

Implementation of e-recruitment:

Enablers and success indicators from the [REDACTED]



Master thesis

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Implementation of e-recruitment

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Preface

When I started my Master of Business Administration at the University of Twente, I also began exploring what I wanted to do for my thesis. It became clear to me that I preferred to conduct research within an organisation, and that I wanted to gain a good understanding of the link between theory and practice. In addition, I wanted to feel what it was like to be part of an organisation, and to cooperate with people around me. The ■■■, a Dutch airline organisation, provided me with an opportunity to do so.

My preference for a research topic was related to e-HRM. This is, in my opinion, a development that is inevitable and will be long lasting, yet appeared to be difficult to implement. At that time, the ■■■ had just introduced their e-recruitment technology and were experiencing this difficulty. As my interests are in Human Resource Management and Change Management, I fenced my research question by focusing on the implementation of e-recruitment and analysing why the system did not deliver the desired outcomes. Literature assumed the relation between a proper implementation and a successful technology.

As I began on my thesis in September 2008, I hoped to gather findings through which my research could contribute to the knowledge gap concerning e-recruitment implementation, and of course to the knowledge and understanding of ■■■ and other organisations in confronting e-recruitment implementation. Now that I am finished with my master thesis, I can say that these hopes have been realised by the many useful insights I have found.

Therefore, I first like to express my gratitude to ■■■, and to all ■■■ who contributed to my research. They offered me a place to conduct my master thesis, and let me gather a large amount of data. In particular, I like to thank my supervisor from ■■■, Rob Regter. Despite his busy schedule, he was always enthusiastic and provided me the space needed to perform research. In addition, I like to thank my direct colleagues of DM for all their interest in my research and for the social talks, the colleagues from the HR Infolijn for all the fun and good care, and of course, my roommates Belia, Annemieke, and Kim. Thank you for having a good time at AMS 700/4130 and for all the “nibble moments” in which we consumed huge amounts of liquorice, chocolate, etc.

Also, outside my research environment, I am supported by beloved ones. Without a doubt, my parents and brothers, supported me all the way and kept me up to the finish. Susanne, who I bothered with my ups and downs. Mandy, who was again a good sparring partner. Suzanne, who looked after me when I was home. And, of course, all other friends and family who supported me along the way.

Last but not least, I am grateful for my supervisors from the university. I like to thank Tanya Bondarouk, my first supervisor, for being a big source of inspiration during my thesis, and keeping me going through her useful insights. My gratitude also goes out to Elfi Ettinger, my second supervisor. Thank you for your enthusiasm and valuable input. I enjoyed working with both of you.

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Management summary

Recruitment is important for organisations since it performs the essential function of drawing an important resource into the organisation. It has a strategic aim as it focuses on the need to attract high-quality people in order to gain a competitive advantage (Parry & Tyson, 2008; Malinowski et al, 2005). A new development in this domain is the use of the internet to attract potential employees to an organisation, and is referred to as e-recruitment.

Yet, in previous research it appeared that only 25% of the organisations indicated achieving strong success with e-recruitment (Chapman & Webster, 2003). In addition, e-recruitment success seems to be established by its implementation (Chapman & Webster, 2003; Galanaki, 2002; Pin et al, 2001; Singh and Finn, 2003). Simultaneously, the [REDACTED] is one of these organisations that report achieving only limited success with their e-recruitment technology.

Although it is known that e-recruitment success can be established by a successful e-recruitment implementation, further results regarding e-recruitment implementation are unknown. However, it is necessary to understand whereof e-recruitment implementation comprises, because e-recruitment implementation is a matter of today (Parry & Tyson, 2008). Therefore, the research goal of this thesis is to analyse e-recruitment implementation at the [REDACTED]. The research question is:

Which enablers and success indicators can be derived from e-recruitment implementation at the [REDACTED] [REDACTED]?

In comparison to other research, e-recruitment is, in this research, approached from the corporate perspective instead of the applicant view or interest.

Based on a literature study, a theoretical framework is constructed to approach e-recruitment implementation. E-recruitment implementation consists of two groups of enablers, which are defined as e-recruitment system strength and e-recruitment management strength. The outcomes of e-recruitment are included as well, and referred to as success indicators. Based on this, three sub-questions are formulated:

- What are the characteristics of e-recruitment system strengths?
- What are the characteristics of e-recruitment management support strength?
- What are the characteristics of e-recruitment success indicators?

Based on document analysis and 26 interviews, these sub-questions are explored at [REDACTED].

It becomes clear that [REDACTED] gains less success with their e-recruitment technology than expected. *Success indicators* like e-recruitment productivity and e-recruitment quality are perceived to be low. This cannot be grounded on factual data because of the missing tool, management reports. The technology turns out to contribute neither to time nor cost savings, and is perceived by users to be unfriendly. In addition, users pointed out that they find it even worse that the technology is applicant unfriendly. As these success indicators pointed out to be less positive, the technology seemed to be used in an appropriated manner.

Returning to the assumption made in the beginning, there might be implied that the implementation at [REDACTED] was less-than successful, since a successful implementation should result in a system that delivers the desired outcomes.

Exploring the *enablers* is done by looking at two components: e-recruitment system strength and e-recruitment management support strength.

Technology quality is part of e-recruitment system strength. When relating SAP E-recruiting 3.0 to its predecessor WISE, the technology offers more tools and captures a wider part of the recruitment process. Nevertheless, when looked at separately, the technology quality is perceived less positively. In general, this is due to its design, which causes the technology to become time-consuming and cumbersome. The other enabler of e-recruitment system strength is service quality. This is determined sufficient by users, based on the responsiveness and completeness of the system. One important dimension found from this research is the clarity of the service procedure for its users.

The other component refers to e-recruitment management support strength. This is the most notable component of e-recruitment implementation at ■■■, as these enablers influenced the technology design and, consequently, the success indicators.

The project lacked steering and control stemming from the steering board and project leaders. Different issues like changing project members, skills, and time- and budget pressures contributed to this situation. In addition, the composition of the steering board and unclear roles and responsibilities reinforced the situation and created confusion among project members. The second enabler is the existence and content of plans regarding the project. Although plans and documents existed, project members experienced these as falling short in their extensiveness and completeness. As a result, it was hard to use these documents as tools to guide the project along. Another issue concerned the commitment to these plans. Due dates were postponed and goals were not maintained. A third enabler is defined as the HRM and IT collaboration. A notable aspect concerns the lack of knowledge during the project. In addition, different understandings and a lack of guidance caused HRM and IT to misunderstand each other. The collaboration influenced the approach of the project. As a result, the functionality of the modern technology was adapted to the traditional recruitment process of the ■■■, and lost its modern tools like management reports and a talent pool. The accumulation of issues caused project members to become tired of the project, yet project members are praised for the large amount of effort they put in. Finally, there was also the issue of provided learning opportunities. Mainly, training was provided in the form of hands-on training, and, to a lesser extent, application area training. Users perceived this training as sufficient. Nonetheless, doubts existed as to whether users received enough training to use the system in the correct manner, and if orientation was needed as well. In addition, training was not secured in the available documents.

Next to the explored constructs derived from theory, three additional enablers were found from this research. These are new to theory. Firstly, this research found that e-recruitment implementation is not a standalone project. The project can be influenced by different developments as happened at ■■■. This caused the timeline of the project to become extensive. Secondly, Recruitment Services needed a business change along with implementing the technology. Changing the mindset of employees and guiding the transition of the changing HR role of Recruitment Services is important. Finally, no overall e-HRM strategy existed, which e-recruitment was part of. This restrains ■■■ from profiting from the mutual reinforcement of different e-practices.

Next to theoretical contribution at construct level, this paper adds several dimensions to the before-mentioned and already-existing constructs. These concern, for example, clarity of service procedure, the level of executed control, the extensiveness of and commitment to the available plans, the level of understanding and familiarity with each other's processes regarding to HRM and IT collaboration, and applicant friendliness. In regard to these findings, this research assumes that management support

enablers especially contributed to the successfulness of the system. Due to this, the technology was designed ineffectively and influences its success indicators. This assumption supports the statements made in previous research that implementing e-recruitment requires a greater organisational change (Parry & Tyson, 2008; Ruël, Bondarouk & Looise, 2004).

