workload is verminderd".	Simplified process, less workload for employees, decreased administrative burden for the business.
Service quality	Resp 30: "Dus waar het toe bijdraagt is vervolgens een betere service vanuit HR als wij het kostenaspect hebben geadresseerd".	Simplifying for employees and managers to give them a better service level.
Data ownership (employees en managers have more insight in the data)	Resp 35: "Maar aan de andere kant vind hij het wel weer prettig dat hij zeg maar gewoon achter de pc allerlei dingen gewoon kan raadplegen in plaats van drie deuren verder naar zo'n HR adviseur te lopen die een dag later met het overzichtje komt".	Managers and employees have insights in the data of the organization. This reduces time to get answers. ESS/MSS.
Simplified processes	Resp 39: "De kliks zijn veel eenvoudiger en dat is met liefde ontvangen. Oh wat fijn, hoef ik niet meer met die papiertjes, hoef ik niet meer in Word gewoon. Dus dat is, nu is het eigenlijk bij wijze gewoon een leeg vel waarmee je alleen maar je aantekeningen in kan tikken en dat gaat heen en weer".	

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Increased interaction between employees and managers	Resp 40: "Dus daar zit ook interactie in, want je hebt je mid-review, final review, je kan zelf kijken, je kan je feedback achterlaten voor elk van de gerealiseerde doelen. Het leuke is je kan je persoonlijke profiel erin zetten, zie je al de supermarktmanagers dat ook doen".	It increased the interaction between employees and managers, more collaborations, understanding of the organization becomes larger.
More integrative management	Resp 45: "Dat stelt managers veel meer in staat om als integrale manager een team te sturen. En niet alleen maar op de dagelijkse dingen die moeten gebeuren maar ook op talent planning, op performance management".	Direct access to data of employees. Managers have more insights in their data. Managers fulfill more the role in integral manager. New way of working.
Engagement employees	Resp 3: "Vanuit het onderzoek lijkt het zo te zijn het de engagement van werknemers kan verbeteren als ze om zich heen in de touch points die zij hebben met hun manager maar ook met de systemen en processen".	The usability is decreased
Satisfaction about the service	Resp 5: "Maar dat is een hele andere invalshoek is dat we mensen er nog wel een beetje blij mee moeten maken. Dat mensen blij worden van je dienst".	The digital HR systems are not working well. It is not flexible and intuitive.
Satisfaction about the service	Resp 8: "Het heeft de tevredenheid verhoogd".	Increased engagement and employees are enthusiastic.
Satisfaction about the service	Resp 10: "Het is ook gewoon fijn om te merken dat wij binnen HR gewoon dik een 8 scoren binnen de organisatie over de klanttevredenheid van alle onderdelen binnen ons bedrijf".	Increased engagement.
HRM Service quality	Resp 30: "Terwijl we met minder mensen, hebben we meer kwaliteit, zijn we beter gewaardeerd".	Increased engagement about the service.
Change of role HR	Resp 3: "Je krijgt simpelweg aan de ene kant de up scaling van je strategy van HR, dus veel meer het drijven van de people agenda".	People to need have a different mindset.
Change management	Resp 5: "Aandacht voor change management is heel belangrijk"	At the moment there is not enough attention for change management

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Change of role HR	Resp 9: "Ik denk wel dat de toegevoegde waarde toeneemt. Dat is de toegevoegde waarde dat je gewoon echt beter op basis van facts en figures, je advies kunt geven".	HR on a strategic level
Change to strategic Business partner	Resp 10: "Dat is helemaal opnieuw ingericht met voor een heel groot deel op nieuwe bemensing, om dus meer die rol van strategische gesprekspartner te kunnen pakken".	HR more strategic.
Change mindset	Resp 11: "Ja, mensen voorbereiden op datgene wat er anders gaat en ze daarop wijzen wat de voordelen daarvan zijn".	Mental training for employees to change the mindset.
Change of role HR	Resp 12: "Maar je bent als HR totaal, als HR-kolom ben je nu wel in staat om die FTEs op een andere manier in te gaan zetten en om ander personeel te gaan zoeken. En om een andere dienstverlening te verzorgen".	HR more strategic.
Change to strategic Business partner	Resp 14: "Dus de primaire eerste insteek is van doordat goed te doen kun je veel dingen heel efficiënt doen, kun je standaards introduceren en dat soort zaken waardoor er tijd overblijft om eindelijk eens een keer echt die, die strategische plek in te vullen".	HR should earn a seat at the table.
People need different competencies	Resp 15: "Andere type mensen, op een ander niveau opgeleid, met andere competenties".	Competencies like interviews skills, consulting skills, looking forward and scenario planning are important.
Responsibility employees	Resp 23: "En dat betekent dat je nu zelf verantwoordelijkheid moet gaan nemen. En zelf ook voor dingen moet gaan zorgen, dat is ingewikkeld hè en dat gaat gewoon een aantal jaren duren".	Culture change. Expected change in behaviors of employees.
Change mindset	Resp 27: "Dus je moet een andere mindset hebben. Dus ook bepaalde open minded om dingen anders te doen".	The changed mindset is not there yet. The willingness to change is not there yet.

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
Change role of advisors to deal with analytics	Resp 30: "Dat betekent dat mijn adviseurs een nog grotere stap moeten maken, want die moeten een meer strategische discussie kunnen voeren en met analytics".	HR advisors need to have a strategic re-orientation to be able to perform their function.
More data available for the business	Resp 33: "Maar je toegevoegde waarde als, als HR-business partner kan heel anders zijn omdat namelijk jouw partner, jouw business partner al de dataset heeft. Dus die hoef jij niet voor hem te onderhouden".	Other discussions with the business, take other business decisions. The HR role is changing to a more strategic role.
Change to strategic Business partner	Resp 35: "En wat toen der tijd ook onze beweging beoogd werd, was zeg maar de focus van HR ook wat meer te maken van zeg maar administratieve bezigheden naar value added. Dus veel meer de rol van wat tegenwoordig de business partner heet om die te gaan versterken".	The change to strategic business partner was difficult and went slowly.
Clear vision for the future	Resp 45: "We moeten ook her en der de visie waar we naartoe willen laten zien. Dus wij hebben de trainingssessies gebruikt door ook wat is de visie op het HR-model, wat is de visie op de rol van HR, de manager, de backoffice zeg maar en de medewerker zelf, wat kan de medewerker ook zelf in ESS".	Clear vision about the future. What does that mean for the role of HR, manager, employee? A change in the way of working.
E-HRM should connect to the strategic goals of the organization	Resp 5: "Het is belangrijk dat het aansluit op de strategisch doelstellingen".	Alignment of HR with the strategy of the organization.
Sustainable employability	Resp 9: "Dat betekent dat we veel inspanningen doen om mensen met een arbeidsbeperking hier een duurzame plek te geven".	Increased employability. The employees are in their strengths in all places in the organization.
HR People need different competencies	Resp 23: "Daar zijn systemen die gevoed worden uit onze HR-systemen, waarbij zeg maar toekomstprofielen in kunt voeren waardoor je ook een personeelsprognose over tien jaar kunt maken en dan kijken wat betekent voor de inname voor nieuw personeel".	Strategic workforce prognosis

Continuing: Second level analysis of perceptions of HR professionals about e-HRM consequences

Consequences	Examples (quotes)	Results
HR People need different competencies	Resp 3: "We gaan nieuwe competenties ontwikkelen die we nu nog niet hebben".	It is important to have people with competencies between HR and IT.
Improved strategic Workforce Planning	Resp 20: "Dat is ook een van de middelen die jou gaat helpen om ook die taakstelling vorm te geven".	
HR People need different competencies	Resp 29: "Je wil ze aankondigen, over 2 jaar heb jij geen baan meer, maar we kunnen je helpen om je te ontwikkelen naar een andere niveau, hetzij binnen organisatie X, hetzij erbuiten".	Sustainable employability. The employees have to need different competencies.
Negativity about the HRM system	Resp 5: “Maar wat ik merk is dat er heel veel negatviteit over HR is, doordat de systemen en de digital HR als je het zo wilt noemen, niet goed is. En niet goed wilt zeggen dat het complex is. Dat het te veel tijd kost en dat het niet flexibel is. En dat het niet intuïtief is en dat mensen meer het gevoel hebben van ik moet dus doen omdat het systeem dat vraagt versus hoe support dat systeem nu mij daadwerkelijk met wat ik als manager geacht wordt te doen”.	The system is not flexible, not intuitive. This is due to the fact that the system is very complex and not working well. The people do not understand the contribution of the system.

