In augural lecture given to mark the assumption of the position as professor of Human Resources Management at the Faculty of Management and Governance and Behavioural Sciences at the University of Twente on Thursday 4 December by

PROF. DR. TANYA BONDAROUK
ORCHESTRATING THE E-HRM SYMPHONY

Over the course of 300 years, the term ‘symphony’ progressed from being a ‘catch-all’ phrase to describe an orchestral work in several movements, to something more standardised in the 18th century, before developing again through the 19th, sometimes including soloists and choruses; the form continued to develop in the late 19th and early 20th centuries as the more formal structures began to loosen again. What symphonies have in common across time is that they are about 'becoming' - taking the listener on a journey which is like attending a play in several acts, or reading a book in several chapters: all different, but contributing to a harmony.

Stephen Johnson, “Bruckner Remembered”

Orchestrating … is a craft and it is an art. A person can learn appropriate ranges of the instruments and effective combinations. That, as well as learning to effectively notate can be considered the craft of arranging. The artistry is the ability to imagine sounds and to make them come alive. It involves creativity, musicality, experience, and attention to details. The successful orchestrator will be able to master the craft and work towards the artistry of creating a new work.

Inspired by David Brinkman, “How to Orchestrate Music”
DEAR RECTOR MAGNIFICUS,
DEAR LADIES AND GENTLEMEN:

It is a privilege that I can speak to you about my most favourite subject that keeps me curious, reinforces my academic entrepreneurial capacity, and challenges me to keep learning: electronic HRM (e-HRM).

In 2003, together with Huub Ruël, I finalized an explorative research project into e-HRM developments and conducted many interviews about the usefulness and usage of e-HRM in five large organizations: Ford in Köln; Belgacom in Brussels; IBM in Amsterdam; ABN AMRO in Luxembourg; and, Dow Chemical in Terneuzen. These were all companies that were forerunners in e-HRM and experimenting with online personnel management. The conclusion was we saw a confused picture. We definitely observed great innovative developments, but also we saw how much companies struggled in their search for the e-HRM ‘miracle’. In 2004 we finalized the project by publishing the book entitled “e-HRM: Innovation or Irritation?”. By then, in truth, we could not answer this question in a straightforward manner (Ruël et al., 2004).

We decided to involve several scholars known to be publishing in academic journals about e-HRM and/or HRIS. Thus, in 2006, the First European Academic e-HRM Workshop was held in the University of Twente. It was initiated and supported by Prof. Stefan Strohmeier from the Saarland University; Prof. Carole Tansley from the Nottingham Trent University; Prof. Miguel Olivas-Lujan from the Clarion University of Pennsylvania; and, Dr. Ewan Oiry and Dr. Karine Guiderdoni-Jourdain from the Laboratoire d’Economie et de Sociologie du Travail, University of Marseille. The workshop gathered 54 researchers from all-over the world. Together we decided to build an e-HRM community to publish Special Issues and to streamline the discourse, whether we came from the IT or HRM worlds. We have since managed five biennial international conferences in different countries and the next one returns back to Twente to celebrate its 10-years existence.
I was one of the initiators of the e-HRM research “club”. I became involved in numerous e-HRM research projects that inspired me to enjoy the beauty of this interdisciplinary and the seemingly uncombinable fields of Information Technologies (IT) and People Management. Different names came to the stage like Web-based HRM; virtual HRM; HRIS; digital HRM. However, in essence, it is about e-HRM. In the last decade since the first book was published about Innovating and Irritating e-HRM several special issues have appeared in international journals and various edited books have been published reporting on diverse empirical and conceptual considerations to develop our understanding of e-HRM and to contribute to optimizing the balancing act between IT and people management (Figure 1).

Figure 1. A collection of e-HRM books (2004-2014) with HRM-UT roots

In addition, allow me to draw your attention to the fact that, since 2004, more than 60 master students have graduated with research topics about e-HRM in Twente and more than half of those theses have inspired academic publications. I am happy to see today those former master students from different generations.
If we reflect on the last decade, we can see that research into e-HRM is still developing, but luckily, no longer is it in its infancy. I can assume that, either those first e-HRM scholars had a big influence on their fellow researchers, or they were just lucky to catch the moment to publish e-HRM-related texts.

What then are the results of a decade of e-HRM research? It is now a perfect opportunity to look back and acknowledge the progress that has been achieved in the e-HRM field and try to predict the future challenges for academia and business alike.

This might have you think that I will reflect on my own 80 or more papers covering the past 10-15 years of active e-HRM research and also touch on the 300 papers into e-HRM since the 1970s, as well as look to the future - all in 45 minutes. I could choose to talk very quickly. However, I would prefer to focus on a selection of the most important ideas but remembering that you can find more thoughts in the booklet that will be distributed after this event.
PART 1.
SETTING THE E-HRM STAGE

Allegro – a quick music passage to be performed in brisk lively manner, chiefly used to set a direction (Oxford Dictionary)

1.1 BELIEVABLE OR BIASED?

In a fair and simple world, it should be easy to be a good boss and be a good HR manager: making your employees happy; connecting them through technologies; making data transparent; and, in return, they repay you with good work, high performance and loyalty… sadly, it looks as if we are not living in such a simple world.

A survey conducted by the Economist Intelligence Unit in 2014 concluded that “happiness won’t stop employees from job hunting”. 83% of their surveyed sample of 1,200 workers said that they are planning to look for new jobs; a 6% increase from the previous year. That is disappointing news for bosses looking to hold onto their best skilled employees; but the news gets more frustrating. Although employees’ intentions to leave increased, so did their job happiness. The answer is simple: 16% of respondents indicated they are seeking higher salaries and in the 51-60 age group 85% were planning to search for new challenges.

I would like to take you through a brief overview of trends I have observed from global surveys into HRM, and HR and ITs for the last 15 years. I will argue soon enough that orchestrating HRM and Information Technologies requires more effort than “just to plug IT into HR processes”.

Orchestrating HRM and Information Technologies requires the act of balancing and blending HRM and IT with their various goals and intentions; expectations and experiences; skills; and, attitudes. HRM and IT can play a beautiful symphony that encourages employees and organizations to perform better, … but it may also crash the best hopes of organizations if how to orchestrate HRM and IT is poorly understood.

I decided purposefully to skip going into detailed numbers to allow my observations last longer than only for this inaugural speech. It is not difficult to see how quickly within 15 years (only!) companies worldwide develop their e-HRM capabilities. Organizations are no longer surprised...
about making personnel management digital. 70% of companies from the global survey (KPMG, 2014) have been using electronic HRM. They broaden the scope of HRM applications. The administrative e-HRM applications are still the most popular for self-portal, payroll administration and record keeping. At the same time, the use of strategic applications, such as talent acquisition services, performance management or compensation management, form a leitmotif on the e-HRM stage.

According to a recent research report by Centraal Bureau voor de Statistiek (CBS, 2014) in 2011 Dutch businesses and governmental organizations invested 2,4% more in IT than in 2010; totalling 13,9 milliard Euro in IT investments. It is remarkable that in 2013 68% of employees had to use IT for their work and 61% used internet for their work. More and more organizations are supporting telework. In 2013 64% of organizations supported telework that most of the time is based on the usage of ERP systems. In Europe the Netherlands is ranked in sixth place after Finland (86% of companies support telework), Poland, Denmark, Czech Republic and Spain (CBS, 2014).

Social media have given organizations a new HRM model where employers receive an average of 101 to 150 applications for each job opening even though only 25% of applicants meet the minimum requirements for the positions for which they apply. Interestingly public organizations use social media for HRM 20% less than profit organizations. The CBS reports that in 2013 50% of organizations made use of at least one form of social media; a rise of almost 10% within one year (CBS, 2014).

Conventional People Management terminology is now being added to by new terms such as data mining; big data; and SaaS. Large companies increasingly are turning to data mining to help identify and retain their talents. For example, by mining data on the relationships among highest educational degree and previous employers Microsoft was able to develop a plan to target certain universities and companies for future hiring (Johnson & Gueutal, 2011).

Investments in e-HRM have started to show a slight preference towards strategic applications. Company investments in reporting tools are lower than those they plan for career planning tools, competence management and talent management. CedarCrestone (2012–2013) has seen a consistent link between higher-than-average technology adoption and financial performance among large companies. Organizations operating globally
with above-average technology adoption outperform those without and show 16% higher revenue per employee and 35% higher profit per employee!

Whether the interpretations above are believable or biased I would like to acknowledge three observations: First, companies are not surprised anymore about e-HRM. Second, the e-HRM discourse has entered the HRM field. Third, companies invest in HRM and IT, but search for their unique positioning in hope for competitive advantage.

1.2 WHAT IS E-HRM?

To understand whether companies gain competitive advantage and become better places to work for with e-HRM… or whether companies follow competitive necessity, let us first understand what e-HRM means. Why do we need to know how researchers define e-HRM? Simply because minor switches in terminology (discourse) might result in different directions of study or in diverse subsets of the e-HRM target population. Following on from the very early work on the intersection between web-based technologies and human resource management, a number of definitions have been proposed regarding the phenomenon that later became e-HRM. E-HRM was used interchangeably with HR Information System (HRIS), virtual HR (M), web-based HRM and intranet-based HRM.

Attempts to define e-HRM varied over four decades and include different connotations. IT-oriented researchers called e-HRM: a “specialized information system … designed to support the planning, administration, decision-making, and control activities of human resource management” (DeSanctis, 1986, p.16). Later, it was defined as: conducting HR transactions using the internet or intranet (Lednick-Hall & Moritz, 2003) and even as: “the administrative support of the HR function in organizations by using internet technology” (Voermans & Van Veldhoven, 2007, p. 887). My close colleague in this research from the Saarland University in Germany, Stefan Strohmeier (2007), defined e-HRM as: the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities (p. 20). In search for a balance, together with Huub Ruêl and Jan Kees Loose in 2004, we defined e-HRM as “a way of implementing HRM strategies, policies, and practices in
organizations through the conscious and direct support of and/or with the full use of channels based on web-technologies” (p.16).
In 2009, I co-edited the Special Issue on e-HRM in the International Journal of HRM. Here I made a detailed analysis of many definitions and proposed to end the confusion by calling e-HRM:

An umbrella term covering all possible integration mechanisms and contents between HRM and Information Technologies aiming at creating value within and across organizations for targeted employees and management (Bondarouk and Ruël, 2009, p. 507).

I used to say that this definition was based on consensus among e-HRM researchers. I can be even proud that it earned a number of citations and entered into the e-HRM discourse.
Now, five years later I have to acknowledge – how vague a definition can be! As I was pointed at: “this definition was the result of a heated discussion among e-HRM researchers, rather than a consensus”. Well, it served the purpose to unite e-HRM researchers from different backgrounds and to give us all the feeling of the e-HRM identity.
It is also now time to explore the subject further and to define what new territory there is for e-HRM research. Instead of considering my own work of five years ago, I find it more interesting to refine this so it can pave the way for the e-HRM research to come and which will be my future research territory also.
The definition of e-HRM from 2009 leaves much room for interpretation and may involve content that cannot really be called e-HRM. The most important critique of that definition is that it views e-HRM as an empirical phenomenon only and not as a field of study (Ruël & Bondarouk, 2014). What are scholars researching when they study the empirical phenomenon they call e-HRM and for what reasons?
Therefore, I introduce the e-HRM territory (Figure 2) as a field of scholarly inquiry that focuses on all integration mechanisms and all HRM content shared via IT that aim 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. Therefore, the future research should aim to improve the understanding of this phenomenon and to contribute to its progress in terms of its 1) content, 2) design, 3) implementation, 4) its interaction with the organizational context, and 5) its consequences.
1.3 COMPOSING YET ANOTHER IT APPLICATION?