Derived from the findings, recommendations are given to each challenge found. In addition four general practical implications are derived. These are:

- Establishing a proper project organisation; creating the correct composition of the steering board and project groups, and establishing a solid initial phase based on clear documents and role descriptions.
- Using the right approach; starting the project from the view of the technology. A technology is purchased because of its modern tools, and the traditional process needs to be adapted to this. This is reinforced by a 'linking pin' to facilitate proper collaboration between HR and IT, and advising what is the best to do regarding the technology design.
- Transition support for role and mindset change; reassuring and removing fear for existence among employees by providing enough and correct information. Subsequently, instigate change by making clear the benefits of the system and possibilities of the role change.
- Securing knowledge; be thoughtful about involving parties and people. Past experiences do not guarantee the right taken choice in the future. In addition, develop criteria to monitor this process and, if necessary, to adjust.

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1. Introduction

1.1 Background

Recruitment is important for organisations since it performs the essential function of drawing an important resource, human capital, into the organisation (Boxall & Purcell, 2003; Galanaki, 2002; Malinowski et al, 2005; Parry, 2006; Parry & Tyson, 2008; Singh & Finn, 2003). It has a strategic aim as it focuses on the need to attract high-quality people in order to gain a competitive advantage (Parry & Tyson, 2008; Malinowski et al, 2005). Recruiting people with the right abilities reinforces the organisational goals (Boxall & Purcell, 2003).

E-recruitment is the use of the internet to attract potential employees to an organisation, and can include the use of an organisation's own corporate website as well as the use of commercial job boards (Parry, 2006). E-recruitment is part of e-HRM (electronic Human Resource Management) and is known as one of the most popular e-HRM applications used by organisations (Bartram, 2000; Chapman & Webster, 2003; Lee, 2005; Panayotopoulou et al, 2005). The first references to e-recruitment go back to articles published in the 1990s (Ojala, 1997; Wilson, 1996; Fisher, 1995; Starcke, 1996; Appleton, 1995; Galanaki, 2002; Parry, 2006; Parry & Tyson, 2008). From this point, the use of e-recruitment has grown rapidly (Cappelli, 2001; Lee, 2005).

Nonetheless e-recruitment is one of the most popular e-HRM technologies used, and literature shows that the majority of organisations report achieving moderate results concerning e-recruitment (Chapman & Webster, 2003; Parry, 2006; Parry & Tyson, 2008; Singh & Finn, 2003). For example, Parry and Tyson (2008) found in their research that only less than a quarter of the organisations reported e-recruitment as successful.

Going along with these findings, the ██████████ (further referred to as ██████), a Dutch airline organisation, also has reported achieving moderate results regarding e-recruitment. They implemented SAP E-recruitment 3.0 in 2007.

██████ has a workforce of 33,000 employees, which is characterized by its diversity. This refers to different collective labour agreements for ground-, cabin-, and cockpit employees, and a variety of nationalities and education among employees. When relating ██████ to other Dutch organisations, ██████ is seen as a popular employer (Elsevier, 2008; HR praktijk, 2008; Intermediar, 2008).

Despite this image as employer, ██████ is facing tight labour markets. Although ██████ invests in attracting and recruiting among others young and experienced professionals, from their annual report it became clear that they need to redouble their efforts to ensure continuity in attracting potential employees to guarantee high performance standards. Dialogues with Recruitment Services indicated that ██████ introduced SAP E-recruitment 3.0 in order to build more efficiency and effectiveness into the recruitment process.

When considering that e-recruitment has its origins in the 1990s, ██████ can be characterised as a late adopter because they implemented SAP E-recruitment 3.0 in 2007 (Rogers, 1995). They could have drawn upon lessons based on 16 years of previous experience. Consequently, it might be assumed that being a

late adopter brings the advantage that several organisations had already applied e-recruitment and ■■■ could use these as an example or benchmark.

Nevertheless, dialogues with the management at ■■■ pointed out that after introducing e-recruitment, the system did not function according to the expectations. Problems concerning the design of the technology and the user-friendliness of the technology arose. Relating this to the rate of e-recruitment success, the results of e-recruitment implementation at ■■■ is not exceptional.

When continuing with the literature study, previous research pointed out that it has been perceived that to achieve e-recruitment success, the implementation of e-recruitment is important (Chapman & Webster, 2003; Galanaki, 2002; Pin et al, 2001; Singh and Finn, 2003). Parry and Tyson (2008) state in their research that organisations might find success with online recruitment methods if they adopt an appropriate strategy for their use and implementation. When exploring this concept in greater detail, questions arose about what exactly e-recruitment implementation is comprised of. Research on this topic is still limited. Existing research indicates that 'thorough planning' and the 'use of established HR practices' are important factors in this implementation (Chapman & Webster, 2003; Galanaki, 2002; Tyson & Parry, 2008).

Further results regarding e-recruitment implementation are unknown. Yet, they are necessary to understand whereof e-recruitment implementation comprises. This is of increasing importance because e-recruitment implementation is a matter of today (Parry & Tyson, 2008).

Contemporary developments like tight labour markets and recruitment difficulties are creating a more competitive recruitment market. This makes recruiting the right people more difficult, yet at the same time even more important. This is especially true when one realises that recruiting applicants might have a strategic significance (Parry & Tyson, 2008; Malinowski et al, 2005).

In addition, growing internet usage urges organisations to meet their customers' demand, and implement e-recruitment (Bartram, 2000; Internet World Stats, 2008; Hayes et al, 2006).

1.2 Research problem and goal

Although findings about e-recruitment are continuously being added to the body of knowledge about the system, there are still topics that need further exploration. To illustrate the development of findings concerning this domain, Parry and Tyson (2008) state in their research that 'evidence indicates that the perceived success of online recruitment may be mixed, but these assertions have even not yet been fully explored empirically' (pp 259). The implementation of e-recruitment is such a topic as well. Despite literature showing that implementation is an important factor in establishing e-recruitment success, little is known about the content of e-recruitment implementation.

Thus, to obtain a complete picture concerning e-recruitment implementation, more data need to be gathered. Therefore, further exploration of this phenomenon is necessary.

Deriving from the above, it is important to fill existing gaps in the scientific body of knowledge concerning e-recruitment implementation and its effectiveness. In addition, it is important for organisations to know *how* to effectively implement e-recruitment and to be able to profit from all possible outcomes.

As a consequence, the research problem concerns the existing lack of knowledge about e-recruitment implementation. In the same way, ■■■ is experiencing a lack of knowledge and resources to analyse the implementation of e-recruitment.

Following from this research problem, the goal of this research is two-fold.

- First, to develop a theoretical framework. Due to the existing lack of knowledge concerning e-recruitment implementation and its content, a theoretical framework is absent as well. Therefore, before this phenomenon can be analysed, a theoretical framework needs to be constructed.
- Second, to analyse the implementation of e-recruitment at the ■■■. This will be done using the constructed theoretical framework. After analysing the situation at the ■■■, implications about enablers and success indicators of their e-recruitment implementation are derived.

1.3 Research question and foci

Based on these research goals, the research question is:

Which enablers and success indicators can be derived from the implementation of e-recruitment at the ■■■?

When doing literature research, many studies focus on the applicant side and applicant attraction of e-recruitment (Borstorff, Marker & Bennett, 2002; Braddy, Thompson, Wuensch & Grossnickle, 2003; Cappelli, 2001; Hu, Su & Chen, 2007; Feldman & Klaas, 2000; Maurer & Liu, 2007; Koong, Liu & Williams, 2002; Parry & Tyson, 2008; Thompson, Braddy & Wuensch, 2008; Williamson, Lepak & King, 2003). However, to consider e-recruitment implementation, this research has approached the topic from the corporate side.

Therefore, this research refers to customers or users as the internal users who need to work with the system, instead of applicants. In addition, the focus will be on the perspective of targeted organisational members (TOMs) (Klein & Sorra, 1996). These are referred to as the individuals who are expected either to use an innovation directly or to support the innovation's use (Klein & Sorra, 1996).

Finally, this research enables ■■■ to gain insights into e-recruitment implementation, and may improve their e-recruitment process and future implementation processes. In addition, other practitioners and academics might find interest in this research as well. Primarily, the aim of this research is to provide ■■■ with practical implications about their e-recruitment implementation.

Simultaneously, caused by the lack of knowledge, this research aims to provide practitioners with more understanding about e-recruitment and the practical implications of its implementation. Furthermore, the research will contribute to the body of knowledge concerning e-recruitment implementation and offers academics a foundation for further exploration of this field.

1.4 Preliminary theoretical framework

To analyse the implementation of e-recruitment at the ■■■, first a theoretical framework needs to be constructed, as there is no existing framework for e-recruitment implementation.

Based on the research question and derived from a preliminary literature study, a preliminary theoretical framework can be presented. This framework will be subject to change after applying existing literature.

Finally, this framework serves to analyse e-recruitment implementation and to gather empirical data from the ■■■.