Appendix G – Third level analysis of perceptions of HR professionals

TABLE 10
Third level of analysis of perceptions of HR professionals about e-HRM consequences

	Consequences	Examples-quotes
	Cost reduction / FTE reduction	
1	High quality of HRM and low costs	Respondent 2: "En die is van hoge kwaliteit en lage kosten. En dat zal steeds verder geoptimaliseerd worden".
2	Saving costs	Respondent 5: "Omdat je natuurlijk heel veel kosten bespaard, omdat het online is". Respondent 8: "Dus ja je moet kosten sensitief zijn, maar wel vanuit wat willen wij bereiken met elkaar". Respondent 21: "Eigenlijk is het hoofdzakelijk toch kosten reductie". Respondent 23: "En dat moet ook gewoon duidelijk zijn, die kostengedrevenheid dat is de oorsprong geweest, de allereerste oorsprong". Respondent 29: "Wat je ziet, wij zijn op 1 januari 2013 overgegaan op het nieuwe systeem. En vanaf dat moment hebben wij ongeveer 900.000 euro op jaar basis bespaard aan kosten".
4	Less offices space	Respondent 10: "Maar het was ook vanuit het oog van efficiëntie, op een andere manier samenwerken binnen de collega's en er zat ook een kosten besparend plaatje aan, omdat je dan gewoon minder dure vierkante meters kantoorruimte nodig hebt".
5	FTE reduction	Respondent 16: "Ja voorheen koste dat anderhalve FTE en uiteindelijk koste alleen dat onderdeeltje, toen we het helemaal geautomatiseerd hadden, 1 FTE. Die hebben we niet meer nodig".
6	Cost overviews becomes easier	Respondent 39: "Kostenbesparing zit vaak ook in de contracten met leveranciers of FTEs die je niet meer nodig hebt".
7	Time reduction in HRM processes	Respondent 16: "Dat is nu allemaal gedigitaliseerd, Dus we hebben nu een Workflow proces, we hebben nu een beeld van wie welke handtekeningen digitaal mag zetten en wij kijken naar centraal of de wet op de loonbelasting, want daar komt het eigenlijk op neer, correct wordt toegepast. Zo ja, hopla klaar en uitbetalen. Dat heeft in een enorme tijdwinst opgeleverd". Respondent 18: "En daar kan ook een HR, een geautomatiseerde HR processen kunnen daar een belangrijke bijdragen aan leveren, want elke seconde of minuut dat een medewerker of een teamleider bezig is met iets inregelen in een HR systeem, alles wat we daarin kunnen besparen kan die gebruiken voor andere belangrijke dingen".
8	Time reduction at the head office	Respondent 40: "Uh staf op een hoofdkantoor is een ander verhaal. Alle uren die we hier besparen in de support naar de winkels, kunnen we wel degelijk verzilveren en doen we ook".

Continuing: Third level of analysis of perceptions of HR professionals about e-HRM consequences

	Consequences	Examples-quotes
	Efficiency	
9	Decreased administrative burden	Respondent 2: "Tijd die je kan besteden aan innovatie aan je klanten, business etc. waar je voorheen misschien administratieve taken aan het doen was". Respondent 12: "Veel sneller dat de doorlooptijd veel sneller gaat. Dat we niet omslachtig zaken op papier afhandelen en dat we dus geen fouten maken en dat we veel minder administratieve rompslomp hebben".
10	Standardization of HRM processes	Respondent 3: "We hebben onze basis data gestandaardiseerd, onze processen zijn gestandaardiseerd, we hebben governance, dus een HR operating model geïmplementeerd". Respondent 5: "Dat je standaardisatie krijgt in een global organisatie, dat je standaardisatie van een aantal processen hebt waardoor je ook veel efficiënter kan werken".
11	To work more efficiently at the HR-service desk	Respondent 4: "Een efficiëntie slag heeft plaatsgevonden. The next step die ik wil is dat het nog efficiënter werkt, dus nog sneller".
12	Efficiency of value added processes	Respondent 7: "Ja dat kennis wordt ondersteund, ondersteunende informatievoorziening. Je added value processen die effectiever laten verlopen".
13	Less fragmentation in HRM processes	Respondent 8: "Maar daar moesten mensen eerst 36 velden invullen in 6 verschillende systemen. En nu als iemand uit dienst gaat, vul je nog maar 3 velden in en dan wordt het verder allemaal geregeld".
14	Simplified HRM processes	Respondent 39: "De kliks zijn veel eenvoudiger en dat is met liefde ontvangen. Oh wat fijn, hoef ik niet meer met die papiertjes, hoef ik niet meer in Word gewoon. Dus dat is, nu is het eigenlijk bij wijze gewoon een leeg vel waarmee je alleen maar je aantekeningen in kan tikken en dat gaat heen en weer". Respondent 45: En ik heb niet meer 6 formulieren, 6 versies van de doelstellingen formulieren, maar ik het gewoon allemaal op dezelfde plek zitten". Respondent 9: "Dat is in dit geval dat het leven makkelijker wordt van leidinggevenden en medewerkers". Respondent 10: "He dus in plaats van dat er allerlei losse afspraakjes zijn is dat gewoon zeg maar in één keer geclusterd. Dus als je het hebt over de doorlooptijd, is dat absoluut een efficiency, maar het is ook voor de leidinggevende gemakkelijk want die hoeft niet al die facetten van het bedrijf zelf te pakken". Respondent 29: "Gaan ze nu naar een systeem toe, ze hebben de bonnetjes vaak al gescand, fotootje gemaakt met de telefoon en ze tikken even in wat het is en de bonnetjes voegen ze erbij en ze sturen het toe. Ook daar durf ik te beweren dat workload is verminderd". Respondent 9: "Het declareren van kosten via een APP gewoon heel simpel, dat het weinig tijd kost en op basis van vertrouwen dat je die dingen gewoon accepteert. Daarmee wordt het bedrijf ook efficiënter en dan heb je ook gewoon minder mensen nodig om alles te checken en te dubbel checken".
15	Increased flexibility of HRM processes	Respondent 18: "De IT ontsluiting van het proces zal anders worden. Maar van hoe we dat dan in het IT systeem vastleggen, dat zal een stuk flexibeler worden".

Continuing: Third level of analysis of perceptions of HR professionals about e-HRM consequences