One challenge that e-HRM researchers have had to deal with is the question of what makes e-HRM different from other management areas that experience an ongoing IT ‘push’. My view on this has been and still is very clear: First of all, unlike many IT applications, e-HRM has a greater target scope in organizations. It involves up to 90% of all employees, including HR professionals, line managers, and employees (Ruël et al., 2004). The second aspect is related to differences in technological cognitive frames of those user-groups associated with the different intended goals of e-HRM serving specific target groups or tasks to be performed with e-HRM and their involvement in HR processes. The third aspect is the balance between mandatory and voluntarily use of e-HRM. I concur with my colleague from the University at Albany (NY, USA) Janet Marler on the idea that, while the IT studies examine factors influencing the use of IT as part of users jobs and day-to-day tasks, in the case of e-HRM, for the majority of targeted users e-HRM is mostly a matter of choice (Marler & Dulebohn, 2005). For HR professionals, operating with e-HRM may be a part of their everyday work routine. However, employees may up-date their address, bank information, or family status (through an
e-HR portal) once or twice a year and always contact HR professionals to do it for them. The fourth important aspect is a potential misinterpretation of e-HRM. This is grounded in firms’ business cases based on the dominance of voluntary use of e-HRM. An employee is encouraged (not obliged) to fill in on-line documents that are later taken into HR transactions as a mandated process. In other words, organizations build their business cases on significant cost savings expected from the voluntary use of e-HRM process (Marler & Dulebohn, 2005). The final difference derives from all the above. If the use of e-HRM is not necessarily binding for all groups of users, and different target groups develop their own ways of dealing with e-HRM, then organizations often face the situation when individual’s technological enthusiasm and decision to first use e-HRM is different from the decision to enact and continuously work with e-HRM.

To conclude at this point I would argue that it is only for HR professionals that e-HRM usage is directly related to their job tasks; line managers and employees are expected to use the e-HRM for reasons other than direct job-related outcomes. It seems reasonable to assume that employees will not be expected to use e-HRM that often. For example, such tasks as recording a new home address, bank account, or family status, terminating a work contract, or changing working hours will not occur very often for an individual employee. This may result in having to repetitively re-discover the ways to perform seemingly simple HR tasks that have been complicated by the e-HRM technology. Therefore, although HR task variety can be high for employees, task routineness may be low, and employees may perceive the performance of HR tasks through e-HRM as neither simple nor repetitive (Goodhue & Thompson, 1995). Finally, an overview of the task contents (Tables 1a-c) allows me to conclude that the HR tasks expected to be performed by employees using e-HR technologies may not have a highly significant impact on the lives of other people in the organization (Hackman & Oldham, 1975). In other words, the task significance for employees of using e-HRM is expected to be low.
<table>
<thead>
<tr>
<th>e-HRM functionality (examples)</th>
<th>Description of the tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>To consult</td>
<td>The employee can consult personal data such as their own staff card, staff-file and pay slip.</td>
</tr>
<tr>
<td>Personal details</td>
<td>The employee can adjust personal data like address and bank account.</td>
</tr>
<tr>
<td>Travel expenses</td>
<td>The employee can claim travel expenses, request a travel abroad, commuting costs, consult an overview of their claims and requests and register for travel compensations through the process ‘travel expenses’.</td>
</tr>
<tr>
<td>Leave</td>
<td>The employee can request and register a number of leave types.</td>
</tr>
<tr>
<td>Working time</td>
<td>The employee can request changes in working time.</td>
</tr>
<tr>
<td>Arrangements</td>
<td>The employee can request flexible benefits, pension, request an advanced payment of vacation money, savings and resume arrangement.</td>
</tr>
<tr>
<td>Claim</td>
<td>The employee can claim expenses for dinner compensation overtime and compensation medical treatment.</td>
</tr>
<tr>
<td>Terminate engagement</td>
<td>The employee can request to terminate his/her engagement.</td>
</tr>
<tr>
<td>Restrain</td>
<td>The employee can request, modify and terminate service reduction on salary. Examples of service reduction are contribution for trade union or staff association.</td>
</tr>
<tr>
<td>Staff conversations</td>
<td>The employee can register the data from the staff conversation with their manager regarding development and functioning.</td>
</tr>
<tr>
<td>To train</td>
<td>The employee can request and modify study facilities, register completed training and settle study facilities.</td>
</tr>
<tr>
<td>Expenses for home movement</td>
<td>The employee can request compensation for home movement and settle the expenses.</td>
</tr>
</tbody>
</table>

*Table 1a. Overview of possible functionalities inscribed in e-HRM for employees*
<table>
<thead>
<tr>
<th><strong>e-HRM functionality (examples)</strong></th>
<th><strong>Description of the tasks</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To consult</strong></td>
<td>The manager can consult data about his/her employees such as absence calendar, staff cards and (parts of) the staff-files.</td>
</tr>
<tr>
<td><strong>Task list</strong></td>
<td>The ‘task list’ contains requests from employees that need to be evaluated and notifications of executed processes.</td>
</tr>
<tr>
<td><strong>Reports</strong></td>
<td>The manager can request management information and operation reports such as staff absence and leave.</td>
</tr>
<tr>
<td><strong>To appoint</strong></td>
<td>The manager can modify a temporary appointment of an employee to a new temporary or fixed appointment.</td>
</tr>
<tr>
<td><strong>Staff conversations</strong></td>
<td>The manager can register the data from the staff conversation with an employee regarding development and functioning.</td>
</tr>
<tr>
<td><strong>To train</strong></td>
<td>The manager can modify data of study facilities of an employee.</td>
</tr>
<tr>
<td><strong>Grant</strong></td>
<td>The manager can assign a fixed grant for irregular shift or a grant for burdening circumstances to an employee.</td>
</tr>
<tr>
<td><strong>Compensate for damage</strong></td>
<td>The manager can assign a compensation for damage to an employee.</td>
</tr>
</tbody>
</table>

Table 1b. Overview of possible functionalities inscribed in e-HRM for managers

<table>
<thead>
<tr>
<th><strong>e-HRM functionality (examples)</strong></th>
<th><strong>Description of the tasks</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To consult</strong></td>
<td>The HR professional can consult data about employees such as staff cards and (parts of) the staff-files.</td>
</tr>
<tr>
<td><strong>Task list</strong></td>
<td>The ‘task list’ contains requests from employees that need to be completed or approved by the HR professional as well as notifications of executed processes.</td>
</tr>
<tr>
<td><strong>To appoint</strong></td>
<td>The HR professional can add the data of a new employee in e-HRM.</td>
</tr>
<tr>
<td>Terminate engagement</td>
<td>The HR professional can terminate the engagement of an employee and register data and payments.</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Staff conversations</td>
<td>The HR professional can register the appraisal date through the process ‘staff conversations’.</td>
</tr>
<tr>
<td>Corrections</td>
<td>In case of data errors the HR professional can correct the errors. These corrections can be executed for errors in personal details, compensations, restraints, leave, working time, etc.</td>
</tr>
<tr>
<td>Working time</td>
<td>The HR professional can request changes in working time for an employee.</td>
</tr>
<tr>
<td>Arrangements</td>
<td>The HR professional can register employees’ applications for teleworking.</td>
</tr>
<tr>
<td>To declare</td>
<td>The HR professional can register data with regard to commission and meeting compensation of employees.</td>
</tr>
<tr>
<td>Reports</td>
<td>The HR professional can request reports regarding formation and occupancy, staff absence, and completed training.</td>
</tr>
</tbody>
</table>

Table 1c: Overview of possible functionalities inscribed in e-HRM for HR professionals

1.4 SPECIAL ISSUES ON E-HRM

*Intermezzo - classical favourites for relaxing and dreaming*  
*(Oxford Dictionary)*

Allow me a short intermezzo to illustrate the richness of e-HRM research during the last one-and-a-half decades. My hidden purpose here is to show the contribution of the HRM research group in the University of Twente in this scholarly development. Out of ten special issues dedicated since 2004 to e-HRM, five originated at the University of Twente (Table 2). “New technologies are all around us. ... This is just as true in the field of human resource management...”, did Mark Huselid sincerely notice in 2004 in his Editor’s Note to the Special Issue on e-HR in the *Human Resource Management* when he also called for a deeper understanding of the consequences of e-HRM on the HR organization (Huselid, 2004). Four years later, in yet another Editor-in-Chief’s Note to one of the issues of the same journal, Theresa Welbourne advanced this topic by stressing the
role of IT in social networks of HR academics and practitioners (Welbourne, 2008).

Five years later, in 2009, two Special Issues on e-HRM were published in The Journal of Managerial Psychology and The International Journal of Human Resource Management (IJHRM) respectively. The first focused on the “paradigm shift in HRM practices” related to “the amount, quality, and utilization of technology in HRM service delivery” (Gueutal, 2009). The central theme of the articles in the IJHRM was value creation through e-HRM (Bondarouk & Ruël, 2009). Contributors to this special issue searched for an answer whether e-HRM is paid to be innovative and whether it builds competitive advantage or mirrors competitive necessity. In 2010 the International Journal of Training and Development published a Special Issue on e-learning in a business context aiming to understand the directions and focal points for e-learning and blended learning within different organizations in a global context, especially within emerging economies (Bondarouk & Ruël, 2010a). In the same year, the International Journal of Technology and Human Interaction published two Special Issues: one on the IT and Workforce Management; and, another one e-HRM in a Cross-National Context (Bondarouk & Ruël, 2010b-c).

After a two-year break, three Special Issues on e-HRM, one after another, appeared in international journals. The German Journal of Research in Human Resource Management dedicated its pages to the evidence-based transformation of HRM enabled by Information Technologies (Strohmeier et al., 2012). Emerging topics in theory and research on electronic HRM formed a Special Issue in Human Resource Management Review (Stone & Dulebohn, 2013) that aimed to advance theory and offer new directions for research and practice and enhancing (understanding of) effectiveness of e-HRM in organizations. The European Journal of International Management inspired the set of articles on e-HRM in multinational corporations (Ruël & Bondarouk, 2013); and the special issue in the Journal of Strategic Information Systems explored reasons of limited exploitation of HR information systems (Grant & Newell, 2013). The latest Special Issue was published in Employee Relations about HRM in the digital era in 2014. Strohmeier and Parry (2014) collected a set of wonderful articles covering three focal areas: “digital employees”, “digital work”, and “digital employee management”.