From the preliminary literature study, it appears that the implementation of e-recruitment is perceived to be an important factor in achieving e-recruitment success (Chapman & Webster, 2003; Galanaki, 2002; Pin et al, 2001; Singh and Finn, 2003). This assumption is characterised as the starting point of this research, and shapes the preliminary theoretical framework as presented in Figure 1. In this research, factors of e-recruitment implementation are referred to as enablers of e-recruitment implementation. E-recruitment outcomes refer to the success indicators caused by the implementation.



Figure 1: Preliminary theoretical framework (1)

1.5 Research outline

Continuing this research, a theoretical framework is developed regarding e-recruitment implementation (Chapter 2). To gather empirical data concerning e-recruitment implementation at the ■■■, methodology is developed in order to do so (Chapter 3). Based on interviews and document analysis, findings are presented. In addition, findings are discussed and reflected on in relation to the theoretical framework. In addition, adjustments are made to the final guideline and recommendations are made regarding the found challenges (Chapter 4). Finally, conclusions, theoretical contributions and practical implications regarding to e-recruitment implementation are described (Chapter 5).

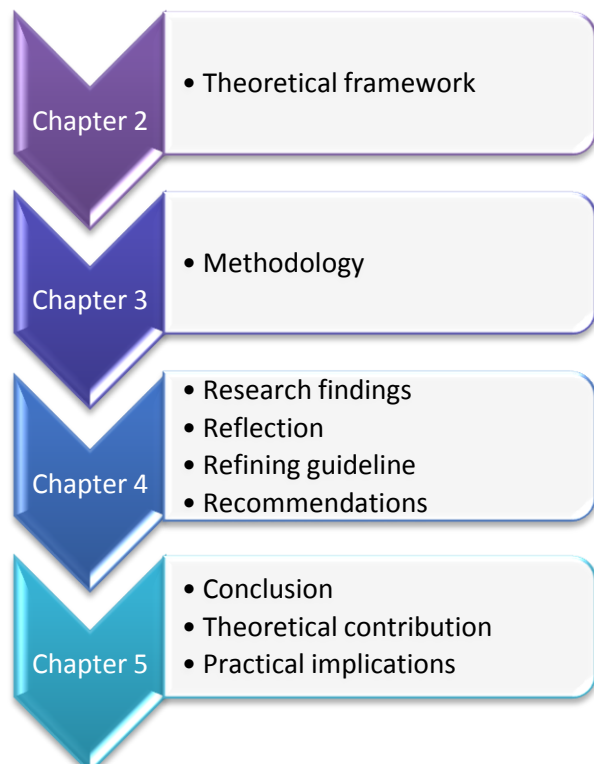


Figure 2: Visual presentation of the research outline

2. Theoretical framework: E-recruitment implementation

2.1 E-recruitment: Introducing the field

Recruitment is one of the Human Resource Management (HRM) practices, and can be defined as those practices and activities carried out by an organisation with the primary purpose of identifying and attracting potential employees (Breaugh and Starke, 2000). Recruitment is important for organisations since it performs the essential function of drawing an important resource, human capital, into the organisation (Boxall & Purcell, 2003; Galanaki, 2002; Malinowski et al, 2005; Parry, 2006; Parry & Tyson, 2008; Singh & Finn, 2003). It has a strategic significance as it puts emphasis on the need to attract high-quality people in order to gain a competitive advantage (Parry & Tyson, 2008; Malinkowski et al, 2005).

In order to create competitive advantage and subsequently higher organisational performance, the process starts with recruiting applicants who possess the necessary knowledge and skills (also called abilities) to actually *do* the job. Ability is one of the three aspects of the AMO concept of individual performance, which states that performance of the individual is a function of employee ability, motivation and opportunity (Boxall & Purcell, 2003):

$$P (\text{performance}) = f (A, M, O)$$

Recruitment, in this way, is a HR field that influences the ability of employees. Recruiting people with inappropriate competences and skills (abilities) might affect their individual performance and subsequently the human capital resources of the organisation, and might doom organisations to fail or, at the very least, slow down growth (Boxall & Purcell, 2003). Seen the other way around, recruitment is more effective when it enables organisations to attract applicants with the right abilities, who meet organisational expectations and reinforce them (Stone et al, 2006).

There are three contemporary developments that influence recruitment practices. The first of these developments is tight labour markets (Lievens et al, 2002; Parry & Tyson, 2008). Scarcity in the labour market makes it more difficult to recruit the right people. Secondly, existing recruitment difficulties also have an effect (Parry & Tyson, 2006). The Chartered Institute of Personnel and Development (CIPD, 2007) mentioned that 84% of the organisations experienced recruitment difficulties related to consequences of tight labour market conditions, and the need to choose appropriate ways to access the labour market. With the development of internet recruitment, the already existing recruitment techniques augment. These former two developments result in a more competitive recruitment market (Parry & Tyson, 2008). A third development concerns the increase in world population working with the internet (Appendix A) (Bartram, 2000; Hayes et al, 2005; Lievens et al, 2002; Parry & Tyson, 2008). From 2000 until 2008, internet usage increased by 305.5 % (Internet World Stats, June 2008). 1,463,632,361 of the 6,676,120,288 people in the world use the internet. This is 21.9 % of the total world population. In North America, 73.6 % of the population uses the internet, in Oceania and Australia 59.5 %, and in Europe 48 %, which to a large extent outweighs newspapers.

As a consequence, organisations need to respond to this development. Applicants applying by mail become rare, and organisations may profit by using this development in their own favour as well (Bartram, 2000). For example, the Deutsche Post global job site discourages applicants from applying via

(e)mail (website Deutsche Post World Net job site). Other corporate job or career sites, like Shell, Coca Cola, Dow Chemicals and Nike, do not even offer the opportunity to apply by mail, and applying online is the only option. These organisations work with online recruitment systems because of advantages for the applicants, but also for the organisation itself. The Deutsche Post website says that:

“To ensure successful application management for the applicant and for us as the company, it is vital to have a transparent system of job listings and interested candidates. To guarantee transparency, we need an application management system that all personnel departments can efficiently and independently access. It would be impossible to ensure this type of access at a company as large as Deutsche Post World Net with resume folders and e-mail applications. That is why we work strictly with online applications (Website Deutsche Post).”

From research performed by Pin et al (2001) among 167 organisations from different countries in Europe, it was found that 83% of the organisations in their research have a corporate website. Nonetheless, while the corporate website is the most frequently employed medium for e-recruitment purposes, only 44% of the organisations that have a corporate website use it for this purpose (Pin et al, 2001). Job boards were used by 41% of the respondents.

Due to developments noted above, the use of technology in the recruitment process, led to the emergence of e-recruitment, also called online recruitment, e-cruitment, cybercruiting, web-based recruitment, or internet recruiting (Galanaki, 2002). *E-recruitment* is defined as:

the use of internet to attract potential employees to an organisation, that can include the use of an organisations own corporate website as well as the use of commercial job boards (Parry, 2006).

Different authors define e-recruitment differently, yet the essence is similar. For example, Galanaki (2002) defines that online recruitment refers to posting vacancies on the corporate web site or on an online recruitment vendor's website, and allowing applicants to send their resumes electronically via e-mail or in some electronic format. To these definitions different dimensions can be added in which e-recruitment is performed. The scope of e-recruitment can also involve the possibility to conduct remote interviews and assessments, like psychometric or aptitude test online, and using banner advertisements and smart agents to search the web. In addition, interactive tools can be used to link the corporate databases with the web site, like search engines, interactive application forms, e-mail auto respondents and electronic mailing lists (Dysart, 1999; Taylor, 2001).

In defining this, e-recruitment is not just about adding another medium to the recruitment process, recruitment is instead taken to another level in matching employees and employers (Jones et al, 2002). By using, for example, corporate websites, organisations can provide applicants with greater information about the organisation, its culture, the job and job opportunities, and career prospects (Jones et al, 2002; Pin et al, 2001; Stone et al, 2006).

2.1.1 E-recruitment steps

The recruitment process begins with the identification of a vacancy whereafter the recruiter receives authorization to fill in this vacancy (Chapman & Webster, 2003). In order to do so, the vacant job needs to be carefully analysed. Analysing the job might include determining the necessary knowledge, skills, and experience required to perform the job appropriately and defining the required specifications. After identifying and analysing a vacancy, it can be placed in, for example, newspapers or other media sources.

E-recruitment differs from the traditional recruitment in that it uses the internet and technology to support the process (Table 1). In case of e-recruitment, vacancies can be published on corporate websites or job boards (Pin et al, 2001). Applicants can apply for vacancies by using the internet. Likewise, further correspondence between organisation and applicant depends on the internet to a large extent.