	Consequences	Examples-quotes
16	Faster lead-time	Respondent 34: "Vanaf het moment van indienen van de declaratie tot uitkering tot het op je bankrekening staat, dat heeft een doorlooptijd van 4 of 5 dagen. En die is gewoon gegarandeerd in control. Dat vinden we nu al doodnormaal".
17	Faster in- through- and outflow of employees	Respondent 10: "Dus als je het hebt over de doorlooptijd, is dat absolute efficiëntie, maar het is ook voor leidinggevenden gemakkelijker, want die hoeft niet al die facetten van het bedrijf zelf te pakken".
	Service quality	
18	Better HRM Service quality	Respondent 14: "Echt zorgen dat je daardoor dan betere antwoorden krijgt, sneller je antwoord krijgt, betere vraag en oplossing dat werkelijk helpt, dat je dan wel, ja". Respondent 30: "Dus waar het toe bijdraagt is vervolgens een betere service vanuit HR als wij het kostenaspect hebben geadresseerd". Respondent 30: "Terwijl we met minder mensen, hebben we meer kwaliteit, zijn we beter gewaardeerd".
19	Increased engagement of employees	Respondent 3: "Vanuit het onderzoek lijkt het zo te zijn het de engagement van werknemers kan verbeteren als ze om zich heen in de touch points die zij hebben met hun manager maar ook met de systemen en processen".
20	Satisfaction about the HRM service	Respondent 5: "Maar dat is een hele andere invalshoek is dat we mensen er nog wel een beetje blij mee moeten maken. Dat mensen blij worden van je dienst". Respondent 8: "Het heeft de tevredenheid verhoogd". Respondent 10: "Het is ook gewoon fijn om te merken dat wij binnen HR gewoon dik een 8 scoren binnen de organisatie over de klanttevredenheid van alle onderdelen binnen ons bedrijf".
21	Negativity about the HRM system	Respondent 5: “Maar wat ik merk is dat er heel veel negatviteit over HR is, doordat de systemen en de digital HR als je het zo wilt noemen, niet goed is. En niet goed wilt zeggen dat het complex is. Dat het te veel tijd kost en dat het niet flexibel is. En dat het niet intuïtief is en dat mensen meer het gevoel hebben van ik moet dus doen omdat het systeem dat vraagt versus hoe support dat systeem nu mij daadwerkelijk met wat ik als manager geacht wordt te doen”.
	Responsibility employees and managers	
22	Increased responsibility of the manager and employees in HRM processes	Respondent 39: "Vroeger deed de HR adviseur dat, nu doet de manager dat en nu zie je zelf een beweging ontstaan dat mensen zichzelf kunnen ziekmelden". Respondent 4: "Ik geloof heel erg in de verantwoordelijkheid bij de mensen leggen". Respondent 8: "En daar zit echt in, managers en medewerkers doen dingen zelf en wij helpen vanuit HR zoveel mogelijk zodat mensen zelf hun beslissing laten nemen en zelf uitvoering te geven aan hun besluiten".

Continuing: Third level of analysis of perceptions of HR professionals about e-HRM consequences

	Consequences	Examples-quotes
		Respondent 23: "En dat betekent dat je nu zelf verantwoordelijkheid moet gaan nemen. En zelf ook voor dingen moet gaan zorgen, dat is ingewikkeld hè en dat gaat gewoon een aantal jaren duren".
23	People perform HRM processes on their own	Respondent 40: "Kijk uh digital betekent het einde van de oude HR BPO's. Dat is over. Het is niet meer nodig om een service provider in te huren om je basis administratie te doen. Het is niet meer nodig om je service provider in te huren die voor jou transsectionele processen gaat uitvoeren".
24	Shifting more HRM processes to the end users	Respondent 3: "Meer selfservice door de platformen".
25	Increased responsibility of own development	Respondent 23: "We willen het veel meer naar de medewerker brengen dat die daarmee, ik zei al er zitten doelstellingen van eigen verantwoordelijkheid, dus ook eigen verantwoordelijkheid voor je ontwikkeling".
	Improved data	
26	Making connections becomes easier	Respondent 9: "Makkelijker verbanden leggen eigenlijk. Als je ergens een hoop verzuim constateert, kun je dan een relatie zien met een lage medewerkers betrokkenheid".
27	Data ownership (Employees en managers have more insight in the data)	Respondent 25: "Dus het gaat erom dat wij met zijn alle veel meer eigenaar worden van onze eigen data". Respondent 35: "Maar aan de andere kant vind hij het wel weer prettig dat hij zeg maar gewoon achter de pc allerlei dingen gewoon kan raadplegen in plaats van drie deuren verder naar zo'n HR adviseur te lopen die een dag later met het overzichtje komt".
28	Better insights in the data and relationships	Respondent 27: "Dan kun je zeggen de rol van HR kun je betere dingen doen, want dan kun je sneller zien waar je moet interveniëren en kun je dus sneller actie ondernemen".
29	More data available for the business	Respondent 33: "Maar je toegevoegde waarde als, als HR-business partner kan heel anders zijn omdat namelijk jouw partner, jouw business partner al de dataset heeft. Dus die hoef jij niet voor hem te onderhouden".
	Changing role HR	
30	Pursuing the people agenda	Respondent 3: "Je krijgt simpelweg aan de ene kant de up scaling van je strategy van HR, dus veel meer het drijven van de people agenda".
31	Added value of HR increases	Respondent 9: "Ik denk wel dat de toegevoegde waarde toeneemt. Dat is de toegevoegde waarde dat je gewoon echt beter op basis van facts en figures, je advies kunt geven".
32	Change to strategic business partner	Respondent 10: "Dat is helemaal opnieuw ingericht met voor een heel groot deel op nieuwe bemensing, om dus meer die rol van strategische gesprekspartner te kunnen pakken". Respondent 14: "Dus de primaire eerste insteek is van doordat goed te doen kun je veel dingen heel efficiënt doen, kun je standaards introduceren en dat soort zaken waardoor er tijd overblijft om eindelijk eens een keer echt die, die strategische plek in te vullen".

Continuing: Third level of analysis of perceptions of HR professionals about e-HRM consequences

	Consequences	Examples-quotes
		Respondent 35: "En wat toen der tijd ook onze beweging beoogd werd, was zeg maar de focus van HR ook wat meer te maken van zeg maar administratieve bezigheden naar value added. Dus veel meer de rol van wat tegenwoordig de business partner heet om die te gaan versterken". Respondent 3: "Dat slaat het pad al in van strategische business partner. Alleen maar bezig houden met die value added kwaliteit en activiteiten".
33	Providing other HRM services	Respondent 12: "Maar je bent als HR totaal, als HR-kolom ben je nu wel in staat om die FTEs op een andere manier in te gaan zetten en om ander personeel te gaan zoeken. En om een andere dienstverlening te verzorgen".
34	Requirements for HR advisors to work with HR analytics	Respondent 30: "Dat betekent dat mijn adviseurs een nog grotere stap moeten maken, want die moeten een meer strategische discussie kunnen voeren en met analytics".
35	More time for organization-wide activities	Respondent 20: "Nel hoeft zich nu ook niet meer met allerlei futiliteiten bezig te houden, dus heeft meer tijd voor organisatie-breed dingen".
36	Making time free for the HR consultant	Respondent 11: "Dus dat zijn eigenlijk, die tijd wordt vrijgemaakt en doordat wij aan de achterkant zeg maar het werk van de HR-consulant weghalen".
	Change management	
37	More specific attention to change management	Respondent 5: "Aandacht voor change management is heel belangrijk"
38	Change mindset	Respondent 11: "Ja, mensen voorbereiden op datgene wat er anders gaat en ze daarop wijzen wat de voordelen daarvan zijn". Respondent 27: "Dus je moet een andere mindset hebben. Dus ook bepaalde open minded om dingen anders te doen".
	New different competences	
39	High-graded new competences of employees	Respondent 3: "We gaan nieuwe competenties ontwikkelen die we nu nog niet hebben. Van mensen die in staat zijn om uh ja tussen business en technologie in te zitten. Het is een soort nieuwe breath van mensen. Het is geen HR, het is geen IT, maar het zit ergens in het midden". Respondent 15: "Andere type mensen, op een ander niveau opgeleid, met andere competenties". Respondent 23: "Daar zijn systemen die gevoed worden uit onze HR-systemen, waarbij zeg maar toekomstprofielen in kunt voeren waardoor je ook een personeelsprognose over tien jaar kunt maken en dan kijken wat betekent voor de inname voor nieuw personeel". Respondent 29: "Je wil ze aankondigen, over 2 jaar heb jij geen baan meer, maar we kunnen je helpen om je te ontwikkelen naar een andere niveau, hetzij binnen organisatie X, hetzij erbuiten".