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal</th>
<th>Special Issue title / focus</th>
<th>Guest editors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Human Resource Management</td>
<td>e-HR: the intersection of Information Technology and Human Resource Management / a variety of ways in which IT affects the HR profession</td>
<td>J.M. Stanton and M.D. Coover</td>
</tr>
<tr>
<td>2010</td>
<td>International Journal of Technology and Human Interaction</td>
<td>The intersection of IT and workforce management – a maturing research field / overview of the recent developments within e-HRM and addressing methodological issues in e-HRM research</td>
<td>T. Bondarouk and H.J.M. Ruël</td>
</tr>
<tr>
<td>2010</td>
<td>International Journal of Technology and Human Interaction</td>
<td>Framing e-HRM in a cross-national context / conditions for successful implementation of e-HRM in a global context</td>
<td>T. Bondarouk and H.J.M. Ruël</td>
</tr>
<tr>
<td>Year</td>
<td>Journal Title</td>
<td>Article Title</td>
<td>Authors</td>
</tr>
<tr>
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</tr>
<tr>
<td>2013</td>
<td>Journal of Strategic Information Systems</td>
<td>Realizing the strategic potential of e-HRM / explaining limited exploitation of e-HRM by people factors</td>
<td>D. Grant and S. Newell</td>
</tr>
<tr>
<td>2014</td>
<td>Employee Relations</td>
<td>HRM in the digital age – digital changes and challenges of the HR profession / denotes along three foci, digital employees, digital work, and digital employee management</td>
<td>S. Strohmeier and E. Parry</td>
</tr>
</tbody>
</table>

Table 2. Overview of Special Issues in international peer-refereed journals on e-HRM (2004 – 2014)
Clearly, e-HRM research has flourished over the past decade considering the number of special issues in peer-reviewed international journals. Topic wise the field developed from working on its boundaries, definitions and challenges (more inward looking) to a more outward-looking view by focusing on its context, the multinational firm, cross-cultural issues, its strategic potential and its impact on the HR profession. Interestingly, so far only US and European journals have published special issues on e-HRM. However, based on the interest from our colleagues in Malaysia and Indonesia, e-HRM research is growing in Asia as well.
PART 2.
MAIN ACHIEVEMENTS IN THE E-HRM RESEARCH

*Andante – a musical composition or musical passage to be performed moderately slow (Oxford Dictionary)*

Now it is time for me to review what has been empirically found within the e-HRM research field. How might we call this: Orchestration or Instrumentation?

*Those who compose for an orchestra are usually thinking about the orchestration from the beginning of the process. Some use the terms Orchestration and Instrumentation interchangeably. However, instrumentation deals with separate elements, individual instruments, while orchestration has to do with combining them all into orchestra.*

2.1 WHAT ARE THE BENEFITS OF E-HRM?

In all special issues, single numerous publications of the colleagues around the world, and in my own works on e-HRM, we all have been searching for an e-HRM Holy Grail: does e-HRM contribute to organizational benefits/outcomes/performance? Does e-HRM make People Management better… faster… more efficient…. easier…? Does it bring long awaited cost benefits in the HRM function? And if so, how exactly? And if not, why not?

Since the publication by Dave Lepak and Scott Snell about three types of e-HRM benefits, researchers use their typology and talk about operational benefits of e-HRM (data quality, HR cost savings, HR efficiency), relational benefits (HR attitude management, HR communications, HR status, HR relationship management, HR service improvement), and transformational e-HRM benefits (HR globalization, HR knowledge management, HR planning, strategic change management) (Lepak & Snell, 1998). Together with Elfi Furtmueller we analysed more than 300 publications on e-HRM
produced since the 1970s. We found that the positive consequences of e-HRM increased for each of the three types of benefits since 1970, with a notable perceived prevalence of transformational benefits of e-HRM (Figure 3).

Figure 3. Identified e-HRM business consequences from 1970 to 2000

A more detailed analysis shows 115 (!) consequences of e-HRM implementation starting from 1970. Importantly, in 1970-80s only ten e-HRM consequences were mentioned in the literature. HR practitioners should be happy to hear this – instead of only cost reduction they can table more than one hundred consequences and convince their management teams to start the e-HRM symphony.

However, a closer look allows us to distinguish seven large groups of strategic benefits of e-HRM (Bondarouk & Ruël, 2013):

- Cost-efficiency within HRM processes, reduction of headcounts from HR
- The generation of HR metrics to support strategic decision-making
- The automation of routine HR tasks and replacing ‘filing cabinets’
- The branding of organizations and improving the organizational image
- Freeing HR staff from administrative burdens and allowing them to undertake strategic people-management activities
- Empowerment of managers through the development and support of management capacity to conduct HR activities
- Improving talent management through e-selection, self-assessment and e-performance management
- Transforming HR professionals from administrative paper handlers to strategic partners.

2.2 WHAT CAN WE LEARN FROM THE HISTORY OF E-HRM RESEARCH?

In the beginning of my research I collected all articles I could find related to e-HRM and/or HRIS. This lasted for three-four years when I realized that, after having digitalized about 400 articles, I still could not track all publications and compete with the pace of publications and conference presentations.

I have already mentioned the joint work with Elfi Furtmueller. In addition, there was the graduate student, Ferry de Wit, who joined our ‘archaeological’ work into e-HRM. We found that e-HRM has been a subject of research since 1971 (Mayer, 1971). Inspired by the research question: what factors affect the success of e-HRM through the four decades of research? we made a selection of 299 academic publications for an analysis of e-HRM research over four decades. We mapped four aspects that influenced adoption and consequences of e-HRM: technology (T), organizational (O), people (P), and environmental (E). These TOPE factors appeared to belong to two research streams: adoption of e-HRM and factors affecting consequences of e-HRM (Figure 4).

![Figure 4. Two streams in the e-HRM research (adopted from De Wit, 2011)](image)
The review of articles published in 1970-1989 has shown that the authors did not yet speak of e-HRM, but mostly used the terms Human Resource Information Systems (e.g. Mathys & LaVan, 1982), Computerized Information Systems in personnel (Tomeski & Lazarus, 1974) or Personnel Systems (Lederer, 1971) for describing computerized support for the personnel department. In that early period one research stream described the status of HRIS in organizations and explored areas that were being automated. A second stream described factors leading to implementation consequences. Increased reporting requirements demanded by the government (e.g. Equal Employment Opportunity Act (1965) in the USA) and growth of organizational size, and thus the need for more advanced and comprehensive data storage and retrieval are mentioned as major pressures for adopting digital systems. Consequently, payroll systems, employee records, compensation and benefits administration, government reporting and skill inventories were the first to be automated. The 1990s did not change the terminology and the word “e-HRM” had not emerged in the literature. Organizations showed an increased awareness for the broader possibilities of implementing computer systems in HRM. For instance, one of the first was the research of Kossek et al. (1994) who investigated the implementation of an HRIS for strategic purposes. In parallel to the linguistic turn in the management literature, scholars started to explore the definitions of computer systems for HR processes: virtual HRM, HRIS, web-based HR. Single academic studies showed interests in different attitudes towards the HRIS (Kossek et al., 1994), international differences in HRIS adoption (Martinsons, 1994) and even a quantitative study on HRIS user satisfaction (Haines & Petit, 1997). However, there was still very little research on the relationships between e-HRM factors and consequences. Finally, the term e-HRM came to the academic studies and led to a deeper discussion on terminology. The difference between HRIS and e-HRM was clarified (Ruël et al., 2004): while an HRIS was directed towards the HR department itself, e-HRM was directed towards the whole organization. E-HRM studies started to explore different factors affecting the implementation and HRM successes, changes in the nature of interactions between HR professionals, line managers and employees, tasks divisions, international e-HRM, convergence-divergence in HRIS in MNCs, unanticipated e-HRM outcomes and the role of the contexts in e-HRM implementations and outcomes.
The literature review synthesized empirical e-HRM studies scattered throughout HRM, organizational behaviour, psychology, and management and information systems literature, in order to guide e-HRM scholars from these different disciplines (Bondarouk & Furtmueller, 2012). In summary, it boils down to a number of major e-HRM themes and key changes along the path as illustrated below (Table 3).

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>– Conceptualizing HRIS phenomenon</td>
<td>– Various terms for computerization of personnel departments</td>
<td>– Conceptualizing HRIS vs. e-HRM</td>
</tr>
<tr>
<td>– Mostly large organizations computerize personnel departments (early adopters)</td>
<td>– Mostly large organizations computerize personnel departments</td>
<td>– Large, medium-size and small organizations computerize or outsource personnel affairs</td>
</tr>
<tr>
<td>– Pressure for computerization due to organizational growth and increase in white collar work</td>
<td></td>
<td>– Organizations with high telecommuting adopt e-HRM</td>
</tr>
<tr>
<td>– Warnings of de-humanizing personnel departments</td>
<td></td>
<td>– Large organizations adopt earlier, but smaller organizations report greater e-HRM success</td>
</tr>
<tr>
<td>HR administrative role</td>
<td>HR relational role</td>
<td>HR transformational role</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Focus on development of applications for internal use within HR departments</td>
<td>Focus on development of applications for internal use within HR departments</td>
<td>Focus on development of applications for line managers and employees (users outside HR departments)</td>
</tr>
<tr>
<td>HRIS supports HR department goals</td>
<td>HRIS supports HR department goals</td>
<td>e-HRM supports long-term organizational goals</td>
</tr>
<tr>
<td>Lack of top management support for HRIS</td>
<td>Lack of top management support for HRIS</td>
<td>Increasing support of top management, HR, IT and Finance executives</td>
</tr>
<tr>
<td>Increasing support of HR, IT and Finance executives and employees</td>
<td>Decreasing support of line managers and employees</td>
<td></td>
</tr>
<tr>
<td>Scant empirical research on implementation factors and consequences</td>
<td>Scant empirical research on implementation factors and consequences</td>
<td>Increase in empirical research on implementation factors and consequences</td>
</tr>
<tr>
<td>Research focus on implementation factors, (enablers, success factors, constraints)</td>
<td>Research focus on consequences (benefits)</td>
<td>Increase in academic e-HRM literature (special issues in ISI journals)</td>
</tr>
<tr>
<td>Conceptual and case study research, survey research without testing relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on technology factors for successful implementations</td>
<td>Focus on organizational factors for successful implementations</td>
<td>Focus on people factors for successful implementations</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>-------------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>HRIS consequences: focus on operational cost savings, efficiency and effectiveness gains</td>
<td>HRIS consequences: focus on operational and increasingly relational consequences (HR Service Improvements, HR Relationship Management, HR Status)</td>
<td>e-HRM consequences: focus on transformational consequences (HR Globalization, HR Strategic Change Management, HR Knowledge Management, HR Planning) next to operational and relational consequences</td>
</tr>
<tr>
<td>In-house development, technical integration of systems, centralizing, interfacing, customizing data</td>
<td>In-house vs. outsourcing development decision making, integrating systems, usability, standardization</td>
<td>Global vs. local development and integration of systems: compatibility across subsidiaries, local adaption of e-HRM, language standardization</td>
</tr>
</tbody>
</table>

| Lack of technical skills | Training HRIS skills supports effective implementation | Training e-HRM, intranet, knowledge management, leadership and strategic planning skills support effective implementation |
| Communication difficulty between HR and IT departments constrain effective implementation |

2.3 FACTORS INFLUENCING E-HRM SUCCESS: ADOPTION AND CONSEQUENCES DIVIDED

I hope that HR professionals recognise the more than 100 benefits they can expect from e-HRM. I think that, even at this point, they expect from me a recipe-book to point at three or four factors that will bring them e-HRM success.