Cappelli (2001) describes the e-recruitment process in three steps (left column of Table 1). First, candidates need to be attracted. This concerns using the organisation's reputation, product image, online technology and other methods to draw as many potential applicants as possible to the organisation's website. There, organisations can reinforce their human resources brand and provide information about jobs and working conditions. The second step in this process is sorting applicants. This relates, for example, to employing sophisticated, standardised online tests to screen candidates, and winnowing the applicant pool to a manageable number. Third, the contacts need to be managed quickly. Due to the use of the internet, organisations are able to respond more quickly to a desirable candidate. Organisations need to work aggressively and use automated hiring management systems to contact the most desirable candidates very quickly, before they are snapped up by another company. Pin et al (2001) describe a similar e-recruitment process. In this way, e-recruitment differs from recruitment by making use of e-enabled sources. These steps apply to the traditional recruitment process as well, yet the distinction lies in the use of e-enabled technologies.

An (e)-recruitment process follows ideally from a systematic human resource planning process, whereby an organisation analyses and plans for the flow of people into, through, and out of the organisation (Chapman & Webster, 2003).

Yet, there is a fourth step, which does not belong necessarily to e-recruitment but to every recruitment process. This concerns closing the deal (Cappelli, 2001). It refers to making the phone call, setting up the meeting and shaking the hand. From this description, one can notice that the e-element is absent. In this way, Cappelli (2001) highlights the importance of the human touch at the end of the recruitment process. According to him, human touch is increasingly neglected in e-recruitment processes but remains very crucial.

Table 1 presents steps taken during a recruitment process, and presents the methods used for the e- as well for the traditional process.

Recruitment process	Traditional recruitment	E-recruitment
Attracting candidates	Using sources that are not technology supported, like advertisements, flyers, spokespersons, to draw as many applicants as possible to contact	Using the organisation's reputation, product image, online technology and other methods to draw as many potential applicants as possible to the organisation's website. There

	the organisation.	organisations can present themselves
Sorting applicants	Using a paper-based test for applicants to create a manageable applicant pool	Employing sophisticated, standardised online tests to screen candidates, and to winnow the applicant pool to a manageable number
Making contact	Contacting the sorted applicants by phone or mail and having face to face conversations	Using automated hiring management systems to contact the most desirable candidates very quickly, before they are snapped up by another company
Closing the deal	Making the phone call, setting up the meeting and shaking hands	Making the phone call, setting up the meeting and shaking hands

Table 1: The recruitment process set out in the traditional and 'e' way of recruiting (Derived from Cappelli, 2001)

2.1.2 Reasons to use e-recruitment

Organisations make use of e-recruitment because of several reasons (Chapman & Webster, 2003; Jones et al, 2002; Lee, 2005; Parry, 2006; Singh & Finn, 2003). These include:

- cost savings
- ease of use for candidates
- larger candidate pool
- ease of use for the organisation
- increasing the speed to hire
- success in finding candidates
- keeping ahead of competitors

Parry and Tyson (2008) studied the use and success of online recruitment methods in the UK. They conducted a six-year survey and performed qualitative interviews among HR managers. The survey had 25,224 respondents over the six years, and represented 935 organisations per survey. Interviews were held to supplement the survey data with a more in-depth view. Fifteen qualitative interviews were conducted with senior HR or resourcing managers responsible for recruitment, and five additional interviews were conducted with providers of online recruitment technology. They found from research that cost effectiveness is the most important reason (75%) mentioned by organisations, followed by ease of use for candidates (64%), a larger candidate pool (53%) and ease of use for the organisation (52%). Galanaki (2002) performed a survey among a sample of 99 organisations, of which 34 organisations responded. This research found similar importance regarding reasons to use e-recruitment, like cost effectiveness (46%), wide response rate (46%), reaching a specific niche (42%) and reaching passive job seekers (38%). Pin et al (2001) found, among 167 organisations, additional support for time savings (64%), lower recruitment costs (51%) and 24hrs a day, 7 days a week online (51%).

From the results noted above, it seems that organisations implement e-recruitment largely for efficiency benefits. Nevertheless, organisations might be rewarded more when they use information technology (IT) strategically (Singh and Finn, 2003). This implies that organisations need go beyond the efficiency motivation to use e-recruitment, and align the recruitment with the organisational strategy to realise optimum results (Singh and Finn, 2003).

2.1.3 Importance of e-recruitment implementation

Despite the fact that the reasons to use e-recruitment might sound profitable, and the use of e-recruitment is growing, several studies show that a majority of the organisations achieve only moderate results (Chapman & Webster, 2000; Parry & Tyson, 2008; Singh & Finn, 2003).

Parry and Tyson (2008) studied the use and success of online recruitment methods in the UK. From their research, it appeared that only under a quarter of the respondents found e-recruitment successful.

Chapman and Webster (2003) performed surveys and interviews as well, and investigated, among other things, the overall success in technology implementation like e-recruitment. First they performed in-depth interviews with senior HR personnel, after which they conducted a web-based survey administered to HR managers. In total, 2,250 respondents (representing a response rate of 75%) completed the survey. The results show that most respondents (about 40 %) indicated that they had been moderately or partially successful, only 25% indicated strong success, and nearly a third reporting limited success in using e-recruitment.

In these mentioned studies, success is vaguely and insufficiently defined. When defined, success is measured based on a single item, and is defined as how interviewees rank their organisation's efforts to acquire and implement technologies in the application, screening, and selection process in their organisation (Chapman & Webster, 2003). Interviewees could answer this question with responses ranging from 'extremely unsuccessful' to 'extremely successful', based on seven options. In another study, success is not specified, based on the assumption that HR is characterised by a context-specific nature, which causes definitions of success to be different in different circumstances (Parry & Tyson, 2008).

The findings presented above show that e-recruitment success is not realised in most cases. One of the factors in establishing e-recruitment success appeared to be the implementation of the system (Chapman & Webster, 2003; Galanaki, 2002; Pin et al, 2001; Singh and Finn, 2003). Galanaki (2002) concludes in her research that the effectiveness of the system depends mostly on the implementation of the system, rather than on the recruitment source itself. Adjacent to this statement, implementation success depends on thorough planning and on the use of established HR practices. Parry and Tyson (2008) state in their research that organisations might find success with online recruitment if they adopt an appropriate strategy for their use and implementation.

Implementation can thus be considered important in e-recruitment success. And while e-recruitment is one of the most discussed topics in the field of e-HRM (Chapman & Webster, 2003; Lee, 2005; Panayotopoulou et al, 2005), e-recruitment implementation receives less attention within these discussions. Although it is acknowledged that e-recruitment implementation is important, results from research about e-recruitment implementation and its content are sparse. Bartram stated back in 2000 that the topic of study [e-recruitment] was relatively new. Eight years later, Parry and Tyson stated that since Bartram's article, still little has changed and little is known. Based on own literature review, this can be confirmed as well for e-recruitment implementation. In addition, they argue that the majority of academic interest in e-recruitment considers the applicants' perspective, rather than the employer's (Allen et al, 2007; Maurer & Liu, 2007; Lee, 2005; Parry & Tyson, 2008).

Research findings concerning e-recruitment implementation are sparse. Of the few that exist, most stop with concluding that implementation is important in establishing e-recruitment success. Knowledge about whereof this implementation consists is lacking.

To recur, while the importance of e-recruitment implementation is acknowledged, enough attention is not paid to what implementation is comprised of. Therefore this research attempts to contribute to the body of knowledge concerning e-recruitment implementation.

In doing so, this research is characterised by several foci. First of all, this paper is focused on e-recruitment implementation itself. The second focus of this research is to provide a more inside look into this phenomenon from the corporate perspective.

2.2 Components and success indicators of e-recruitment implementation

Implementation is a widely investigated concept in research (Bouwman et al, 2003; Hayes, 2007; Krishnan and Singh, 2006; Montealegre, 1994; Ruta, 2005; Yeates, 1991), and in every study implementation might have another meaning. Hayes (2007) defines implementation as “translating actions (strategies and plans) into actual change efforts (pp 82)”.

IT implementation definitions like the one of Bouwman et al (2003), suggest that implementation can be seen as “the step between the adoption phase - the decision to acquire a new technology - and the phase in which the new technology is either used or rejected” (pp 12). They refer to this as the phase of internal strategy formation, project definition, and activities in which the adopted IT application is introduced within the organisation. In addition, including the aim of removing resistance and stimulating the optimum use of the application. Krishnan and Singh (2006) did research into Human Resource Information Systems (HRIS) and briefly define the implementation stage as “the phase after the selection of the HRIS”.