Continuing: Third level of analysis of perceptions of HR professionals about e-HRM consequences

	Consequences	Examples-quotes
	Look to the future	
40	More informed succession planning	Respondent 20: "Dus het geeft al een kwaliteitsslag gewoon naar de toekomst te kijken met zo'n vraag heb ik wel voldoende mensen en voldoende gekwalificeerde mensen in huis, maakt dat je je organisatie kwalitatief beter maakt als je het ook uitvoert he".
41	Clear vision for the future	Respondent 45: "We moeten ook her en der de visie waar we naartoe willen laten zien. Dus wij hebben de trainingssessies gebruikt door ook wat is de visie op het HR-model, wat is de visie op de rol van HR, de manager, de backoffice zeg maar en de medewerker zelf, wat kan de medewerker ook zelf in ESS".
	Connection with the strategy of the organization	
42	E-HRM should connect to the strategic goals of the organization	Respondent 5: "Het is belangrijk dat het aansluit op de strategisch doelstellingen".
	Inclusiveness of practices	
43	Inclusivity practices (for people with work limitations)	Respondent 9: "Dat betekent dat we veel inspanningen doen om mensen met een arbeidsbeperking hier een duurzame plek te geven".
	Workforce planning	
44	Improved strategic Workforce Planning	Respondent 20: "Dat is ook een van de middelen die jou gaat helpen om ook die taakstelling vorm te geven. Niet omdat we jou willen pesten met weer een nieuw systeem maar om jou te helpen, te faciliteren, vanuit HRM ook met een systeem wat jou kan helpen".
	Interaction between managers and employees	
45	Increased interaction between employees and managers	Respondent 40: "Dus daar zit ook interactie in, want je hebt je mid-review, final review, je kan zelf kijken, je kan je feedback achterlaten voor elk van de gerealiseerde doelen. Het leuke is je kan je persoonlijke profiel erin zetten, zie je al de X managers dat ook doen".
	Integrative management	
46	More integrative management of the team	Respondent 45: "Dat stelt managers veel meer in staat om als integrale manager een team te sturen. En niet alleen maar op de dagelijkse dingen die moeten gebeuren maar ook op talent planning, op performance management".
	Making time free	
47	Making time for innovation and growth	Respondent 3: "We gaan nu echt naar die eindgebruiker toe en we gaan gewoon meten hoeveel tijd ben je kwijt nu en wij zetten gewoon targets voor time reduction. Want wij gaan jou tijd terug geven voor innovatie, voor groei om op tijd met het gezin thuis belangrijke dingen te kunnen doen".

Appendix H – First level analysis of perceptions of IT professionals

TABLE 11
First level of analysis of perceptions of IT professionals about e-HRM consequences

Consequences	Examples-Quotes	Results
Efficiency / more enjoyable for employees	Resp 6: "Textkernel is de tool die de Cv's kan gaan scannen, ook automatisch weer. Soort matching functionaliteit heeft het, er staat een vacature, Cv's komen binnen en je kunt de eerste grove schifting al doen. Kijk wat ze krijgen 500 tot 600 Cv's per maand, ja en dan kun je dat, dat scheelt het weer geld maar het is ook efficiency".	This tool makes it more simplified and enjoyable for the employees. Furthermore it becomes formal.
Efficiency - Arrange things quickly	Resp 13: "Het bestellen van PCs dat kostte vroeger gewoon twee maanden en nu is het altijd binnen een week geregeld maar het kan maar zo zijn dat je binnen twee dagen je pc hebt".	Simplified process, that makes it easer and faster.
Efficiency - Work is more simplified	Resp 17: "Dus in die 20 jaar heeft X zich zo opgebouwd en inmiddels ook voor gezorgd dat de business, dat het werk ook veel gemakkelijker te doen is. Dat je de business ook geld kan besparen en minder mensen nodig hebt en minder handjes nodig hebt".	Simplified process. But at the moment the managers and employees are not sufficiently address their own responsibility and often come the HR for questions that they can resolve by themselves. Managers and employees should more understand their own responsibility in the self-service that is offered in the organization.
Efficiency - It takes less work	Resp 13: "Dus daar kun je enorme slagen mee boeken plus dat het veel minder werk kost want we hebben ook nog een volle FTE bespaart in het hele proces dus dat".	It takes less work, FTE reduction
Increased responsibility employees	Resp 41: "Vroeger moest je het formulier opsturen naar de administratie. Tegenwoordig moet je zelf de foto maken en moet je het ergens uploaden".	From centralization to different links in the organization
Efficiency - Time reduction through simplified process	Resp 41: "Dat je dat van twee uur kunt brengen naar een kwartier. Dat betekent dat je 1 uur en driekwartier tijd vrij krijgt of verlaag het contract van die team lead die in mijn winkel daarvoor is aangesteld".	It is a simplified process.

Continuing: First level of analysis of perceptions of IT professionals about e-HRM consequences

Consequences	Examples-Quotes	Results
Users arrange things by themselves	Resp 13: "Zodat je, nou bijvoorbeeld als je een password reset wilt doen of dat soort dingen, dat je dat zelf kan oplossen. En het voordeel, los van de besparing, is dat het ook 7 maal 24 beschikbaar is".	More and more self-service for employees and managers.
Disappearing of HR business partner	Resp 19: "Dus dan wil ik helemaal niet bellen, dan wil ik geen HR business partners, ik wil gewoon klikken en klaar. Dat vind ik er prettig aan".	Manager is satisfied that he can arrange things by himself, without an HR business partner.
Increased responsibility	Resp 41: "Dat de medewerkers verantwoordelijk worden voor hun eigen gegevens die van hen zijn en over hun gaan".	Responsibility manager and employees. They become self supported.
More insights in the data	Resp 13: "Wel goed om dat online te doen en die resultaten vast te leggen en ook over de jaren te zien wat voor ontwikkeling is er nou met iemand".	
More Impersonalization in appraisal talks	Resp 19: "Ik heb bij de beoordelingen wel een omschakeling moeten maken. Ik vind met een laptop op tafel, zo gesprek voeren, ja dat werkt niet vind ik".	Manager has difficulties with the new way of working for the appraisals with his employees. He found it impersonal.
Mutual transparency between employees and managers	Resp 19: "Dat betekent dat het heel transparant is geworden en dat we aan twee kanten er ook in kunnen werken. Ik ben nu naar een nieuwe rol gegaan en wat ik dan doe in het systeem is even twee jaar terug kijken, hoe die beoordelingen zijn geweest van mijn voorgangers bij diegene. Dat was bij de papierenversie niet mogelijk".	Digital HR gives more opportunities for managers by appraisals of his employees. With digital HR he add with his role in the appraisals more value.
Need to alignment with HR processes all over the world.	Resp 6: "Dus alles wat in Nederland werd bedacht, moest ook voor de wereld gaan gelden. Dus daar werd continu rekening mee gehouden".	The solution must also fit with the other organizations in the world. This made it more difficult. But now there is consistency of the digital HR solutions for all the organizations (HR replicability between the different organizations in the world).

Appendix I – Second level analysis of perceptions of IT professionals

TABLE 12
Second level analysis of perceptions of IT professionals about e-HRM consequences

	Consequences	Examples-Quotes
	Efficiency	
1	Work is more simplified	Resp 6: "Soort matching functionaliteit heeft het, er staat een vacature, Cv's komen binnen en je kunt de eerste grove schifting al doen. Kijk wat ze krijgen 500 tot 600 Cv's per maand, ja en dan kun je dat, dat scheelt het weer geld maar het is ook efficiency. Dus dit is een hele mooie tool om te zeggen van ja dit maakt het werk ook gewoon leuker voor de medewerkers".
2	Work is more simplified	Resp 17: "Dus in die 20 jaar heeft X zich zo opgebouwd en inmiddels ook voor gezorgd dat de business, dat het werk ook veel gemakkelijker te doen is. Dat je de business ook geld kan besparen en minder mensen nodig hebt en minder handjes nodig hebt".
3	Logistics is quicker	Resp 13: "Het bestellen van PCs dat kostte vroeger gewoon twee maanden en nu is het altijd binnen een week geregeld maar het kan maar zo zijn dat je binnen twee dagen je pc hebt".
4	HRM processes takes less work	Resp 13: "Dus daar kun je enorme slagen mee boeken plus dat het veel minder werk kost want we hebben ook nog een volle FTE bespaart in het hele proces dus dat".
5	Time reduction through simplified process	Resp 41: "Dat je dat van twee uur kunt brengen naar een kwartier. Dat betekent dat je 1 uur en driekwartier tijd vrij krijgt of verlaag het contract van die team lead die in mijn winkel daarvoor is aangesteld".
	Increased responsibility employees	
6	Employees become self supported	Resp 41: "Dat de medewerkers verantwoordelijk worden voor hun eigen gegevens die van hen zijn en over hun gaan".
7	Users arrange HRM processes by themselves	Resp 13: "Zodat je, nou bijvoorbeeld als je een password reset wilt doen of dat soort dingen, dat je dat zelf kan oplossen. En het voordeel, los van de besparing, is dat het ook 7 maal 24 beschikbaar is".
8	Users arrange HRM processes by themselves	Resp 41: "Vroeger moest je het formulier opsturen naar de administratie. Tegenwoordig moet je zelf de foto maken en moet je het ergens uploaden".
9	Shifting the role of HR Business partner	Resp 19: "Dus dan wil ik helemaal niet bellen, dan wil ik geen HR business partners, ik wil gewoon klikken en klaar. Dat vind ik er prettig aan".
	Development employees	
10	Longitudinal and long term insights of development employees	Resp 13: "Wel goed om dat online te doen en die resultaten vast te leggen en ook over de jaren te zien wat voor ontwikkeling is er nou met iemand".
	Impersonalization	
11	Impersonalized appraisal talks	Resp 19: "Ik heb bij de beoordelingen wel een omschakeling moeten maken. Ik vind met een laptop op tafel, zo gesprek voeren, ja dat werkt niet vind ik".