Our research has shown that since 1970s 168 factors have been found empirically to be responsible for the e-HRM adoption and 95 factors for the e-HRM consequences. How to orchestrate them all? What are the key, style, dynamics, range, character (is it a blend or a balance; big bang or march-like)?

These numbers are the nightmare for an academic who wants to give clear-cut advice on how to implement e-HRM... How can anyone make sense of these numbers? Does it mean we are lost in a meta-analysis, or in translations, or in understanding of it?

Let me clarify this issue. When looking at our findings from the overview of e-HRM research over four decades (Bondarouk & Furtmueller, 2012), the first observation was that the literature was divided into two research streams which described different types of e-HRM success. The first research stream concerned the adoption of e-HRM and factors affecting successful adoption. The second stream concerned consequences of
e-HRM. This distinction was present throughout all decades, although the accents differed. The second finding was that all factors, whether affecting adoption or consequences, can be categorized according to the TOPE framework. Although some factors do show a relation to multiple categories, and whilst the categories are not mutually exclusive, I think this framework provides a grounded distinction. The third observation was that the most important factors affecting adoption, as well as consequences of e-HRM, reside in the category “people factors”. Although technology and organizational factors were necessary prerequisites, people factors, and especially the mindsets within certain organizational cultures, were found to make the difference.

Three main categories were found to shape the Technology-based factors: IT architecture; data quality; and, technology project management; with such examples of sub-factors like: quality of applications; ease of use; language standardization; compatibility of IS; and, integrating vendors. Organizational factors gave a wider spectrum with five categories influencing e-HRM implementation: organizational knowledge and skills; policies and practices; project management traditions; resources; and, demographics. Within this category, various sub-factors involve resources: IT expertise; mapping HR processes; cross-functional teams; and. HR ICT governance structure. Finally, People Factors cover: employee management; employee involvement; skills; and, communications (Bondarouk & Furtmueller, 2012). Figures 5a-c show an overview of the TOPE factors.

Figure 5a. Impact of Technology factors on e-HRM consequences
Figure 5b. Impact of Organizational factors on e-HRM consequences

Figure 5c. Impact of People factors on e-HRM consequences
There is a light at the end of this tunnel. In the last decade I have observed a significant increase in the relevance of ‘People Factors’ for successful implementation (Figure 6). Increasingly, people have been found central to determining e-HRM effectiveness. This trend was evident already in 2004 when we observed that implementing e-HRM effectively in an organization required a change in employees’ mindsets, since it required them to do their work differently.

... About changes in the mindsets. What a beautiful instrumentation of resistance! HR professionals resist to go digital as they are used to hug and talk in person with employees; classic Strategic HRM scholars resist to welcome the field as it sounds too narrow – too pianistic; editors, who invite on the pages of their editorial addresses multidisciplinary manuscripts, - in the end, do not know what to do with e-HRM compositions...

![Figure 6. Factors influencing e-HRM adoption (from De Wit, 2011)](image)

2.4 USAGE, ADOPTION OR ENACTMENT OF E-HRM? RESULTS OF EMPIRICAL STUDIES

I would like to share with you results of four empirical studies that, in my view, challenge the e-HRM research and practice.
STUDY 1: TECHNICAL AND STRATEGIC EFFECTIVENESS OF HRM

Together with Huub Ruël and Mandy van der Velde (University of Utrecht), we conducted a quantitative study on the question as to whether e-HRM contributes to HRM effectiveness. For this purpose, we measured using a stratified sample the extent to which e-HRM applications were perceived as being appropriate for their use and the extent to which employees perceived the resulting HRM to be effective. This was carried out in a large governmental organization, the Dutch Ministry of Interior and Kingdom Relations. We followed the suggestion of Huselid et al. (1997) that HRM seeks approval for its activities in socially constructed environments and to meet the expectations of stakeholders. Thus, we explored the influence of e-HRM on two types of HRM effectiveness. The first type concerned traditional HRM activities similar across different organizations, labelled "technical" by Huselid et al. (1997). The second type concerned strategic HRM activities seen as HRM innovations in companies. Huselid et al. (1997) noted that, despite a lack of full agreement on what is means, there is a broad acknowledgement that strategic HRM involves the development and implementation of policies aligned with business strategy. Our survey was conducted among 277 e-HRM users (186 operational employees, 47 managers and 44 HR professionals).

Inspired by the IT scholarly tradition, we assumed that the perceptions about the job relevance, quality and ease of use of e-HRM tools positively affect technical and strategic HRM effectiveness.

The outcome of the data analysis showed, surprisingly, that only the quality aspect of the e-HRM application had significant and positive effects on strategic HRM effectiveness ($\beta = 0.35; p = 0.003; n = 100$) and on technical HRM effectiveness ($\beta = 0.41; p = 0.001; n = 100$). This means that how employees and managers judge the content and design of the e-HRM application determines (at least statistically) the extent to which they perceive the HRM to be technically and strategically effective. When employees are more positive about the content and the structure of an e-HRM application, they tend to see an increase in technical and strategic HRM effectiveness (Figure 7, Table 4). The fact that the other two aspects, job relevance and ease of use, did not have a significant effect on HRM effectiveness surprised us, since these two aspects have been shown to be important determinants in case studies on IT implementation and the acceptance of new IT systems by users (Ruël et al., 2007).
Figure 7. Hypothesized and revealed relationships between e-HRM and HRM effectiveness

<table>
<thead>
<tr>
<th>Dependent variable: Technical HRM effectiveness</th>
<th>Non-standardised coefficients</th>
<th>Standardised Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant)</td>
<td>2.494</td>
<td></td>
<td>8.969</td>
<td>0.000</td>
<td>0.120</td>
</tr>
<tr>
<td>Ease of use</td>
<td>-0.037</td>
<td>-0.046</td>
<td>-0.359</td>
<td>0.720</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>0.316</td>
<td>0.414</td>
<td>3.281</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Job relevance</td>
<td>-0.004</td>
<td>-0.006</td>
<td>-0.054</td>
<td>0.957</td>
<td></td>
</tr>
</tbody>
</table>
Dependent variable: Strategic HRM effectiveness

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-value</th>
<th>p-value</th>
<th>HRM Effectiveness (Ruel et al., 2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant)</td>
<td>1.206</td>
<td>0.294</td>
<td>4.107</td>
<td>0.000</td>
<td>0.265</td>
</tr>
<tr>
<td>Ease of use</td>
<td>0.103</td>
<td>0.109</td>
<td>0.110</td>
<td>0.943</td>
<td>0.348</td>
</tr>
<tr>
<td>Quality</td>
<td>0.305</td>
<td>0.102</td>
<td>0.346</td>
<td>3.000</td>
<td>0.003</td>
</tr>
<tr>
<td>Job relevance</td>
<td>0.133</td>
<td>0.078</td>
<td>0.174</td>
<td>1.705</td>
<td>0.091</td>
</tr>
</tbody>
</table>

Table 4. Results of regression analysis: assessment of e-HRM applications and strategic and technical HRM effectiveness (Ruel et al., 2007)

STUDY2: DIFFERENCES IN E-HRM PERCEPTIONS

The qualitative study at the Dutch Ministry of the Interior and Kingdom Relations aimed to explore the relationships between the perceived usefulness and ease of use of e-HRM tools and HRM effectiveness. Together with colleagues Huub Ruël and Beatrice van der Heijden (Open University, The Netherlands), we looked at two different groups of users: line managers and employees. Interviews were conducted with line managers and with employees about the functioning of the e-HRM applications within the field of career development including: (1) performance interview; (2) personal development (competence management); (3) 360 degree feedback; and (4) mobility bank. The respondents were randomly selected based upon their availability and willingness to participate in the research. Our sample comprised five different departments: (1) Document management; (2) Juridical affairs; (3) International collaboration; (4) IT; and (5) Knowledge and information centre.

Our findings showed that e-career development was perceived differently by line managers and employees. Unfortunately, those differences were not fully taken into account in the content design. The differences revealed a call for a multi-stakeholder approach in e-HRM studies. Line managers and employees do have different, sometimes conflicting viewpoints that result in their different perceptions of usefulness and value of e-HRM. Effectiveness of HRM was clearly shown to have different meanings for different stakeholder groups. This highlights that if HRM professionals delegate their administrative tasks via e-HRM applications to the line managers, then we should probably not talk about HRM efficiency as
the main goal of e-HRM. Rather we suggest considering that e-HRM inflames differences in perceived effectiveness of HRM by different stakeholders. Such a switch in the traditional belief in e-HRM creates an opportunity to investigate interests of different groups of e-HRM users in HRM. Our key point is that to rely exclusively on efficiency measures will camouflage other important measures of the e-HRM contribution to the HRM effectiveness (Bondarouk et al., 2009).

**STUDY 3: DOES THE E-HRM USAGE MATTER?**

*Dissonance is a combination of notes that sound harsh or unpleasant to most people (Oxford Dictionary)*

In 2008 I collected the data about the usage of e-HRM in a Belgian Ministry of Healthcare. Together with Rainer Harms, we conducted the survey analysis of data from amongst employees who were supposed to use the PeopleSoft e-HRM system, called DeBOHRA. We presented our results in a couple of academic conferences and were even awarded the Best Paper Award in the Dutch HRM Network conference.... and got stuck in a publication loop. Our results were clearly dissonating for those who think that the usage of e-HRM should enhance HRM services. We assumed that the potential advantages of e-HRM would be dependent on how the e-HRM technology was used. Specifically, we examined the relationship between e-HRM and HRM service quality and argued that the key drivers of HRM service quality are the strengths of HRM and of e-HRM. We expected this relationship to be mediated by the frequency of e-HRM usage. In addition, the degree to which mediation occurs was assumed to differ within regimes of high and low e-HRM appropriation. We used moderated mediation analysis on a sample of 140 employees. Our results have been consistent using various conceptualizations of the dependent variables and across different frequencies of e-HRM use and e-HRM appropriation; but we had to conclude that the relationships between antecedents and outcomes were not dependent on how often and/or how well employees used the e-HRM technology (Bondarouk & Harms, 2009).

However, what we did find was that the direct effects models indicated a good overall model quality for both HRM- and e-HRM strengths. The direct effects model of HRM strength showed explanation between 44.7% and 51.3% of the variance in the dependent variables (HRM service quality). The coefficients of HRM strength have been all found
strong (between .606 and .686), and significant at the 1% level. The direct effects models of e-HRM strength explained from 18.4% to 46.6% of the variance in the HRM service quality. The e-HRM strength coefficients were all strong (between .395 and .610), and significant at the 1% level (Figures 8a-b).

Figure 8a. Hypothesized relationships between IT and HRM Strengths of e-HRM, frequency and appropriation of e-HRM use, and HRM service quality.
Albeit with some caution, we said that HRM strength seemed to play a stronger role than e-applications in HRM service quality. We did not underestimate the role of technological properties: they also had a strong explanatory power in HRM service quality. However, the comparison of the two antecedents showed the greater influence of HRM strength (Bondarouk & Harms, 2009).