Gottschalk (1996) did research into implementation predictors and found different implementation definitions. He defines implementation in his research as “the process of completing the projects for application of information technology to assist an organisation in realising its goals”.

When taking into account Gottschalk’s implementation definition, different opinions about implementation completion do exist. Gottschalk (1999) comments that “some authors find implementation to be completed when change is occurring, while others find that it continues until intended benefits have been realised” (pp 81). Yeates (1991) in this way defines implementation success of a system as whether the system is used successfully and contributes to the overall business performance. Concerning this definition, the implementation of e-recruitment is completed when the expected business performance is met. For this research, business performance or intended benefits are referred to as outcomes of e-recruitment implementation. Thus, implementation is completed when the desired outcomes are realised.

When referring to IT implementation, the use of a system is an important effect of successful implementation of innovation (Klein & Sorra, 1996). Considering this, Klein and Sorra (1996) define implementation as “the process of gaining targeted organisational members’ appropriate and committed use of an innovation”. To be more exact, they consider implementation as “the transition period during which targeted organisational members ideally become increasingly skilful, consistent, and committed in their use of an innovation”. TOMs are outlined as the individuals who are expected either to use the

innovation directly or to support the innovation's use (Klein & Sorra, 1996). In addition, they argue that, among others, the fit of an innovation to targeted users' values is important in implementation. Unless the adoption decision is made by the management, implementation fails when the system is not used. Klein and Sorra (1996) refer in this case to using the innovation less frequently, less consistently, or less assiduously than required for the potential benefits of the innovation to be realised. Concluding from the above, using the system an important effect of a successful implementation.

Based on the elaboration above, two important conclusions regarding e-recruitment implementation can be made at this point.

First of all, the definition of implementation to be used in this research can be defined. Important is the focus on proper use of e-recruitment and realising desired outcomes (Bouwman et al, 2003; Gottschalk, 1999; Klein and Sorra, 1996; Yeates, 1991). Next to that, the implementation will focus on the step that follows the adoption, until and including the use of e-recruitment (Bouwman et al, 2003).

So, in this research e-recruitment implementation is referred to as:

the transition phase after the adoption, during which users ideally become increasingly skilful, consistent, and committed in their use of e-recruitment, and realising desired outcomes.

Secondly, e-recruitment implementation success is derived from the definition that Yeates (1991) uses to describe implementation success of a system. E-recruitment implementation success depends in this case, on:

whether e-recruitment is used successfully and realises desired outcomes.

Obviously, e-recruitment implementation can be seen as an IT implementation. Yet, Yeates (1991) states that it "does not matter how much technical preparation has been carried out, nor how technically skilled the project team is, the complementary factor is good management" (pp 211). Proper management at all times is critical for the success of implementation (Krishnan & Singh, 2006). Bouwman et al (2005) present that often innovations do not deliver the desired outcome because of "a faulty implementation of new technologies". Therefore, management issues during the implementation are part of e-recruitment implementation. These imply, for example, strategy formulation, project definition and activities in which the adopted IT application is introduced (Bouwman et al, 2003).

Therefore, the just formulated definition of e-recruitment implementation needs to carry the notion that the system as well the organisational side are important in implementation. The system thus has two components, the organisational and technical component.

Perceiving e-recruitment implementation from the organisational side, shifting from a traditional manner of recruiting to online or e-recruiting is not just swapping the medium (Parry & Tyson, 2008). The use of the system might require a greater change than just changing the technology. When doing research into e-HRM, Ruël, Bondarouk and Looise (2004) ascertain that e-HRM is to a large extent considered to be an

IT implementation by organisations. But, when actually performing the implementation, organisations acknowledged that implementing e-HRM applications also requires organisational change. E-recruitment implementation needs, therefore, to contain management support activities, or, as defined in this research, management support strengths.

Perceiving e-recruitment from the technical side is about system characteristics or strengths, and use of the system. IT is successfully implemented when, due to the system strengths, users use the system (Bouwman et al, 2003; Gotschalk, 1999; Klein & Sorra, 1996; Yeates, 1991). Considering the formulated definition of e-recruitment implementation, this includes the importance of proper use of e-recruitment and realising outcomes (Gotschalk, 1999; Klein and Sorra, 1996). Proper use of a system is important because an implementation fails when users use the system less frequently, less consistently or less assiduously than required (Klein & Sorra, 1996). For this research, this is named system strength.

2.2.1 Defining e-recruitment implementation success indicators

The technical side of the implementation focuses on the use of the system. Using a system as it is supposed to be used and incorporating the system into work processes by its users are, therefore, important outcomes of successful implementation (Klein & Sorra, 1996; Ruël, 2001). Bouwman et al (2003) describe that organisations could have made a well-considered decision to adopt an innovation, and have a thorough implementation strategy, however use of a system seems to be the crucial variable for successful implementation. Use concerns, in this sense, the extent and the way in which an application is used. Klein and Sorra (1996) state that ‘implementation fails when employees use a system less frequently, less consistently or less assiduously than required for the potential benefits of the innovation to be realised’. Including use of a system in this research as one of the success indicators is, therefore, necessary.

It becomes clear that the use of a technology can be defined as an outcome of successful e-recruitment implementation. It is important that users work with the technology in line with the intention of the technology. This is known as *appropriation*.

Appropriation is a concept belonging to the Adaptive Structuration Theory and is defined by Ruël (2001) as “the physical and mental activities that users of technology carry out while making a selection from the potential set of structures of a technology, represented by the spirit and the technical features, for the day-to-day practices” (pp 53). Structures are referred to as rules and resources of IT (Bondarouk, 2004; DeSanctis & Poole, 1994). Spirit refers to the general intent with regard to values and goals underlying a given set of structures (DeSanctis & Poole, 1994).

Appropriation can thus be used to approach the manner in which technology is used in a specific context (DeSanctis & Poole, 1994). This concept is used in many studies to confront technology use (Chin, Gopal & Salisbury, 1997; Ruel, 2001; Salisbury, 1996; Wiredu, 2007). In this sense, Chin, Gopal and Salisbury (1997) performed three experiments from which they found that faithfulness of appropriation is important for participant satisfaction. Faithfulness of appropriation concerns the extent to which a certain technology is appropriated in line with its spirit (DeSanctic & Poole, 1994; Ruël, 200). In addition, Salisbury (1996) found, from survey research based on 228 respondents (representing a response rate of 97 %), that meaningful appropriation significantly influences satisfaction of users. Finally, Ruël (2001) found, related to appropriation based on four case studies, that the clarity of the spirit seems to be

positively related to the level of appropriation. This supports the thought behind appropriation, that “the clearer the spirit of IT to the user: the more faithfully they appropriate the technology, the more they perceive it as useful and easy to use, and the more they use the technology in a task-oriented way” (Bondarouk, 2004, pp 33). To make the spirit of an IT clear to its users, agreement about the reasons for technology implementation, user involvement and organisational support are important (Ruël, 2001). Referring to the formulated definition of implementation and implementation success (pp 14), use can be considered one of the desired outcomes.

A second outcome of successful e-recruitment implementation concerns *productivity benefits* of e-recruitment. These are widely discussed in the literature. If e-recruitment is successfully implemented, it might lead to efficiency advantages like cost reduction and time saving (Cappelli, 2001; Chapman & Webster, 2003; Galanaki, 2002; Maurer & Liu, 2007; Parry, 2006; Pin et al, 2001; Singh & Finn, 2003; Torkzadeh and Doll; 1999).

For example, cost reduction can be realised by computerisation of routine recruiting activities (Cappelli, 2001; Chapman & Webster, 2003; Galanaki, 2002; Jones et al, 2002; Parry, 2006; Pin et al, 2001). Cost reduction refers as well to advertisement placement, and paper and copying use. Jones et al (2002) show that a newspaper advertisement in the United States costs \$5,000, whereas an internet advertisement \$1,000. Cappelli (2001) even states that it costs only about one-twentieth as much to hire someone through e-recruitment, as to hire someone through traditional means. Research performed by Pin et al (2001) shows that lowering recruitment costs is the number two advantage of e-recruitment. 51 % of their respondents perceived cost savings as an advantage.

Time saving include job posting and processing time, which can be reduced by e-recruitment (Jones et al, 2002). Job postings, applicant response, and processing of résumés can be done faster (Pin et al, 2001). Next to that, the immediacy of listing reduces the time taken for recruitment to remove quality job candidates from circulation before other competitors have the opportunity to act (Jones et al, 2003). This affects the hiring cycle. Time saving advantages also influence cost reduction.