Continuing: Second level analysis of perceptions of IT professionals about e-HRM consequences

	Consequences	Examples-Quotes
	Insights in HRM processes	
12	Longitudinal and long term insights	Resp 19: "Dat betekent dat het heel transparant is geworden en dat we aan twee kanten er ook in kunnen werken. Ik ben nu naar een nieuwe rol gegaan en wat ik dan doe in het systeem is even twee jaar terug kijken, hoe die beoordelingen zijn geweest van mijn voorgangers bij diegene. Dat was bij de papierenversie niet mogelijk".
	Alignment HRM processes	
13	Need to alignment with HR processes all over the world (for MNCs)	Resp 6: "Dus alles wat in Nederland werd bedacht, moest ook voor de wereld gaan gelden. Dus daar werd continu rekening mee gehouden".

Appendix J – Third level analysis of perceptions of IT professionals

TABLE 13
Third level of analysis of perceptions of IT professionals about e-HRM consequences

	Consequences	Examples-Quotes
	Efficiency	
1	Work is more simplified	Resp 6: "Soort matching functionaliteit heeft het, er staat een vacature, Cv's komen binnen en je kunt de eerste grove schifting al doen. Kijk wat ze krijgen 500 tot 600 Cv's per maand, ja en dan kun je dat, dat scheelt het weer geld maar het is ook efficiency. Dus dit is een hele mooie tool om te zeggen van ja dit maakt het werk ook gewoon leuker voor de medewerkers". Resp 17: "Dus in die 20 jaar heeft X zich zo opgebouwd en inmiddels ook voor gezorgd dat de business, dat het werk ook veel gemakkelijker te doen is. Dat je de business ook geld kan besparen en minder mensen nodig hebt en minder handjes nodig hebt".
2	Logistics is quicker	Resp 13: "Het bestellen van PCs dat kostte vroeger gewoon twee maanden en nu is het altijd binnen een week geregeld maar het kan maar zo zijn dat je binnen twee dagen je pc hebt".
3	HRM processes takes less work	Resp 13: "Dus daar kun je enorme slagen mee boeken plus dat het veel minder werk kost want we hebben ook nog een volle FTE bespaart in het hele proces dus dat".
4	Time reduction through simplified HRM processes	Resp 41: "Dat je dat van twee uur kunt brengen naar een kwartier. Dat betekent dat je 1 uur en driekwartier tijd vrij krijgt of verlaag het contract van die team lead die in mijn winkel daarvoor is aangesteld".
	Increased responsibility employees	
5	Employees become self supported	Resp 41: "Dat de medewerkers verantwoordelijk worden voor hun eigen gegevens die van hen zijn en over hun gaan".
6	Users arrange HRM processes on their own	Resp 13: "Zodat je, nou bijvoorbeeld als je een password reset wilt doen of dat soort dingen, dat je dat zelf kan oplossen. En het voordeel, los van de besparing, is dat het ook 7 maal 24 beschikbaar is". Resp 41: "Vroeger moest je het formulier opsturen naar de administratie. Tegenwoordig moet je zelf de foto maken en moet je het ergens uploaden".
7	Shifting the role of HR Business partner to line-management	Resp 19: "Dus dan wil ik helemaal niet bellen, dan wil ik geen HR business partners, ik wil gewoon klikken en klaar. Dat vind ik er prettig aan".
	Development employees	
8	Longitudinal and long term insights of development employees	Resp 13: "Wel goed om dat online te doen en die resultaten vast te leggen en ook over de jaren te zien wat voor ontwikkeling is er nou met iemand".

Continuing: Third level of analysis of perceptions of IT professionals about e-HRM consequences

	Consequences	Examples-Quotes
	Impersonalization	
9	Impersonalized appraisal talks	Resp 19: "Ik heb bij de beoordelingen wel een omschakeling moeten maken. Ik vind met een laptop op tafel, zo gesprek voeren, ja dat werkt niet vind ik".
	Insights in HRM processes	
10	Longitudinal and long term insights in HRM processes	Resp 19: "Dat betekent dat het heel transparant is geworden en dat we aan twee kanten er ook in kunnen werken. Ik ben nu naar een nieuwe rol gegaan en wat ik dan doe in het systeem is even twee jaar terug kijken, hoe die beoordelingen zijn geweest van mijn voorgangers bij diegene. Dat was bij de papierenversie niet mogelijk".
	Alignment HRM processes	
11	Need to alignment with HR processes all over the world (for MNCs)	Resp 6: "Dus alles wat in Nederland werd bedacht, moest ook voor de wereld gaan gelden. Dus daar werd continu rekening mee gehouden".

Appendix K – First level analysis of perceptions of Business leaders

TABLE 14
First level of analysis of perceptions of Business leaders about e-HRM consequences

	Consequences	Examples-Quotes	Results
	Increased self-service employees and managers		
1	Increased self-service employees and managers	Resp 1: "Dus in plaats van een employee of een manager te pamperen ik wil verlof en dan de HR business partner dat in het systeem. Nee dat doet een medewerker zelf en de manager keurt dat goed".	More responsibility of the employee and manager
2	Increased self-service employees and managers	Resp 22: "Betekent ook dat medewerkers bijvoorbeeld veel meer zelfvoorzienend moeten worden in het aanvragen van sommige zaken, zoals van reisdeclaraties tot en met het veranderen van de gegevens op je medewerkerskaart".	Less paper work, easier and a better overview
3	Increased self-service employees	Resp 32: "Dus veel dingen zijn eigenlijk al wel bij medewerkers gewoon neergelegd. Dus die kunnen zelf ook prima in hun eigen, zeg maar in de opleidingscatalogus gewoon kijken naar passende trainingen".	More responsibility of the employee for their own development
4	Increased responsibility of employees and managers in HRM	Resp 38: "Meer verantwoordelijkheid neerleggen bij medewerkers en managers in plaats van de HR-adviseurs".	More self-service, employees should to get to their own information
5	Transparency and openness in HRM processes	Resp 31: "Het is veel meer open, transparant wat de manager doet, wat de medewerker erin doet. Je kan, de medewerker kan zichzelf beoordelen hè of de afspraken die hij heeft gemaakt. Dat kan de manager gewoon zien".	Transparent communication between the managers and the employees.
6	Time reduction is difficult to validate	Resp 1: "Dat je nu weinig tijd met ESS/MSS kwijt bent is duidelijk, maar om dat verschil met voorheen te kunnen duiden".	It reduced the time for the HR business partner. It is shifted to the manager and employee.