I hope now to get HR professionals involved. Our findings mean a simple thing: we cannot start orchestrating e-HRM unless we have all HR instruments in the right place and well-tuned. Do not come to a strategic table unless you do not get an HRM rhythm to make the music.

**STUDY 4: DOES E-HRM TRANSFORM THE HR FUNCTION?**

Here I will refer to three interpretive studies, both dealing with the IT-enabled HRM transformation. The first field study was inspired by the question: to what extent does the management of employee relationships and the HR function in companies change with the planned use of web-tools for HRM purposes? The project was conducted within five large global companies within the chemical, telecom, IT, automobile, and the bank sectors, each having >15,000 employees. The selected companies
all had a good reputation regarding developments in e-HRM (Bondarouk & Ruël, 2008). The data came from open interviews with 75 employees who were either members of the works council, coaches, team leaders, HR professionals and employees without managerial responsibilities. In order to become a real global company, HR policies and practices need to be the same in all the corners of the globe where a company is present. However, institutional factors became barriers for centralized HRM. For the HR department, introducing e-HRM appeared to be a ‘push-factor’ for changing HRM within an organization: from a bureaucratic approach towards a market approach.

All e-HRM users emphasized three main organizational changes forced by the IT-enabled HRM change. First, new job functions were introduced like team coaches who had mostly social team-leading responsibilities or who were e-HRM managers. The increased communication and transparency of HR information were interpreted by all groups as an organizational change encouraged and supported by the e-HRM. Regarding HR task division, HR specialists and line managers noted that, with the introduction of e-HRM, much of the HR work goes to the line managers, and even the support personnel became involved in HR tasks. The number of HR specialists has decreased and the role of the HR department has changed from a role of policing into advisors.

The second study was conducted at a large federal governmental organization in Belgium, with a seven-year history of introducing an Oracle HR project (this makes me think about our university) (Bondarouk & Ruël, 2013). Oracle HRM contained various modules offering HR applications such as: managing personnel data; training and development; recruitment and selection; personnel planning; e-learning; HR report generation; holiday administration; workflow registration; and, payroll management. The study indicated that four HR role types from Ulrich (1997) could be reduced to two: HR as people manager; and, HR as business associate. Further, HR professionals rated themselves as moderate in terms of both role types, other respondent groups (line managers and non-managerial employees) rated the HR professionals as moderate to low on both role types. In the interviews, the HR specialists expressed the view that they did not see their work as now involving less administration or that it become easier. For example, HR specialists commented:
“People who were busy with HR administration 5 years ago—they still do the same. New HR employees are mostly busy with strategy and policies. But that is due to our new HR director and not due to Oracle HR”
(from an interview with an HR professional)

“My tasks did not become easier, maybe only making reports and checking the data are easier. But talking about my main responsibility—the staffing plan—this is as intensive as before Oracle HR”
(from an interview with an HR professional)

At the same time, all the interviewees acknowledged changes in the vision of the HRM department. They saw it as becoming more strategic: oriented towards people and organization development. However, attributing this HR strategic orientation to the introduction of Oracle HR seemed questionable. Mostly, interviewees attributed this re-orientation to the new vision of HRM work in general.

In terms of time spent on HRM activities since the introduction of Oracle, the line managers most highly rated their involvement in HR administration. Similarly, non-managerial employees rated their involvement in HR administration the highest. All respondents perceived that, since the implementation of Oracle HR, most of the time they did spend on HR was on administration activities (checking, recording and organizing personnel data). Line managers became mostly, in terms of HR, busy with the following tasks: career opportunities; career planning and development; individual development cycles; and, personnel planning.

The third study, published in 2013, together with Jeroen Meijerink, reported the results of a project that did not seem relevant for e-HRM – implementation of HR Shared Service Center, G-Share, within again a Dutch governmental organizations (Meijerink & Bondarouk, 2013). HR Shared Services have become possible only after e-HRM has been introduced in organizations: technological support and enablement of HR services delivery from a semi-autonomous business unit towards the customers within firms and organizations. Indeed, the HR staff who were re-employed at G-Share were stationed in centralized locations in the Netherlands, and alternated between offering a first-tier call-handling service and a specialist second-tier follow-up work. G-Share offered the following shared HR services: an HR portal which housed: (1) Employee and management self-services (ESS and MSS); (2) Personnel data and
management information; and (3) General information on payroll and personnel administration.

All it said is that the service centre fulfilled a key characteristic: the central bundling of HR resources and enabled by IT. The e-HRM consisted of more than 10 databases covering numerous datasets for payroll, absence and secondary benefits. Both groups of the line managers and employees had to master their IT skills before the HR shared service could go live. However, our research observations showed that HRM employees had a limited ability to retrieve data from the database. Such a complexity of HR Shared Services has been predicted conceptually when we considered the dynamic capabilities approach with Marco Maatman (Maatman et al., 2010).

To share with you results of more than 40 e-HRM research projects I engaged in during the past decade would not contribute to the “e-HRM Symphony”. On the contrary it would sound exhaustive. At this point, I want to make decisions about how faithful I am in the orchestrating to the original idea. Do I need to make changes, such as simplifying rhythms, changing octaves, stretching the sound palette or condensing it? Let me consider the possible articulations. Are the e-HRM instruments we chose able to do what we want for HRM? Let me now look forward and make sure that we take into account the effects, dynamic changes, masking problems, balance, blend and choices.
PART 3.
E-HRM CHALLENGES IN RESEARCH AND PRACTICES: JAZZ IT UP!

E-HRM consultants have made considerable efforts to assert that by making HR digital, HRM systems will become strategically oriented by freeing HRM professionals from administrative work and devolving HRM tasks to line managers and employees. E-HRM researchers have endeavoured to critically assess these claims and to understand how to orchestrate HRM and IT into an e-HRM symphony enjoyed by e-HRM user groups.

I am convinced that there is no need to repeat all of the promises that have been accounted to e-HRM, including cost reduction, improving HR services or the strategic orientation of HR specialists. It is now acknowledged that across different e-HRM studies, research has echoed contradictory organizational reality: some HR activities benefitted by adopting e-HRM (cost savings, efficiency, flexible services, employees participation), whereas others acquired extra organisational barriers (work stress, more HR administration and disappointments with technological properties) (for a detailed overview, see works of Stefan Strohmeier).

Given these findings, I propose to make a switch in the focal points of the e-HRM research. For the past few years, business cases in e-HRM have been predominantly built upon cost containment and return on investment, making these the main research foci. I suggest, what I call theoretical, empirical, and implementation challenges as a substitution to the business case foci.

My experience in serving as the co-organiser of two European Academic Workshops on e-HRM and two International Workshops on HRIS has taught me a great deal, simultaneously highlighting the importance of mutual understanding between such seemingly polar scientific fields as IT and HRM, and underlining how much more work is needed to bring them together.
3.1 THEORETICAL CHALLENGES

As I mentioned earlier, collecting individual articles has become an almost useless practice over the last ten years, as I have realised that in different parts of the world a huge number have been published on the subject. Recently, together with PhD researcher, Dustin Schilling, I studied six existing literature reviews of e-HRM research conducted between 2007 and 2014. This analysis allowed us to sense the evolution of conceptual and empirical e-HRM studies (Figure 9):

Figure 9. Overview of e-HRM reviews: leading topics and desired research directions (Schilling, 2014)

In the first review, Stefan Strohmeier concluded that research on e-HRM appeared to have formed an “initial body of empirical research” (Strohmeier, 2007, p.19), though this seemed to lack sufficient focus to assert itself as its own field quite yet. Bondarouk and Ruël (2009) encouraged scholars to reduce studies on cost effectiveness and to concentrate instead on reducing the ambiguity of e-HRM content. In 2012, Bondarouk and Furmueller focused predominately on e-HRM effectiveness and observed that the literature was centred primarily on the human aspects of e-HRM implementation. Marler and Fisher (2013)
provided the evidence-based guidance for strategic management-HRM research and criticised e-HRM research for being too deterministic. A review of e-HRM research, from the perspective of the IS literature and MNCs by Van Geffen et al. (2013), concluded that most e-HRM research was rooted in HR, instead of forming a good balance between IT literature and a predominant focus on post-implementation issues, whereas the IS literature additionally offered a number of topics regarding pre-implementation and implementation. The most recent review on e-HRM research was published in 2014 by Ruël and Bondarouk. It reviewed the challenges and concluded that e-HRM was seen to be not precise enough and, thus, not accountable for much in practice.

The overview of e-HRM international conferences led me to deduce that the research focus is drifting from one Call for Papers to another. While in 2006 researchers were eager to strengthen the theoretical foundation of e-HRM, in 2008 their focus shifted towards exploring new topics, such as the impact of e-HRM on the traditional HRM function. In 2010, a great debate arose on the rigor and relevance of e-HRM research. In 2012, the link between creativity and e-HRM emerged. The recent 2014 conference has marked a tipping point where both the strengthening of the theoretical basis and the exploration of new topics were called for. I am still puzzled by the question of whether the pattern of e-HRM research is in a recurring loop. Yet, from what I have observed, the regretful answer is yes. The last three reviews (Marler & Fisher, 2013; Van Geffen et al., 2013 and Ruël & Bondarouk, 2014) called for a strengthening of the theoretical basis of e-HRM research. I join this call and see my research task and duty to engage with a solid foundation of e-HRM conceptualization.

To address the grand theoretical challenge I call for plurality of political, behavioural, institutional, economic, sociological and cultural conceptual lenses. Each of them brings its own specific set of research questions. A political lens questions the role of power and how it is exercised in e-HRM projects and rollouts, and how power plays a role in the standardization and localization of e-HRM. A behavioural lens focuses on the role of individual actions and interpersonal interactions. An economic lens focuses on quantifying the costs and benefits of standardization and localization of e-HRM. An institutional lens deals with the social construction, and a cultural lens helps to clarify how the cultural background of factors involved in e-HRM projects play a role in shaping e-HRM.
Finally, comparative studies on e-HRM are needed to place e-HRM goals, types and outcomes in different national and cultural contexts. From such studies researchers and practitioners can learn how context and e-HRM ‘content’ influence each other.