Pin et al (2001) present in their research a visual overview concerning the difference in time spent between the traditional and internet hiring process (Figure 3).



Figure 3: Time spent on hiring process when using the traditional or by using the internet (adapted from Pin et al, 2001)

Deriving from Figure 3, potential time savings by using the internet in recruiting applicants are obvious.

Findings from research confirm these observations in that saving time is considered the number one advantage of e-recruitment by 64 % of the respondents (Pin et al, 2001).

A third outcome is referred to as *e-recruitment quality*. This is about the extent that e-recruitment helps to regulate the work processes and performance of the recruitment process (derived from Torkzadeh & Doll, 1999). More or less, this has to do with to what extent the technology is relevant in performing recruitment related tasks. For e-recruitment, this could include user satisfaction. A technology might provide users more time left to really recruit, or to recruit better.

Another example can concern applicant satisfaction. Concerning applicant satisfaction, research performed by Chapman and Webster (2003) showed that increasing applicant convenience appeared to be the least mentioned goal of organisations before they implement e-recruitment (only 15.5 % of the respondents thought so) (Parry & Tyson, 2008). Yet, after implementing e-recruitment, this least mentioned goal was achieved most. Research performed by Parry (2006) proved that 64 % of the organisations mentioned ease of use for candidates as a reason to use a corporate website for e-recruitment. When considering user satisfaction, 52 % of the respondents rated ease of use for the organisation as a reason (Parry, 2006). Applicant satisfaction can result in an increased amount of applicants and a higher quality of applicants. Galanaki (2002) shows that a wide response rate (46 %) and higher quality responses (23 %) are major factors for organisation when deciding to use e-recruitment.

2.2.3 Reflection on the research framework - components and success indicators of e-recruitment implementation

Based on the elaboration above, it is clear that e-recruitment implementation is seen as important in establishing e-recruitment success. Proper e-recruitment implementation in this way contains a technical (e-recruitment system strength) as well as an organisational (e-recruitment management support strength) component.

When e-recruitment is actually implemented successfully, this might result in several positive outcomes. These outcomes are classified as e-recruitment appropriation, e-recruitment productivity and e-recruitment quality. These outcomes are perceived to be as lucrative, and to ensure that they come about, attention needs to be paid to e-recruitment implementation. In the research model, positive outcomes are referred to as success indicators.

Based on the elaboration above, the preliminary theoretical framework presented in Figure 1 can be extended. This is presented in Figure 4:

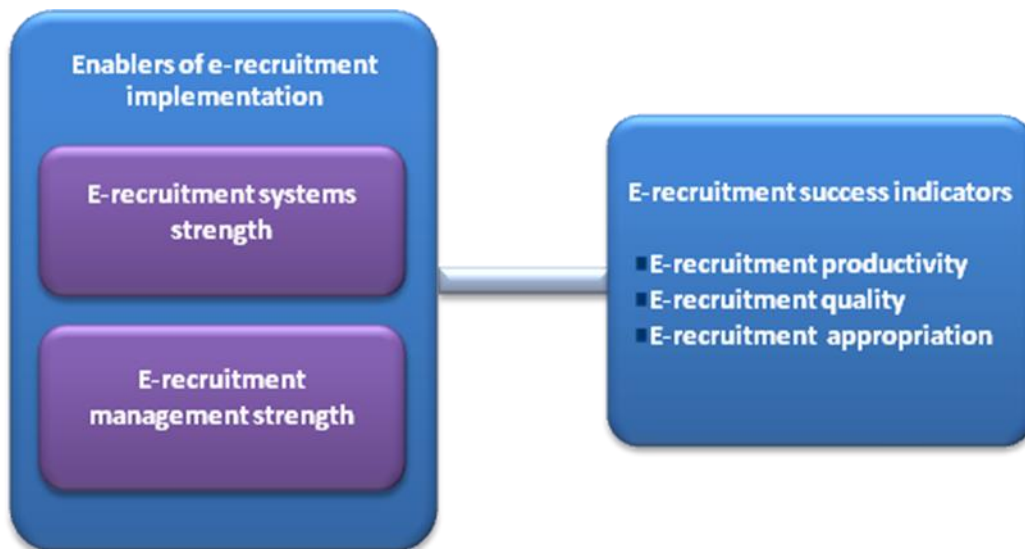


Figure 4: Preliminary theoretical framework (2).

2.3 Enablers of e-recruitment implementation

To determine enablers of e-recruitment implementation, concepts belonging to the components e-recruitment characteristics strengths and e-recruitment management support strengths will be used.

2.3.1 E-recruitment system strength enablers for e-recruitment implementation

To define technology enablers, existing models provide a foundation to do so. In this field of knowledge, different models exist. For this research, I built on three models: the DeLone and McLean Information Systems Success Model (D&M IS Success Model) (DeLone & McLean, 2003), the Technology Acceptance Model (TAM) (Davis, 1989) and the measurement of End-User Computing Satisfaction (EUCS) by Torkzadeh and Doll (1997).

An obvious difference between these three concepts is their vision concerning IT implementation effectiveness. The DM IS success model measures system success described as net benefits. These refer to the impact of an IT on an individual or organisation. The TAM measures IT effectiveness by IT acceptance of users, and usage on the job. Finally, the measurement of End-User Computing Satisfaction measures IT effectiveness by considering the satisfaction of end users. Satisfaction in this model is defined as the affective attitudes towards a specific computer application by someone who interacts with the application directly (Doll & Torkzadeh, 1988).

To reach IT implementation effectiveness, the TAM tries to predict peoples' acceptance by measuring their intentions and the ability to explain their intentions. Based on a longitudinal study of 107 users, perceived usefulness and ease of use by the user are measured in terms of attitudes and subjective norms (Davis, 1989). The TAM model has been tested considerable times (Adams, Nelson & Todd, 1992; Davis & Venkatesh, 1996; Legris, Ingham & Collette, 2003). One of the findings stemming from these tests is that perceived usefulness seems to be a more significant determinant of system use than perceived ease of use (Davis & Venkatesh, 1996). Despite that the TAM receives a great deal of empirical support, there are some remarks related to this model (Legris, Ingham & Collette, 2003). Among these, the critique has been raised that research about TAM is often based on self-reports. In addition, many studies involved students instead of taking place in a business context. Finally, it has also been

criticised for the types of applications examined. Studies concerning TAM often focused on the office automation software or systems development applications.

In case of measuring EUCS, an instrument has been developed which merges ease of use and information product items to measure the satisfaction of users (Doll & Torkzadeh, 1988). Based on a survey among 618 end users and a factor analysis, 12 items were suggested to measure five components of end user satisfaction. These are content, accuracy, format, ease of use and timeliness (Doll & Torkzadeh, 1988). Research performed by Etezadi-Amoli and Farhoomand (1996) supports the use of this model. Based on 341 questionnaires, they found a significant variation in user performance explained by the six correlated attitudinal factors underlying EUCS. Yet, they postulate that a further theoretical foundation is absent, which implies careful treatment of these results.

The D&M IS success model measures the success of a technology (DeLone & McLean, 1992). Based on a review and integration of 100 research studies (DeLone & McLean, 1992; Halawi & McCarthy, 2007), initially five concepts were developed. The first two are referred to as system quality, and information quality. These influence the Intention to use and User satisfaction, which subsequently create individual and organisation impact. After the original D&M IS success model was developed in 1992, the quest was to apply, validate, challenge, and propose enhancements to the original model. Since then, an internet search indicates that 2.911 articles have cited or made use of the model. Based on contributions made in other research, the D&M IS success model was adjusted in 2002 (DeLone & McLean, 2002; 2004). As a result, service quality was added to the model, and individual and organisational impacts are collapsed into net benefits (DeLone & McLean, 2002).

Among these articles, findings present the model to be broadly valid (Rai et al, 2002; Seddon & Kiew, 1994, Meyers et al, 1997). For example, Rai et al (2002) found empirical evidence that suggest the model is characterised by explanatory power, and thus suggesting that the model explains IS success (p 65). Seddon & Kiew (1996) attempted to partially validate the DeLone & McLean (1992) model, and in so doing suggested the inclusion of perceived usefulness as a replacement to use, given that use is primarily a behaviour, and not reflective of success in contexts where usage is mandatory.

Yet, based on the extensive research on this model, some issues have been raised. Seddon (1997) argues that the original D&M IS success model is confusing. From his own experience with the system and empirically tested parts of it, he found that the inclusion of both variance and process interpretations in one model leads to so many potentially confusing meanings that the value of the model is diminished (p 251). The comments raised were adjusted into the D&M IS success model constructed in 2002.