Continuing: First level of analysis of perceptions of Business leaders about e-HRM consequences

	Consequences	Examples-Quotes	Results
	Cost reduction		
7	Only cost-driven, not service-driven	Resp 32: "Het is voor mijn gevoel ook nog heel erg kosten-driven geweest in van, joh we gaan van platte formuliertjes vast naar het vastleggen in een systeem en dat scheelt heel veel tijd. Maar het is nog niet heel erg service-driven van hey wat zijn nou diensten die we kunnen leveren waar heel veel vraag naar is bij de business, dat zit er eigenlijk nog niet in".	This Business manager has not experienced the service-driven results of the E-HRM solution. From his point of view it is a lot of cost-driven. He hopes that this changed in the coming years.
8	Transparency in time registration	Resp 42: ". Dus een hele complexe rekensom, en dat is zo intelligent systeem. Hij houdt er rekening vooruit met of je zo iemand wel of niet moet plannen. Je moet 12 weken terug, 3 maanden terug en dat leverde wel geld op".	There are a lot of Part-time employees. If they work more than 12 hours, than they have to pay surcharges. With this system, they can reduce the surcharges of these employees.
9	Cost reduction	Resp 43: "This move to shared-service centers, who do the transactional work for us in the field of payroll, that's something that we have realized a lot of these kind of savings already. Because we have, as I said, we now have most of the countries with the same payroll system or master data system and a lot of these countries have moved certain transactional functions to our tool shared service centers we have".	There is a standardized process for a lot of different countries. They have the same standardized process for payroll.
10	FTE reduction	Resp 24: "Dus ja in die zin op het FTE gebied is dat wel een enorme win, maar dat is nog maar het begin van wat je daadwerkelijk met E-HRM kan doen natuurlijk. Dat is nog maar het kostenfactor dat je, ja de processen heel erg kort hebt gemaakt".	It is not only FTE reduction, there are also other important consequences of E-HRM.
	Efficiency		
11	Easier, faster and location independent	Resp 22: "Ik denk dat het makkelijker gaat, sneller gaat en dat je, het is ook tijd en plaats onafhankelijk".	Employees and managers can see their information at home or other places, and not only at the office.
12	Offering HRM services to more people	Resp 26: "Maar dan kan je dus terwijl je misschien je medewerkers aantal met 20 procent groeit, kan je met dezelfde populatie HR-mensen nog steeds die populatie goed bedienen. Ja, dat is opzicht een besparing en efficiëntieslag die je aanbrengt".	Due to the automation of more and more tools, HR professionals can serve a bigger population.

Continuing: First level of analysis of perceptions of Business leaders about e-HRM consequences

	Consequences	Examples-Quotes	Results
13	Standardization in operational level	Resp 47: "Dus ik zie de voordelen meer in de operationele sfeer, dat het ook echt wat efficiënter, wat professioneler en wat gestandaardiseerde gaat".	Not yet advantages as attractive employer, hire better people, quicker development or to bind people with the organization.
14	HRM as simple as possible for the different employee population	Resp 38: "Nou voor de ... is dat eenvoudig omdat ze dat mee kunnen nemen onderweg. Dus ja, dan moet alles gewoon zo simpel mogelijk op een klein ding zijn en ook begrijpelijk, want de populatie van ... is ook heel divers en iedereen moet ermee om kunnen gaan".	The tools are as simple as possible for the different employees.
	Better Insights in the working population of the organization		
15	Better insights in the potential	Resp 42: "Ik heb beter inzicht ik mijn potentieel en zo kan ik mensen beter inzetten op de plekken die er toe doen".	How are the talents and who is in my team?
16	More insights in the employee population	Resp 42: ": Als ik heel eerlijk ben zit het dat voornamelijk in het beoordelingsvlak. Waardoor ik beter zicht op mijn mensen heb, en mijn in-, uit-, en doorstroom beter kan bepalen en kwalitatief kan bepalen".	Better and more information about the employees
17	Better recording of HRM information	Resp 47: "Dus een stukje aanstelling of een medewerker die weggaat, dat is nu allemaal duidelijk en goed vastgelegd, inclusief datum en de afwikkeling en de taak van accorderen en de performance reviews die worden niet alleen gedaan maar ook vastgelegd, dus mensen kunnen die later ook nog even terugvinden".	Earlier it was a lot of Excel sheets that the people filled in by themselves and sent it to HR. Now you have a better overview of the information.
18	Changing questions of managers	Resp 31: "Managers ook hè, want managers krijgen nu, waar ze voorheen moesten ze echt de personeelsdossiers zeg maar bij elkaar schrapen. Nu zien we in één oogopslag wie er in een team zit, wat hun scores waren, wat ze verdienen en nou, dat gaat ook andere vragen oproepen bij de managers".	Advisors should answer other questions; such as how can I help the business to increase the performance.
19	Data more readily available	Resp 32: "En er is wel meer data die je gewoon makkelijker beschikbaar kan stellen over de medewerker".	More information from the data, reduction of time
	More steps/ actions		
20	Manager spend more time on HR	Resp 1: "Waarbij zo manager zegt van het is wel leuk zo manager selfservice, maar het kost mij allemaal tijd".	Manager have to fill in more forms, more steps

Continuing: First level of analysis of perceptions of Business leaders about e-HRM consequences

	Consequences	Examples-Quotes	Results
21	Managers have more approval actions	Resp 22: "Jij verantwoordt jouw uren en ik moet ze fiatteren. Nou dat ga ik echt niet doen. Dat doet iemand op mijn naam, want ik heb daar helemaal geen tijd voor".	More checkmarks for managers
22	More variations and actions to fill in the forms	Resp 22: "Dus het aantal varianten en variaties dat groeit met de tijd. Collega's moeten ook steeds meer verschillende handelingen daarvoor gaan inrichten en gaan verrichten".	The forms should be filled in the prescribed manner, otherwise it is not going well.
	Availability of information		
23	Employees are better informed	Resp 22: "En daarbinnen zie ik absolute voordelen van digitalisering, zodat de collega op straat veel beter zijn werk kan doen. Beter geïnformeerd is, totale overzicht heeft. Ook niet voor iedere wissewasje terug hoeft naar het bureau om het daar weer in te kloppen in het systeem".	More information, and so they can perform their work better.
24	Instantly information	Resp 24: "En ook de doorlooptijd, van hoe snel je dan bij je informatie kan en de processen, die gaan super snel. Dat is nu al gereduceerd naar instantly. Ik kan al instantly bij mijn informatie en wijzingen zie ik ook realtime meteen terug, zonder dat het door een proces heen moet wat iemand handmatig moet doorvoeren".	Very quick, instantly, more and more information, not only on the computer but also on the Smartphone.
25	More information available	Resp 43: "We have certain portals where our people could go and check on certain information about whatever payslip and all these things, which is still mainly on web-views which you of course could look at on a mobile phone as well".	More and more information available
26	Clear overview of the organization	Resp 24: "Als je nu JAM opent, kan je in 1 keer zien wie die 75.000 medewerkers zijn en aan wie ze rapporteren en waar ze zitten en wat ze doen en welke expert veld hebben".	App on the phone, it is easy and you can quickly see an overview of the organization.
	Changing role HR		
27	Automation for the changing role of HR	Resp 1: "Na zoals aangegeven dat automatiseren, gewoon 1 van de redenen is om die transformatie naar een meer strategisch HR te kunnen faciliteren".	Change to a more strategic level
28	Automation becomes increasingly important for the HR strategy	Resp 1: "Daar liepen vroeger alleen maar IT mensen rond en nu zie je veel meer dat HR-leaders zich daarvoor interesseren. Omdat die tooling of die automatisering heel belangrijk is voor hun om die HR strategie te realiseren".	HR Tech World Congress. At the moment more and more HR professionals are interested in the IT- Tooling. This is a big difference with a few years ago.