3.2 THREE E-HRM EMPIRICAL CHALLENGES – NEW QUESTIONS

First, let’s start with the end users: HR professionals, line managers and employees. It is their perceptions of e-HRM applications that determine, to a great extent, how and whether e-HRM will be used. It is by being transferred and filtered through perceptions, understanding and experience that an HRM system gains its quality. Together with Anna Bos-Nehles and Xanthe Hesselink, we explored the HRM actors’ perceptions of organisational processes, filtered through their existing mental frames that formed the basis for the formulation and interpretation of organisational issues in a healthcare organization (Bondarouk et al., 2014). Thus, the successful implementation of changes to HRM processes depends heavily on the organisation’s members’ perceptions. Social cognitive theorists have shown that a shared meaning leads to better organisational performance, increased organisational effectiveness and more successful implementation of HRM changes and innovations. On the contrary, incongruent frames lead to different understandings and conflicting interpretations expressed in process loss and misaligned expectations, contradictory actions, resistance and scepticism. Together with Bart Lempsink and Jan Kees Looise, we explored e-career development as perceived by line managers and HR professionals at Vos Bouw-Divisie in 2009 (Bondarouk et al., 2009). I am glad to continue this line of research. It grew into a large project that explores the mechanisms and dynamics of so-called HRM frames on HRM innovations. Together with a group of seven master students, I have been searching for answers to such questions as: what constitutes e-HRM frames by line managers and employees? Are these differences contingent on a type of e-HRM, sector or an HR application? Is information technology a suitable medium for HRM devolution? This project has been conducted with the help of C-managers of KLM AirFrance, Zara, PepsiCo, Philips, Van Drie Groep and TSN Thuiszorg. I am glad that Carole Tansley will join my effort to finalise this research project that will greatly benefit from her interpretive research tradition (Tansley & Newell, 2007; Tansley et al., 2001).
Line managers have become crucial actors by taking over the responsibility of managing operational-level employees (Bos-Nehles, 2010) with more work being devolved to them over the past few years (Renwick, 2003). Therefore, they play an important strategic role in designing, conveying information about and implementing HR practices (Delmotte et al., 2012). Within the term “line managers” my colleague Bos-Nehles rightly distinguishes between middle-level or middle managers and frontline managers. She writes that, whereas, the latter have direct supervisory responsibility, middle managers are responsible for the coordination of an organisational unit’s day-to-day activities. Involving line managers in the implementation and enactment of the HRM system enabled by IT is another challenge for future research and for joint collaborative research plans with Anna Bos-Nehles. I will not surprise anyone if I say that HR professionals and line managers are expected to work together in partnership, with the HR function playing a sparring partner role to the line in providing support and advice about people management. Therefore:

**Challenge 1: to empirically explore the HRM frames responsible for differences in interpretations of e-HRM by different stakeholders and thus – for its success.**

Second, e-HRM diffusion in various international contexts has been researched by Miguel Olivas-Luján and other colleagues (Florkowski & Olivas-Luján, 2006; Olivas-Luján et al., 2007). We have continued this line of research inquiry, and learned from the research conducted in Indonesia by Dustin Schilling (Schilling et al., 2014), that, in that particular international context, the users of e-HRM applications have little to no voice in the implementation phase. This may lead to misunderstandings and redundancy in e-HRM projects. Taken in integration with the research into institutional aspects of e-HRM implementations of the colleague from the Aarhus University (Denmark) Anna Holm, it is important, therefore, to re-open this page in the research. We will continue studying e-HRM implementation with the focus on the international context and explore what effects the international context has on the implementation process of e-HRM. Thanks to the research of Jukka-Pekka Heikkilä (Aalto University, Finland) scholars acknowledge that e-HRM implementation is more complicated in MNCs than in national organisations as it involves additional institutional and cultural factors (Heikkilä & Smale, 2010).
I have sent another PhD researcher to Jakarta, Sri Herawati, who is now investigating the role of end-users in e-HRM implementations in these particular contexts. Therefore:

Challenge 2: to empirically investigate the international context of e-HRM adoption, including comparative analysis of developed and developing host countries’ effects of e-HRM implementation in MNCs.

The third empirical challenge concerns the transformation of the function of HRM by ITs, where the HRM function is understood as not being limited to a set of activities performed by the HRM department, but as the distribution of all HR tasks and responsibilities within and outside the organisation. Four developments are central to this challenge. In response to environmental pressures and uncertainty IT offers structural solutions to HRM for extensive differentiation through the implementation of e-HRM that enables partnerships with HRM providers outside organisations. Secondly, outsourcing and HR shared service models, while increasing the scope of differentiation, gear the HRM function towards structural integration, requesting from it innovative methods for coordinating and aligning dispersed activities. I am investigating HRM sourcing arrangements with two HRM colleagues, Jeroen Meijerink and Marco Maatman. Thus, the involvement of IT in the HRM field has brought the conventional two-levels HRM (HR department and middle managers) into question (Figure 10).

Figure 10. HRM function channels
The new architecture of the HRM function directs discussions towards future questions. What is HRM transformation? What is being “transformed” (responsibilities, jobs, HR roles, HR technology)? What are the mechanisms of such HRM transformations? If HRM transformations involve HR professionals, line managers and employees, what are the objectives, focal points and benefits that are specific to each group? How are they encouraged to actively use re-structured HRM? Therefore:

*Challenge 3: To empirically examine value created by different configurations of the HRM architecture, specific to their organisational contexts.*

### 3.3 E-HRM IMPLEMENTATIONS: ENLIGHTENED ENACTMENT

“Symphony” literally means agreement or concord of sound, or “Symphōnos” (συμφωνος) - harmonious (Oxford English Dictionary)

I argue that to-date, the explanations proffered for the difficulties that organisations experience in implementing e-HRM have tended to overlook an important aspect of e-HRM adoption: i.e. the dynamic nature of the process. My first call for future research is to explore the inclusion of the pre-implementation and implementation phases of e-HRM projects (with the PhD researcher Sri Herawati). My second call is to shift the focus from technological factors of e-HRM towards people factors, since it is the various stakeholder groups and their specific needs that determine the success of an e-HRM implementation; it is not determined solely by the technology itself.

Believing that human interactions with technology do play a key role in its successful implementation, I view implementation as complete only when the users are contentedly working with IT and they have acquired the necessary skills to master and fully understand it (Bondarouk, 2011). Although the technology may still require changes in time, the implementation is seen to be complete because employees feel comfortable working with it, they are fearless of any technological modifications and they appreciate carrying out their tasks with e-HRM. In other words, I suggest looking at the stable use of an e-HRM technology, rather than looking for the stabilization of the technology itself. The main indicator of successful e-HRM implementation is, in this view, the skilful and task-
consistent operation of the application by the targeted employees. Rather than starting with e-HRM technology and examining how people adopt, appropriate, adapt, or accept its applications, I call to start with the targeted users and explore how they develop their work with e-HRM. The enactment approach to e-HRM implementation (Figure 11) emphasises the prominent and decisive roles that users play in the recurrent use of an e-HRM technology in the belief that various stakeholders engaging in implementation exert social influence in order to change the pattern of technology use in ways that, over time, remove or ameliorate its potential

At the heart of the enactment framework are three building blocks: targeted users of e-HRM; organisational support; and, the e-HRM technology.

The targeted users are the centre and starting point of enactment. Following social psychologists, I use interpretive schemes for the targeted users of e-HRM indicating differences in their expectations, knowledge and perceptions of the e-HRM, as well as their knowledge of performing HR tasks, as well as enacting the e-HRM and its organisational context.
These aspects, in turn, are likely to be influenced by training, communication and previous experiences. At the level of the individual human actor, user participation has an impact on users’ attitudes toward information technologies.

When human actors enact an e-HRM technology they draw on their knowledge, perceptions and experience of the organisational context in which they work. Within this organisational context, cultural, IT infrastructural, political and facilities-related organisational issues are important. As noted, e-HRM is expected to be used (to varying extents) by all employees in an organisation, not only those in specific jobs. Unlike the many studies that consider the technology’s characteristics in IT implementations, the enactment model suggests the focus to be on the managerial interventions and on the integration of technological resources to build a unified platform for the e-HRM implementation.

Alongside the influence of the organisational context, human actors are also influenced by the e-HRM technology. During the process of e-HRM enactment, human action is both facilitated and constrained through communication on the goals of the e-HRM; the extent to which it provides personal outcomes; and, whether there are intrinsic benefits to be gained from using the e-HRM. As IT becomes more accessible, personnel management becomes increasingly dependent on its use and the benefits of using e-HRM cannot be limited to improving job outcomes.

I emphasise that the technology does not determine HR practices. For e-HRM to be integrated into daily HR processes it must be enacted by human actors and, through this exercise, there are three scenarios for future research.

**Inertia-based** e-HRM enactment is characterised by a situation in which users (HR professionals, line managers and employees) choose to work with e-HRM in the “old-fashioned” way. This may result in the preservation of the existing technological circumstances with no changes to the HR processes. Top management is not involved in the e-HRM implementation in many respects: their attention has shifted from the e-HRM implementation to other organisational issues; insufficient resources are allocated to the e-HRM project; and responsibilities for e-HRM implementation are left to consultants and vendors. The actual use of the e-HRM is highly restricted; users have only limited involvement in the implementation process, they are not invited to participate in e-HRM projects, or their participation is requested, but then ignored.
**Mutual adjustment**, as the second e-HRM enactment type, may be characterised as a situation in which all groups of users strive to find a consensus that refines their “old” face-to-face HR practices and integrates new IT possibilities. Users engage in HR search activities, create HR documents and databases, or record and analyse problems. Users draw on existing organisational structures, but also try to enhance the e-HRM properties over time. In this enactment mode, top management and individual users are able to participate by offering advice at any stage of the e-HRM implementation.

**Improvisation-based** enactment of e-HRM calls for the refinement of existing methods of performing HR tasks. Such enactment results in dramatic alterations of HR work processes and the use of e-HRM applications. Users show a great deal of understanding of the technology and its purpose and are committed to working with it. The HRM function manages to maintain organisational attention of the e-HRM implementation. Senior managers are actively involved in e-HRM project groups as they advise and control the enactment process, and they discuss adjustments that need to be enacted in the artefact and in the HR work processes. The majority of users are engaged with the idea of improving existing HR processes with the help of e-HRM. In this enactment mode users may be asked to participate by taking control of the e-HRM implementation, or through their involvement in working groups, as design team members, or in prototyping groups. Therefore:

*My last grant research challenge is to explore different e-HRM implementation scenarios.*
The aforementioned research challenges cannot all be realised on my own. Therefore, at this point, I would like to talk about the research and teaching plans in the HRM department. As stated on another occasion earlier this year, let me reiterate that the department was established in 1990 and has been led for more than twenty years by Jan Kees Looise with a research focus on HRM and Social Innovation.

Speaking of our future directions in research and teaching, I doubt that anybody would be surprised at the assertion that electronic HRM falls under an umbrella of “HRM and Innovation”. Within the group we will keep to the same line and continue to add to HRM and Innovation research through the involvement of Information Technologies that bring new opportunities for line managers and employees and also encourage New Ways of Working and HRM analytics.

The HRM group will continue research into innovating changes while honouring traditions. Enjoying our High Tech Human Touch environment, we will focus on the emerging developments in HRM organisations, the content of HR practices and policies, and their architecture, which are seen to be strongly linked to the contribution of the HRM function to innovation, organisational performance and management of High Tech Human Talent. Concerning the research into the connection between HRM and Technology and Innovation, the HRM group has a unique academic position and expertise within the Dutch and international scientific and professional arenas. More specifically, our two main focal points of research are (Figure 12):

- HRM and Innovative Performance; and
- Innovating HRM Function.
We aim to explore the interdependence between HRM and social and technological innovation; the contribution of HRM to innovative performance; and, the changes and re-structuring of the HRM function within organisations.