When comparing these three models, the outcome constructs of the TAM and EUCS seems to be characterised more by an affective notion, like satisfaction, and IT acceptance and usage. Although the D&M IS success model includes use and user satisfaction like the TAM and EUCS do, the overall focus is on net benefits. In this way, the DM IS success model is taking it one step further when considering net benefits. These benefits can include quantitative measures, like improved cycle time, decreased costs, or an increased profit. This results in a more complete, and not solely affective measure of IT effectiveness or success.

Finally, when considering these three models, the D&M IS success model is the only model among the three previously mentioned models that includes service quality of the system. Based on a meta analysis consisting of 100 reviewed articles, service quality has been added to the model because information and system quality only measure the success of the technology itself. Service attached to the system is underestimated, but seems to be important in IS success (DeLone & McLean, 2003). Therefore, to capture a more complete overview, they added service quality to their model.

2.3.1.1 Technology and service quality as e-recruitment system strength

After elaborating on different IT implementation effectiveness measurement models, it is now time to look at IT implementation effectiveness in light of e-recruitment implementation.

It is important to include the characteristics of an IT in the overall implementation of e-recruitment. First of all, a construct is needed to measure the quality of the IT itself. Therefore, this research includes *technology strength* as a construct for e-recruitment implementation. This refers to the quality of the e-recruitment technology and the information stemming from the technology (derived from DeLone and McLean, 2003). By including this construct, the technology itself will be measured.

Next to focusing on the effectiveness of IT solely, another construct needs to be added to reinforce the overall measurement of IT effectiveness. This relates to the service that is attached to the technology. In many models (Doll & Torkzadeh, 1988, Davis, 1989), this aspect of IT effectiveness is underestimated and excluded. To capture a more complete view concerning e-recruitment, *service quality* will be added in this research.

Service quality is referred to as the overall support delivered by the service provider, and applies regardless of whether this support is delivered by the IS department, a new organisational unit, or outsourced to an Internet service provider (ISP) (derived from DeLone & McLean, 2003). Service quality is a concept which already exist for a while (Pahalad & Krishnan, 1999), yet it was left out of consideration in IT research because the focus was on the product, the technology itself (Pitt et al, 1995).

Service quality is more difficult to measure when compared to product quality. This is because a service has several characteristics that are opposite to those of a product, like intangibility, heterogeneity and inseparability (Parasuraman et al, 1985). Mostly based on its intangibility, service quality is more difficult to measure. Because of the lack of tangible evidence, it is hard to evaluate service quality. An organisation or service provider might find difficulties in understanding *how* customers perceive service and service quality. When service providers know how a service is evaluated by its customers, providers will be able to improve the service, and customers are able to influence the evaluations in a desired direction (Gronroos, 1982). Therefore, service quality is not only outcome-oriented, but to evaluate service quality a distinction needs to be made between the actual delivered service and the expectation of the customer (Parasuraman et al, 1985). This way of thinking is based on the disconfirmation paradigm, which postulates that satisfaction is related to the size and direction of the disconfirmation experience where disconfirmation is related to the person's initial expectations (Churchill & Suprenaut, 1982).

By focusing only on the product aspect of technologies, IT success might be mismeasured. To intercept this, service quality will be included in this research as a construct to measure the e-recruitment technology success. Service quality is important, as poor service will result in 'lost' customers and sales

(DeLone & McLean, 2003). IT increasingly determines the nature of the experiences customers, employees, partners, and investors have with a company, its products and services, and its operations (Pralhad & Krishnan, 1999).

To measure service quality, the SERVQUAL instrument has been developed (Parasuraman et al, 1985; 1994). Yet, with the emergence of e-commerce, customers are interacting with organisations via ICT mediated channels (Ettinger, Wilderom & Ruel, 2009). Therefore the concept e-service quality has been developed, to measure the service quality delivered by websites, as perceived by customers (Parasuraman, 2005). From previous research, it appears that high service quality seems to enhance customer satisfaction, customer retention, and consequently, organisational performance (Berry & Parasuraman, 1997; Grönroos, 2007; Rodgers, Negash & Suk, 2005).

Translating this to e-recruitment, positive experiences relating to the system are critical to motivate the customer. To prevent confusion, internal users of the system, such as recruiters and HR assistants (rather than applicants), will be referred to as customers. Yet, as the focus of this research is on the user, establishing high e-service quality is important for applicants as well. Poor service might lead therefore to 'lost' customers because they cannot use the system or refuse to work with it (DeLone & McLean, 2003). As a consequence, this could lead to lost applicants or inefficiencies in the recruitment process.

2.3.1.2 Reflection on the research framework - e-recruitment system strength

Reflecting on the above mentioned, the constructs belonging to the technical components of e-recruitment implementation are set out. Approaching the technology strengths of e-recruitment will be done by examining certain qualities, specifically:

- technology quality
- service quality

2.3.2 E-recruitment management support strength enablers for e-recruitment implementation

As pointed out before, management support is one of the two components important for e-recruitment implementation. Because of its importance and undervaluation, this research includes management support (Bouwman et al, 2003; Ruël et al, 2004; Yeates, 1991).

Relevant management support strength enablers or activities, in relation to e-recruitment implementation, will be discussed. Bouwman et al (2003) refer to, for example, strategy formulation, project definition and activities in which the adopted IT application is introduced.

2.3.2.1 Empowered project team

The function of a project manager is to manage and run the project (Newton, 2006). What is often seen, is that the project manager is actively engaging. Yet, a manager is not supposed to act as a team member. Project managers who lack the ability to effectively lead an implementation risk not delivering the promised scope, reliability and performance on time or on budget at the end or during the implementation (Kappelman, 2006; Newton, 2006; Yeates, 1991).

Team members are employees working on a certain project, managed by a project manager (Newton, 2006) If these members lack the required knowledge or skills, this will directly affect the ability to fulfil implementation tasks. In addition, team members need to be committed to the project. In the case that they are not, the promised scope and quality of the implementation on time and in budget will not be realised, and they will find other projects that they pay more attention to (Kappelman, 2006).

Thus, a project team should be led by a manager who is able to lead effectively, and the team needs to exist of members who have the required knowledge and skills and are committed to the implementation.

2.3.2.2 Content of a plan

Galanaki (2002) stated in her research that the effectiveness of e-recruitment depends upon the implementation of the system. Subsequently, she states that implementation success depends on, among others, a thorough planning (Chapman & Webster, 2003; Galanki, 2002).

A project plan can be defined as an extensive description of the necessary actions to finish a project (Newton, 2006). Such a plan has several purposes. These can include gathering more information about the duration of the project, getting to know the required resources, clarifying the project to the project members or customer, to distribute tasks and responsibilities and to monitor the progress of the project (Newton, 2006)

A plan starts with having a vision. This is a picture about the future, in this case about e-recruitment implementation, and helps clarify the direction in which the implementation is moving (Kotter, 2007).

Coupled to this vision, eventually a strategy is developed to achieve this vision. This strategy consists of documented requirements or success criteria (Kappelman, 2006). In developing this strategy, attention needs to be paid to whether e-recruitment is used strategically (Singh & Finn, 2003). E-recruitment should be used to complement and reinforce the overall strategy. This could be the overall organisational and HRM strategy. This is underlined by Schuler and Jackson (1987), who, based on Porter's competitive strategies, argue that business performance will improve when HR practices mutually reinforce the organisation's choice of competitive strategy (Schuler & Jackson, 1987). In addition, HRM practices need to be aligned with each other as well (Hayes et al, 2007).

Finally, an effective schedule planning also needs to be present (Kappelman, 2006). The planning is formed by short-term tasks and due dates that lead to the overall implementation. In this, they might function as possible short term wins (Kappelman, 2006; Kotter, 2008). Not having short term wins result in people who give up on the implementation (Kotter, 2008).

A planning with a proper content leads to employees that are moving in the same direction. Kappelman (2006) suggests that every person has their own expectations and assumptions because each one is working from a different metal blueprint. To prevent that different expectations, assumptions, or even conflicts exist in a project team or even among the targeted organisational members concerning the implementation of e-recruitment, a clear plan is necessary (Krishnan & Singh, 2006).

When developing a plan, team members and managers need to be aware that they are most of the time set in their ways of acting (Krishnan & Singh, 2006). A plan could incorporate perpetuated processes and procedures because they have worked over years. Yet, these processes and procedures might not be the way to optimise the value of an implementation. This especially counts when the implementation concerns new projects that might bring more value when perceived differently than previously implementations. Members should be encouraged to challenge old ways of thinking (Krishnan & Singh, 2006). In doing this, they should not focus on doing things better, but towards doing things differently or even doing different things (Hayes, 2007; Nadler & Shaw, 1995).