Continuing: First level of analysis of perceptions of Business leaders about e-HRM consequences

	Consequences	Examples-Quotes	Results
29	Change to tactical and strategic level	Resp 1: "Dat zijn eigenlijk de drie grootste brokken die je moet invullen om te kunnen zorgen dat die HRBP, enerzijds heb je er minder nodig en aan de andere kant kunnen ze door de tijd die er vrij komt door niet meer bezig te zijn met operationele taken zich, natuurlijk gekoppeld aan ontwikkeling, zich meer focussen op meer tactisch toegevoegde waarde hebben voor, waarvoor we hier zijn, voor de business".	There was a lot of work on the operational level. Now they try to decrease the work on this level → more responsibility to the employees and managers.
30	Changing role of HR to advisor	Resp 31: "De mensen die puur aan het invoeren waren, dat is dadelijk niet meer want heel de invoer wordt door de medewerkers en managers zelf gedaan. Dus je moet veel meer adviserend zijn als ze een bepaald proces niet begrijpen of even niet weten hoe het moet".	Responsibility goes to the employee and manager. HR is performing a advising role.
31	Changing role of HR to tactic and strategic	Resp 32: "Voorheen hadden we daarnaast nog altijd operationele ondersteuning. Dus dan kregen we er vaak nog iemand bij die operationeel nog wat dingen meer voor teammanagers kon betekenen. Maar dat is helemaal wegbezuinigd. Dat is zeg maar naar de teammanagers gegaan".	Tactic and strategic level of HR. More advice.
32	Change to strategic level	Resp 47: "Zoals ik naar de business partner kijk, moeten die met name bezig zijn met de strategische vraagstukken en het meedenken en ondersteunen van het management. Wat je in het verleden toch vaak zag was dat ook zij voor een groot deel werden opgeslokt in allerlei operationele rompslomp".	The change to a more strategic business partner. To add more value to the management and organization.
33	Transparency	Resp 1: "Dan denk ik dat de tooling wel heel belangrijk is om dat transparant te maken. Waarbij de manager een aanbeveling doet en dan gaat de manager + 1 die kijkt van hé. Het systeem genereert überhaupt een aanbeveling en dan kan een manager dan van afwijken. Dat moet jij beargumenteren".	More transparency in the appraisals. Earlier this was arranged in the backroom.

Continuing: First level of analysis of perceptions of Business leaders about e-HRM consequences

	Consequences	Examples-Quotes	Results
34	Contribution for the long term of HRM	Resp 31: "Dus, uiteindelijk is, gaat dit voor de lange termijn veel meer een bijdrage leveren waarmee je voorheen was het misschien even een bijdrage voor dat moment, of een kostenbesparing op dat moment is het nu veel meer iets wat op de lange termijn uitgesmeerd gaat worden en waarin je dus nou ja, één gesprek met je business en intern en uiteindelijk met hoe de buitenwereld naar ons kijkt, dat je HR-beleid vormt en dan is dit er een onderdeel van".	Not only the short term any more. Looking to the future.
	Development employees		
35	Different learning opportunities for employees to expand their knowledge and skills.	Resp 24: "Ja van die roulatie trajecten die gewoon digitaal zijn. Dus je kan heel snel kijken van nou waar zijn leuke opportunity's en dan kan je daar een aantal maanden werken".	Employees can go to different directions: horizontal, vertical. Fellowships.
36	Visibility of HR	Resp 31: "HR is weer zichtbaar. Er wordt heel veel gedaan aan ontwikkeling en nou ja weet je, als medewerkers iets willen, het is eigenlijk bijna allemaal mogelijk".	More opportunities
	Recruitment is simplified		
37	Job application is easier	Resp 38: "Maar wat we wel doen is dat ze makkelijker kunnen solliciteren. Dus dat je dat gewoon via je mobiel kan, dus dat je niet per se achter een computer moet zitten en dat eenvoudiger wordt dus meer kandidaten, misschien betere kandidaten".	Better recruitment, simplified
38	Simplified recruitment process	Resp 42: "Nou dat begint heel simpel. Ik krijg geen eens brieven binnen. Het gaat automatisch en ik kan het lezen. Ik kan selecteren met bepaalde filters volgens mij, wat is wel en wat is niet een interessante kandidaat".	Less time, very thoroughly
39	It is not only the system, but also the willingness of the people	Resp 26: "Maar dat is daarom zeg ik, een systeem lost niet alles op. Ik denk dat die mensen dat zelf ook moeten willen".	Development of the strategy, which is supporting by the people.
40	Increased engagement	Resp 31: "Ik weet niet of je dat fenomeen kent, een engagement score, wij hebben dat, nou dat doen wij ook al een paar jaar en die is dit jaar bij X hartstikke gestegen, dus iedereen is heel happy en zit heel lekker in zijn vel".	Increased engagement, increased customer satisfaction

Appendix L – Second level analysis of perceptions of Business leaders

TABLE 15
Second level of analysis of perceptions of business leaders about e-HRM consequences

	Consequences	Examples-Quotes
	Increased self-service employees and managers	
1	Employees and managers become self supported	Resp 1: "Dus in plaats van een employee of een manager te pamperen ik wil verlof en dan de HR business partner dat in het systeem. Nee dat doet een medewerker zelf en de manager keurt dat goed". Resp 22: "Betekent ook dat medewerkers bijvoorbeeld veel meer zelfvoorzienend moeten worden in het aanvragen van sommige zaken, zoals van reisdeclaraties tot en met het veranderen van de gegevens op je medewerkerskaart". Resp 32: "Dus veel dingen zijn eigenlijk al wel bij medewerkers gewoon neergelegd. Dus die kunnen zelf ook prima in hun eigen, zeg maar in de opleidingscatalogus gewoon kijken naar passende trainingen".
2	Increased responsibility of employees and managers in HRM	Resp 38: "Meer verantwoordelijkheid neerleggen bij medewerkers en managers in plaats van de HR-adviseurs".
3	Transparency in HRM processes	Resp 31: "Het is veel meer open, transparant wat de manager doet, wat de medewerker erin doet. Je kan, de medewerker kan zichzelf beoordelen hè of de afspraken die hij heeft gemaakt. Dat kan de manager gewoon zien".
	Cost reduction	
4	Only cost-driven, not service-driven	Resp 32: "Het is voor mijn gevoel ook nog heel erg kosten-driven geweest in van, joh we gaan van platte formuliertjes vast naar het vastleggen in een systeem en dat scheelt heel veel tijd. Maar het is nog niet heel erg service-driven van hey wat zijn nou diensten die we kunnen leveren waar heel veel vraag naar is bij de business, dat zit er eigenlijk nog niet in".
5	Time reduction is difficult to validate	Resp 1: "Dat je nu weinig tijd met ESS/MSS kwijt bent is duidelijk, maar om dat verschil met voorheen te kunnen duiden".
6	FTE reduction	Resp 24: "Dus ja in die zin op het FTE gebied is dat wel een enorme win, maar dat is nog maar het begin van wat je daadwerkelijk met E-HRM kan doen natuurlijk. Dat is nog maar het kostenfactor dat je, ja de processen heel erg kort hebt gemaakt".
	Efficiency	
7	Easier, faster and location independent	Resp 22: "Ik denk dat het makkelijker gaat, sneller gaat en dat je, het is ook tijd en plaats onafhankelijk".

Continuing: Second level of analysis of perceptions of business leaders about e-HRM consequences

	Consequences	Examples-Quotes
8	Offering HRM services to more people	Resp 26: "Maar dan kan je dus terwijl je misschien je medewerkers aantal met 20 procent groeit, kan je met dezelfde populatie HR-mensen nog steeds die populatie goed bedienen. Ja, dat is opzicht een besparing en efficiëntieslag die je aanbrengt".
9	Standardization of HRM processes	Resp 43: "This move to shared-service centers, who do the transactional work for us in the field of payroll, that's something that we have realized a lot of these kind of savings already. Because we have, as I said, we now have most of the countries with the same payroll system or master data system and a lot of these countries have moved certain transactional functions to our tool shared service centers we have". Resp 47: "Dus ik zie de voordelen meer in de operationele sfeer, dat het ook echt wat efficiënter, wat professioneler en wat gestandaardiseerde gaat".
10	HRM as simple as possible for the different employee population	Resp 38: "Nou voor de ... is dat eenvoudig omdat ze dat mee kunnen nemen onderweg. Dus ja, dan moet alles gewoon zo simpel mogelijk op een klein ding zijn en ook begrijpelijk, want de populatie van ... is ook heel divers en iedereen moet ermee om kunnen gaan".
	Better Insights in the working population of the organization	
11	Better insights in the potential of employees competences	Resp 42: "Ik heb beter inzicht ik mijn potentieel en zo kan ik mensen beter inzetten op de plekken die er toe doen". Resp 42: ": Als ik heel eerlijk ben zit het dat voornamelijk in het beoordelingsvlak. Waardoor ik beter zicht op mijn mensen heb, en mijn in-, uit-, en doorstroom beter kan bepalen en kwalitatief kan bepalen".
12	Better recording of HRM information	Resp 47: "Dus een stukje aanstelling of een medewerker die weggaat, dat is nu allemaal duidelijk en goed vastgelegd, inclusief datum en de afwikkeling en de taak van accorderen en de performance reviews die worden niet alleen gedaan maar ook vastgelegd, dus mensen kunnen die later ook nog even terugvinden".
13	Changing questions of managers to improve the performance in their teams	Resp 31: "Managers ook hè, want managers krijgen nu, waar ze voorheen moesten ze echt de personeelsdossiers zeg maar bij elkaar schrapen. Nu zien we in één oogopslag wie er in een team zit, wat hun scores waren, wat ze verdienen en nou, dat gaat ook andere vragen oproepen bij de managers".
14	Data more readily available	Resp 32: "En er is wel meer data die je gewoon makkelijker beschikbaar kan stellen over de medewerker".
	More steps/ actions required for managers	
15	Manager spend more time on HR	Resp 1: "Waarbij zo manager zegt van het is wel leuk zo manager selfservice, maar het kost mij allemaal tijd".