4.1 INNOVATING HRM AND INNOVATIVE PERFORMANCE: POSITIONING THE RESEARCH PROGRAM

HRM 4 INNOVATIVE PERFORMANCE
Under the leadership of Jan de Leede, the research stream into New World of Work (NWoW) is looking into the link between human resources and the organisation and new technologies. Several foci form the basis of this research sub-program, among them: working times (determining healthy and flexible working times, with ideas like self-‘rostering’); new world of work (how effective virtual work is, how effective virtual leadership is); latest developments in the intersection between Strategic HRM, HRM and Information Technologies; and the impact of HRM re-organisation on employment relationships. Regarding academic value, this project develops knowledge on the effectiveness of different leadership styles in NWoW configurations and knowledge on the effectiveness of different employee behaviours in NWoW configurations. Sjoerd van den Heuvel is leading a project on the attitude of employees towards such changes as the implementation of new ITs and innovative HR practices. In his research, attitude towards change is explicitly
explored as a three-dimensional construct, comprising affective, behavioural and cognitive responses. We also have plans with Sjoerd to work intensively on the domain of HRM and Analytics.
I see our group leading in the field of e-HRM research and intend to retain this position. Together with two PhD students, Sri Herawati and Dustin Schilling, I will be exploring international aspects of e-HRM with the special focus on e-HRM in the emerging economies.

PERFORMANCE 4 INNOVATING HRM
Anna Bos-Nehles is leading the field of inquiry into the involvement of line managers in HRM with a focus on the role of line managers in HRM implementation effectiveness and their impact on innovative employee behaviour. Several questions are central to her research: How do line managers implement HR policies and practices at the operational level? In what way do line managers shape innovative behaviour of employees in all areas of the organisation? Which constraints do they experience in their HR implementation role and how well do they execute HR practices? Regarding academic value, this project develops, among others, new research instruments to measure perceived constraints of line managers in implementing HR practices on the work floor and HR implementation effectiveness.

Jeroen Meijerink is leading research into exploring and explaining value creation of HR Shared Services. It includes the design, implementation and evaluation of HRM shared service models by HRM professionals, line managers and employees. The way in which shared services for HRM create value for the organisation and separate business units is the central focus of this project. Business value propositions in this research cover the development of validated research instruments for measuring, comparing and explaining levels of value creation by HR shared service providers and checklists for organisational design and HR Shared Services fit. Recently, he has also begun to involve high level employees in the HRM function. His research into employee agency in employee-organisation relationships covers HRM-as-practice; strategic behaviour of employees in shaping employment relationships; and, the involvement of employees in the co-creation of HRM practices and their outcomes.
4.2 INNOVATIVE HRM FOR EMPLOYEE DRIVEN INNOVATION

In March 2014 we received the NWO grant for three full-time PhD projects which will determine the department’s focus for at least the next four years (joint proposal with Jeroen Meijerink and André Veenendaal). Maarten Renkema, Jorrit van Mierlo and Milana Korotka, who joined the group as of September 1st, 2014, are already fully involved in all activities of our Twente Graduate School.

This project has become a logical continuation of the earlier research in our group conducted by André Veenendaal. It is centred on the innovativeness of Human Capital. This is understood as the abilities, motivation, and opportunities of employees to develop and implement innovative ideas. This research into HRM and innovation is rooted in the idea that, if properly supported, front-line employees can be highly innovative (Evans & Waite, 2010). However, the common-sense opinion is that R&D departments and high-tech firms form the main source of innovation. This project instead departs from the assumption that the ‘regular’ front-line employees and their (innovative) human capital are the driving forces behind new organisational development. Research shows that HRM practices, such as compensation, training, performance management and work design, positively influence employee human capital (Jiang et al., 2012), employees’ innovative work behaviour (Veenendaal & Bondarouk, 2013) and organisational innovation performance (Beugelsdijk, 2008).

In this project we focus on healthcare and public sectors that are introducing innovations like new employment forms and working conditions, electronic HRM, securing employability and enhancing workforce flexibility and a New Way of Working. Nowadays, both healthcare and public sector organisations seek to be innovative, to provide better services and to support their employees in new ways of working. In the context of marketization, healthcare and public sector clients increasingly demand customised solutions for meeting their varying needs in a flexible way; preferably at lower costs (Tummers, 2011). It is likely that these market forces in both sectors have important implications for human capital, which is shown to positively influence innovation performance (De Winne & Sels, 2010).

Allow me to share a fun fact with you. Five years ago, together with Karen Fehse, I was looking for a student from Health Sciences to join our small
research project on HRM practices within large Dutch hospitals. To my surprise, I received an answer from the HS program coordinator stating that the HRM was not seen as an important driver for hospitals’ performance. We found a student from the BA program, Kim Vorgers, who was interested in this area of research. We analysed sixteen cases where medical mistakes led to discussions in the Dutch media and conducted interviews with clinicians and HR professionals in several hospitals. We concluded that medical mistakes were often rooted in conflicts, miscommunications and the disregard of strategic and innovative human resource management (Vorgers, 2010).

Now, thanks to NWO, we are able to conduct research into HRM innovations and performance within healthcare and governmental organisations. This project challenges the mono-level approach to HRM in conventional HR studies; an approach already criticised by Jaap Paauwe in 2009 (Paauwe, 2009). Instead of adopting purely an organisational level perspective, we will examine individual level phenomena and test whether and how innovative HRM practices are implemented and which employee human capital elements they influence. As a result, we will report on cross-level effects of organisational HRM policies on individual employee human capital. Another research challenge in this project is the development of the micro-foundations of human capital management and the articulation of the multilevel theory to describe how the human capital resource is created and transformed across organisational levels. The research framework (Figure 13) forms the conceptual basis for addressing the key question in this section of research: in which way do innovations in HRM on the organisational level enhance the innovation performance of organisations through enhancing the human capital and innovative work behaviour on the employee level?
Within this large multidisciplinary research subject we draw upon different concepts: structuration theory (rooted sociology); motivation and Human Capital theories (rooted in organisational psychology and sociology); and configuration and multilevel theories (rooted in both strategic management and organisational psychology). Sub-project 1 brings employees into the equation as pro-active agents who are able to steer, hinder and/or change HRM innovations, and so helps to explain employee-driven innovation. This negates the cautiousness common in the broader Employee-Organisation Relationship literature which conventionally views employees as reactive responders in employment relationships. Sub-project 2 contributes to the Human Capital and Innovation literature by elaborating on motivation as an additional component of individual level Human Capital. This approach helps to explain the mechanisms through which HRM influences innovation. Sub-project 3 contributes by uncovering the complexities in the cross-level influence of individual level HC on organisational innovation performance.

4.3 TEACHING HRM IN TWENTE

The HRM department will continue to contribute prominently to the educational programmes of the University of Twente by developing and teaching excellent courses, modules and programmes in the field of
human resource studies. The chair is responsible for the provision of HRM in general and specific HRM educational units. We recognise that a number of approaches to teaching HRM exist. To offer a clear advantage, we approach HRM from a perspective that combines contextual and emerging HR challenges and helps students understand the dynamic and exciting environment of HRM, and the complex decision making process that all managers are engaged with when managing employees.

TEACHING HRM AT THE BACHELOR LEVEL: TEM, TOP AND HOLI

Within the general International Business Administration bachelor program, we train our students to become proficient in three HRM foci: managing employees in the context of organisations (instead of an HR department); integrating three primarily HRM sub-fields (work design and workforce planning, management of employee competences and management of employees’ behaviours and attitudes); and managing international HRM challenges. Our aim is that our bachelor graduates know the basic content of HR practices and bundles and understand their dynamic context.

Specifically, the chair contributes to two core modules in the module-based curriculum: TOP (Technology, Organisation, and People), and HOLI (Human Resources, Organisational Behaviour, Law, and Information Management). Well… this is easy to say, takes just a minute to read and the paper does not talk back. I think I can say for many of my colleagues that we learnt a lot during the design and first year of the implementation of the Twente Educational Model (TEM). If I could paraphrase the title of our NWO project, I would call the TEM model “Innovating Educational Programmes for Teachers’ Driven Innovation”.

In 2012-13 together with Ivar Dorst, I conducted research into business expectations from our bachelor graduates. After analysing interviews at 14 companies with their top level managers, together with Jasper Veldman, we had to conclude that all of our interviewees attributed a higher importance to analytical skills rather than to factual knowledge of their junior managers. Procedural and meta-knowledge also scored higher than specialised knowledge: the business already expects bachelor graduates to be broad-in-scope, interdisciplinary, creativity-driven and have globally oriented knowledge about the business processes. Knowledge was seen as a tool for learning, sharpening intelligence and challenging organisational reality. We can be proud of our aspirations
to train our bachelors in this respect. What is difficult, however, is to teach them to see the relevance of academia in practice; i.e. to have the ability to translate concepts and research findings into the practical context in general and into particular business contexts. Making sense of organisational life and being able to work in an international environment and developing business sensitivity – these are challenges that we as teachers continue to address (Dorst, 2013).

I would also add an urgent call to teach our graduates “contextual intelligence” (Khanna, 2014), the “ability to understand the limits of our knowledge and to adapt that knowledge to an environment different from the one in which it was developed”. The problem with management practices is that the “whats” are generic, the “hows” are specific to each and every graduate, and the organization they come to work for. An attempt to apply management practices across geographical borders becomes even more difficult. Therefore, until we train and require as exit qualifications this kind of intelligence, students’ abilities to unfold HR practices across the globe will remain limited.

Speaking of global HR practices, internationalisation is a very popular topic in our university, and rightly so. It is reflected in the name of the program – International Business Administration. Let me share with you some results in this domain. I am conducting longitudinal research into cross-cultural sensitivity of our bachelor students. I will be running the survey for the third time this year each time examining the role of the educational design in enhancing students’ cross-cultural sensitivity. Together with Annique de Greef, Luuk Geurts and Julia Bönte, we collected data from 11 bachelor programmes in 2012 and from 8 - in 2013 in our university, amounting to a sample of four hundred respondents. After working through some statistical puzzles with Harry van der Kaap, we had to conclude, to our surprise, that the score of intercultural sensitivity of students did not change in the course of studying over a two year period. Furthermore, students who came to Twente from other countries scored significantly higher on intercultural sensitivity than Dutch pre-university (VWO) school leavers. As antecedents of cross-cultural sensitivity, only the content of curriculum seemed to have a strong direct effect. Such anticipated antecedents as teaching style, teaching methods and cross-cultural project groups did not show any impact on the cross-cultural sensitivity of students.
TEACHING HRM AT THE MASTER LEVEL

In-line with the Twente concept “research-design-organise”, graduates of the HRM specialization become *academically trained* to function as business leaders, competent in conducting international and multidisciplinary research, designing and organising business solutions and contributing to value creation in organisations through management of technology and human talent:

- They are capable of systematically answering explanatory questions about HRM systems in the context of globalisation, social and technological innovations, managing innovative performance and innovating HRM functions
- They are capable of selecting, designing and evaluating Business solutions with the HRM perspective, to assess alternative business and HR solutions, to organise and manage the HRM function through applying different channels: information technology, sourcing arrangements and involvement of line managers
- They are qualified to organise and innovate HRM through strong leadership, project management, team work and cross-cultural skills.

Teaching will become quite challenging again in the near future. In an assignment of the master program management team, we will re-design our HRM courses within Business Administration. We will translate our research program into graduate teaching. In August 2013, I completed a small study with Michael Golla of fifty top-ranked HRM master programs in Europe (Eduniversal University Ranking). Our conclusion was that, although a majority of HR curricula include IT-components, in most of the curricula this content is not integrated in HRM, but stays as an “IT insertion”. On the basis of a series of interviews with program directors of European Universities master programmes, we proudly concluded that our university is one of the four European universities that offers integrated courses into HRM and IT. Believable or biased…? (Golla, 2013).