Continuing: Second level of analysis of perceptions of business leaders about e-HRM consequences

	Consequences	Examples-Quotes
16	Managers have more approval duties	Resp 22: "Jij verantwoordt jouw uren en ik moet ze fiatteren. Nou dat ga ik echt niet doen. Dat doet iemand op mijn naam, want ik heb daar helemaal geen tijd voor".
17	More variations and actions to fill in the HRM forms	Resp 22: "Dus het aantal varianten en variaties dat groeit met de tijd. Collega's moeten ook steeds meer verschillende handelingen daarvoor gaan inrichten en gaan verrichten".
	Availability of information	
18	Employees are better informed	Resp 22: "En daarbinnen zie ik absolute voordelen van digitalisering, zodat de collega op straat veel beter zijn werk kan doen. Beter geïnformeerd is, totale overzicht heeft. Ook niet voor iedere wissewasje terug hoeft naar het bureau om het daar weer in te kloppen in het systeem".
19	Instantly information	Resp 24: "En ook de doorlooptijd, van hoe snel je dan bij je informatie kan en de processen, die gaan super snel. Dat is nu al gereduceerd naar instantly. Ik kan al instantly bij mijn informatie en wijzingen zie ik ook realtime meteen terug, zonder dat het door een proces heen moet wat iemand handmatig moet doorvoeren".
20	More HR related information available	Resp 43: "We have certain portals where our people could go and check on certain information about whatever payslip and all these things, which is still mainly on web-views which you of course could look at on a mobile phone as well".
21	Clear overview of the organization	Resp 24: "Als je nu JAM opent, kan je in 1 keer zien wie die 75.000 medewerkers zijn en aan wie ze rapporteren en waar ze zitten en wat ze doen en welke expert veld hebben".
	Changing role HR	
22	Automation for the changing role of HR	Resp 1: "Na zoals aangegeven dat automatiseren, gewoon 1 van de redenen is om die transformatie naar een meer strategisch HR te kunnen faciliteren".
23	Automation becomes increasingly important for the HR strategy	Resp 1: "Daar liepen vroeger alleen maar IT mensen rond en nu zie je veel meer dat HR-leaders zich daarvoor interesseren. Omdat die tooling of die automatisering heel belangrijk is voor hun om die HR strategie te realiseren".
24	Tactical and strategic role of HR	Resp 1: "Dat zijn eigenlijk de drie grootste brokken die je moet invullen om te kunnen zorgen dat die HRBP, enerzijds heb je er minder nodig en aan de andere kant kunnen ze door de tijd die er vrij komt door niet meer bezig te zijn met operationele taken zich, natuurlijk gekoppeld aan ontwikkeling, zich meer focussen op meer tactisch toegevoegde waarde hebben voor, waarvoor we hier zijn, voor de business". Resp 32: "Voorheen hadden we daarnaast nog altijd operationele ondersteuning. Dus dan kregen we er vaak nog iemand bij die operationeel nog wat dingen meer voor teammanagers kon betekenen. Maar dat is helemaal wegbezuinigd. Dat is zeg maar naar de teammanagers gegaan".

Continuing: Second level of analysis of perceptions of business leaders about e-HRM consequences

	Consequences	Examples-Quotes
25	Advisory role of HR	Resp 31: "De mensen die puur aan het invoeren waren, dat is dadelijk niet meer want heel de invoer wordt door de medewerkers en managers zelf gedaan. Dus je moet veel meer adviserend zijn als ze een bepaald proces niet begrijpen of even niet weten hoe het moet".
26	Change to strategic level	Resp 47: "Zoals ik naar de business partner kijk, moeten die met name bezig zijn met de strategische vraagstukken en het meedenken en ondersteunen van het management. Wat je in het verleden toch vaak zag was dat ook zij voor een groot deel werden opgeslokt in allerlei operationele rompslomp".
27	Transparency between managers	Resp 1: "Dan denk ik dat de tooling wel heel belangrijk is om dat transparant te maken. Waarbij de manager een aanbeveling doet en dan gaat de manager + 1 die kijkt van hé. Het systeem genereert überhaupt een aanbeveling en dan kan een manager dan van afwijken. Dat moet jij beargumenteren".
28	Contribution for the long term of HRM	Resp 31: "Dus, uiteindelijk is, gaat dit voor de lange termijn veel meer een bijdrage leveren waarmee je voorheen was het misschien even een bijdrage voor dat moment, of een kostenbesparing op dat moment is het nu veel meer iets wat op de lange termijn uitgesmeerd gaat worden en waarin je dus nou ja, één gesprek met je business en intern en uiteindelijk met hoe de buitenwereld naar ons kijkt, dat je HR-beleid vormt en dan is dit er een onderdeel van".
	Development employees	
29	Different learning opportunities for employees to expand their knowledge and skills.	Resp 24: "Ja van die roulatie trajecten die gewoon digitaal zijn. Dus je kan heel snel kijken van nou waar zijn leuke opportunity's en dan kan je daar een aantal maanden werken".
30	Visibility of HRM	Resp 31: "HR is weer zichtbaar. Er wordt heel veel gedaan aan ontwikkeling en nou ja weet je, als medewerkers iets willen, het is eigenlijk bijna allemaal mogelijk".
	Recruitment is simplified	
31	Job application is easier	Resp 38: "Maar wat we wel doen is dat ze makkelijker kunnen solliciteren. Dus dat je dat gewoon via je mobiel kan, dus dat je niet per se achter een computer moet zitten en dat eenvoudiger wordt dus meer kandidaten, misschien betere kandidaten".
32	Simplified recruitment process	Resp 42: "Nou dat begint heel simpel. Ik krijg geen eens brieven binnen. Het gaat automatisch en ik kan het lezen. Ik kan selecteren met bepaalde filters volgens mij, wat is wel en wat is niet een interessante kandidaat".
	Willingness of the people in the organization to work with digital HRM	
33	It is not only the system, but also the willingness of the people	Resp 26: "Maar dat is daarom zeg ik, een systeem lost niet alles op. Ik denk dat die mensen dat zelf ook moeten willen".

Continuing: Second level of analysis of perceptions of business leaders about e-HRM consequences

	Consequences	Examples-Quotes
	Engagement	
34	Increased engagement	Resp 31: "Ik weet niet of je dat fenomeen kent, een engagement score, wij hebben dat, nou dat doen wij ook al een paar jaar en die is dit jaar bij X hartstikke gestegen, dus iedereen is heel happy en zit heel lekker in zijn vel".
	Time registration	
35	Transparency in time registration	Resp 42: ". Dus een hele complexe rekensom, en dat is zo intelligent systeem. Hij houdt er rekening vooruit met of je zo iemand wel of niet moet plannen. Je moet 12 weken terug, 3 maanden terug en dat leverde wel geld op".