We continue to contribute to the Master of Business Administration by placing the HRM track within the technological and innovating business context. HRM teaching in Twente means: Global Talent Management, electronic HRM, Strategic HR Analytics, and of course, HRM and Innovation. Working through this innovating teaching journey always requires good team work. We cannot succeed without professional pedagogical support from the program management team and colleagues from other departments. We are very much looking forward to a new challenge, such as the possibility of teaching HRM in combination with
researchers from Information Management and Information Systems research fields, Fons Wijnhoven and Jos van Hillegersberg. To finalise the teaching challenge at this point would not be enough, nor would it really be final. In 2015, we are looking forward to designing a double degree program with the Master in Business Administration from Novancia Business School in Paris.

4.4. NETWORKING

INTERNATIONAL COOPERATION WITH RESEARCH GROUPS
The department has established institutional links with several international research schools. Institutional links imply collaboration in research projects and teaching, and to a different extent in the joint supervision of PhD projects. I am glad to have established links with the following universities and departments:
- Business School, Nottingham Trent University (UK), contact: Prof. Dr. Carole Tansley
- School of Management and Labor Relations, Rutgers University (New Jersey, USA), contact: Prof. Dr. Dave Lepak and D. Professor Randall Schuler
- Management Information Systems department, Saarland University (Germany), contact: Prof. Dr. Stefan Strohmeier
- Clarion University of Pennsylvania (USA) Contact: Prof. Dr. Miguel Olivas-Luijan
- The Management Centre, King’s College, University of London, (U.K.), contact: Prof. David Guest
- Institut für Organisation und Lernen, University of Innsbruck (Austria), contact: Julia Brandl
- Department of Management, University of Vaasa (Finland), contact: Prof. Dr. Adam Smale
- Faculty of Economics and Management, Universita’ Cattolica del SacroCuore (Milan, Italy), contact: Prof. Dr. Barbara Imperatori
- School of Management, University at Albany (NY, USA), contact: Prof. Dr. Janet Marler.
NATIONAL COOPERATION
The department is a member of the Dutch HRM Network, which is a group of affiliated HRM professors, in charge of HRM teaching master and research programmes. Jan Kees Looise has been a very active member of this network organising the HRM Network conference in Twente in 2005, and maintaining Twente HRM research as a key part of this network. It is my task to continue this work. The HRM Network conference in 2016 will be held in Utrecht under the leadership of Paul Boselie. I am sure that this conference will again be a great success and gather, as usual, around 200 participants from different European countries.
Regarding teaching in the national landscape, I would add a brief overview. In the Netherlands we have three accredited HRM master programmes, and three HRM master tracks within broader programmes. The following three Dutch universities offer separate master’s degrees in HRM:
- University of Tilburg, with its longest history of training students in Human Resource Studies, offers a one-year MSc program with a focus on SHRM, HRM and organisational change, management of diversity, and consultancy of HR decisions.
- Rotterdam School of Management offers a one-year program in Human Resource Management, with a focus on HRM policies, organisational change, teams and leadership and psychological factors influencing human behaviour.
- University of Groningen offers a one-year program in Human Resource Management, with the focus on employability, commitment, vitality of employees; team processes, organisational change and leadership.
The following three Dutch universities offer HRM-related specialisations within the BA master programmes:
- Radboud University Nijmegen offers a one-year Strategic HRM specialization within the MSc of Business Administration, with a focus on international and strategic HRM, gender and diversity and flexible workforce.
- University of Utrecht offers a one-year track in Strategic Human Resource Management, with a focus on public management, labour law and HR practices for profit and non-for profit organisations.
VU University Amsterdam offers a one-year Strategic HRM specialization within the MSc of Business Administration, with a focus on careers and organisations, gender and diversity management and SHRM. Our HRM curriculum will definitely fulfil its niche in the national higher education system.

**LINKS WITH THE BUSINESS COMMUNITY**

As an applied research field, HRM research and teaching can only make progress when it interacts closely with the business community. It allows us to stay up-to-date; to survive critical business questions; to master our competencies to translate findings to a business language; and, to enjoy the possibility of carting out empirical field studies. At the moment we have a broad network of organisations based on existing research collaboration history and on combined interests. It is important to mention our business partners in the NWO project: Werkgeversvereniging (WGV) Zorg & Welzijn, the expertise centre for HRM and human capital in the healthcare sector; TSN Thuiszorg; Medisch Spectrum Twente; and the Dutch Ministry of Interior – Directoraat Generaal Bestuur en Koninkrijksrelaties. The Dutch Ministry of Defence and P-Direct have been in our research community since 2009, when they decided to support PhD research into HR Shared Services. Thank you for joining today. Current research at KLM AirFrance, Philips, Thales, TenCate Nederland, DSM and KPMG are all projects with the great potential for the future.

To structure our links we will establish the HRM and Innovation centre of excellence to bridge the gap between research and business. This is the last ambition of the group that I prepared to share today. A lot to orchestrate, a lot to balance and a need to find the right tone.
WORD OF THANKS

When I held my first MSc diploma (in chemistry) issued by the State University of Saint-Petersburg, I could never have imagined I would stand, dressed up like this, in front of you now. I truly wonder what exact reasons got me here, but I know for sure that I owe thanks to many, many people.

I would like to address my first thanks to the Board of the University of Twente and the Dean of the School of Management and Governance for the trust they have placed in me by appointing me to this chair. Ton Mouthaan did not witness my research assessment which led to my appointment as a professor. It was done by two other deans of the School before him. But after congratulating me on the appointment in March 2014, he gave me the advice that was the closest to my heart – to build a team and focus on research.

In 2004 I received a PhD degree in Business Administration under the supervision of Professor Jan Kees Looise. He has played a crucial role in my academic and leadership development for which my gratitude is endless. Our professional relationship has since turned to a new stage and I am as ever attentive to his guidance. He, together with Professor Koos Krabbendam, appointed me in the former department of Organisations, Operations and Human Resources. Koos, my special thanks to you for giving me confidence and convincing me to take the road that has led me to this stage today.

My word of thanks goes to the colleagues professors from different generations, from several departments at our school, with whom I had many fruitful discussions about High Tech Human Touch Business Administration research and teaching. I am looking forward to new inspirations, new discussions, joint supervision of our PhD researchers; and to new collaborative projects with them and their groups. I tried today to look over the shoulders of past years to acknowledge your impact on and contribution to our research and teaching alliance.
I am very much grateful but also obliged to my colleagues from the HRM department. Jan Kees, Jan, Anna, Jeroen, Sjoerd, Ida, Marie-Christine – many thanks for our collaboration and your support, I am looking forward to new inspirations. As you know, the job that is in front of me sounds quite impossible to fulfil: teaching, networking, joining meetings, supervising PhDs, writing, giving guest lectures, attending conferences, organising the budget, raising funds, building a new master curriculum, thinking about a BBQ in Lattrop... You know why I am doing it: I admire our team work and am delighted by your dedication to the work you do. The group has doubled in its size this year – five full-time PhD researchers, who add a breath of fresh air to our discussions and make this place even more fun to be in. Sri, Dustin, Milana, Maarten and Jorrit – thank you for a unique combination of hard work and fun, that will offer a new cross-departmental collaboration arena for colleagues with diverse backgrounds (sociology, psychology, innovation management and strategy). Marco and Andre – it is rewarding and fulfilling to work with you and supervise your almost finalised PhD projects, I am sure we will continue our collaboration further. I would like to give my special thanks to Maarten and Martijn who moved to other institutions and with whom I shared lots of discussions. The colleagues from the e-HRM community who are present today, especially those who came from foreign universities – I am indebted to you for your support, for your multidisciplinary creativity, and just for being great colleagues. Carole, Stefan, Miguel, Jukka-Pekka, Anna, Karine, Dave – thank you very, very much. I thank my colleagues from the Dutch HRM Network for the support and great stimulating discussions about HRM higher education and HRM research.

My work as an associate editor of three international ISI journals has undoubtedly contributed to my understanding of science and the art of publications. Managing up-to eighty papers per year made me finally understand that publishers are in the business of publishing, not rejecting papers. I am especially grateful to Dave for his trust in my work in his *International Journal of Human Resource Management*. And – Miguel, thank you for our extremely fruitful and inspiring collaboration on our *Advanced Series in Management*. With your energy we have exceeded the expectations of the publisher, making two books per year!
I was a master student twice; I was a PhD student, also twice. I think I am still a student. Therefore, I owe thanks to my students. Part of the magic of university life is that we are in the middle of a stream of young and talented people. They come to us fresh, naive and full of expectations; and they leave us as different people: independent, creative, ambitious, educated. We are honoured to be able to give them their bachelor and/or master diploma, and look in the eyes of their proud parents on their last day at the university. There have been more than sixty master students, whom I was honoured to supervise during their master projects. Many of them are here today: thank you!

As I have hopefully managed to express, university life requests balance and the blending of many activities. I am grateful to have terrific colleagues who offer endless support. I would especially like to thank Marie-Christine Predery and Jeanette Visser-Groeneveld.

Allow me to turn back to just under a year ago – and I would see myself back as a BA programmes director. At this point I want to express my gratitude to Professor Petra de Weerd for her fresh energy to boost the programmes. I would like also to say how much I am indebted for the lessons I learnt from Corrie, Aleksandra, Celine, Riet, Sanne, Sietie, Charlotte and all of my colleagues from educational and student support services. Not to forget our “TOM kernteam” discussions with the programmes directors with whom we shared inspirations, good and better educational insights. Thank you! I cannot forget to thank all those who made the hands-on design of the IBA program, but allow me to personally thank the coordinators of modules and so-called “lines”: Henk, Anna, Jasper & Petra, Henry, Fons, Jeroen & Kasia, Rainer, and Celeste. Without any special introduction, I would like to thank my friends from our PhD structuration club: our PhD friendship stayed over the years and supported me and all of us in our professional and personal developments. Karen, Marieke, Sander, Edward, Klaas and André – thank you! Klaas, I have learnt from you about the implementation of groupware systems, and I am looking forward to learn more from you about new symphonies!
I would love to recall the words of my PhD supervisor in the University of Saint-Petersburg, professor Zinaida Vasiljeva†. Seventeen years ago she told me, “I taught you to enjoy the freedom and responsibilities of being a scientist. Now it is your turn to find your place in science.” I know she would have been proud to see me today. Finally, and most importantly, I owe everything to the people nearest to me. I am immensely grateful to my parents. Their, sometimes tough, support (“Of course you can do it, you should and – yes - you can!”) dragged me through the different stages of my career. My father would have been proud to be here. Like my parents, I am extremely proud of my daughters, Lena and Yulia. They are the most beautiful daughters, and I am grateful for our adventure when we decided to come to the Netherlands. We went through many discoveries together; and I am very excited about your adventures to come, in your new stages of life together with Tim and Joeri. And then Huub. Working, teaching and writing together, supervising research projects together, cross-cultural management in real life. Sharing all of these and far beyond – isn’t it the most gorgeous symphony! Thank you for the endless patience, boundless critique, and overarching love.

Ik heb gezegd.
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