2.3.2.3 HRM and IT collaboration

Panayotopoulou et al (2005) did research into the role of HRM and the adoption of e-HR. They found collaboration between HRM and IT to be a critical success factor in e-HR adoption. This not only has impact on the adoption of a system, but also its use.

In light of e-recruitment, right collaboration ensures successful integration of e-recruitment into the HR process (Panayotopoulou et al 2005; Krishnan & Singh, 2006).

Next to that, proper collaboration responds to the need for a quality service. (Panayotopoulou et al, 2005) Considering this, a needs assessment is important in this collaboration to determine what exactly needs to be delivered by the system to fulfil its quality (Krishnan & Singh, 2006).

If the needs assessment is done properly, it can still occur that a system does not deliver the assessed needs. Research into HRIS implementation showed that the HR department had no opportunity to select the package they would like to implement according to their needs (Krishnan & Singh, 2006). In this case, incongruence consists between system needs and system abilities, which might lead to unsuccessful integration of the system into the HR processes and insufficient service quality.

2.3.2.4 Providing learning opportunities

Research into e-HR adoption shows that employee IT skills are an important issue (Panayotopoulou et al, 2005). The traditional recruitment process transforms into an e-process, which includes more transformation than only the medium itself (Jones et al, 2002). IT asks as well for a transformation in the skills of users (Singh & Finn, 2003). Relating this to HRM, Wilson (1998) even postulates that HR professionals generally have been known to be technophobic.

Krishnan and Singh (2006) found from research into HRIS implementation that user training is a key factor (Pin et al, 2001; Panayotopoulou et al, 2005; Krishnan & Finn, 2006). System features are not completely used due to a lack of knowledge or skills. Providing training just before live use begins helps minimise the time between training and actual use of a system (Krishnan & Finn, 2006).

Therefore, there need to be invested in the HRM department concerning IT training. Attention needs to be paid to this issue, to train employees with the appropriate skills (Kappelman, 2006; Krishnan & Singh, 2006; Panayotopoulou et al, 2005; Pin et al, 2001; Singh & Finn, 2003; Yeates, 1991). In this way it also decreases resistance among users to use the system. There are three forms of training that should be covered to achieve a successful implementation (Yeates, 1991).

First, orientation training. This is training with the aim of creating the right cultural environment for the system and to provide a context in which the application can establish an organisational foundation and grow. Second, application area training. This refers to more detailed training about what the specific application is designed to achieve for the business as a whole and, if relevant, the particular organisational unit selected. Finally, hands-on training. This concerns training about the actual operation of the system by the end user. Providing proper training to users includes all three sorts of training.

When providing training to employees, one needs to keep in mind that there is not 'one employee'. Employees differ from each other and this might influence processes (Stone et al, 2007; Panayotopoulou, 2005). Relating this to learning, different employees might require different learning opportunities.

2.3.2.5 Reflection on the research framework -e-recruitment management support strength enablers

Deriving from the aforementioned, enablers belonging to the component e-recruitment management support are identified. The most important enablers for e-recruitment implementation are, therefore:

- empowered project team
- content of a plan
- HRM and IT collaboration
- providing learning opportunities

2.4 Theoretical framework

From this chapter, a research framework can be outlined. The framework can be used to approach the implementation of e-recruitment, based on the formulated enablers.

The model presents that e-recruitment implementation consists of e-recruitment system strength and e-recruitment management support strength. As assumed at the beginning of this research, a successful implementation of e-recruitment results in outcomes by the e-recruitment system, measured by success indicators.

The preliminary theoretical framework can now be extended into a guideline that will serve for the rest of the research. This theoretical framework is presented in Figure 5.

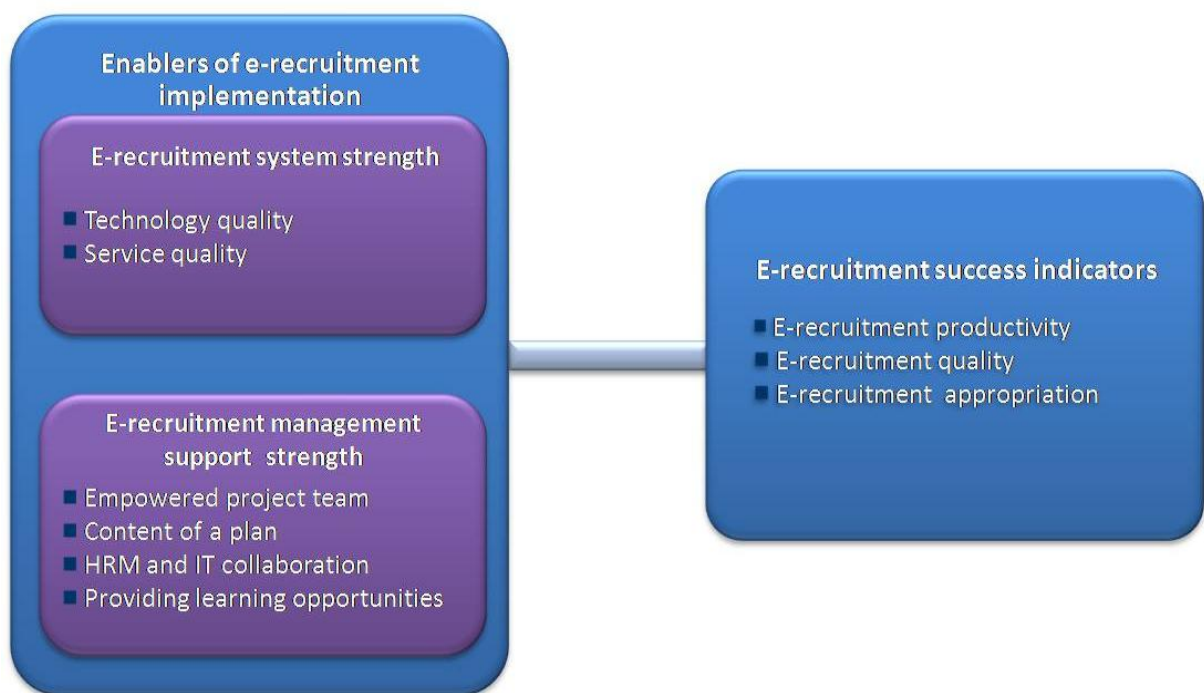


Figure 5: Theoretical framework

This model will be used to explore the implementation of e-recruitment at [redacted], and to derive enablers and success indicators. Secondly, if possible, this theoretical framework will be refined.

Based on the constructed theoretical framework, the research question can be divided into three sub-questions:

- What are the characteristics of e-recruitment system strength?

- What are the characteristics of e-recruitment management strength?
- What are the characteristics of e-recruitment success indicators?

These three sub-questions will be used when proceeding with this research.

3. Methodology

3.1 From theory towards research design

This research has used the previously constructed research framework as a guideline to study e-recruitment implementation. Therefore, the purpose of this research is to explore e-recruitment implementation at the ■■■, not to test the framework.

The research framework starts from the assumption made in the beginning, that e-recruitment implementation is important in establishing a successful e-recruitment system (Chapman & Webster, 2003; Galanaki, 2002; Pin et al, 2001; Singh and Finn, 2003). The framework shows that a successful e-recruitment system delivers multiple success indicators, which are understood as e-recruitment productivity, e-recruitment quality and e-recruitment appropriation. In addition, e-recruitment implementation consists of two components, defined as strengths of the e-recruitment system and management support concerning e-recruitment implementation. In turn, the components consist of several factors.

Because of the lack of available explicit knowledge regarding e-recruitment implementation, the desire exist to explore this phenomenon. This was done by exploring and unfolding this phenomenon at ■■■ using the research framework. The framework was used as a guideline to confront e-recruitment implementation at the ■■■.

In order to gather details about the implementation of e-recruitment at the ■■■, in-depth study was necessary. This was done by investigating this phenomenon in its real-life context. This provides a rich understanding regarding to the context of the research and its process (Saunders et al, 2003). Investigation was carried out based on the opinions and meanings of TOMs (Targeted Organisational Members, Klein & Sorra, 1996).

The reason for studying the opinions and meanings of TOMs was to get into the details of the situation, and the reasons behind them. This is related to a research philosophy known as interpretivism or constructionalism (Denzin & Lincoln, 1998; Klein and Sorra, 1996; Saunders, Lewis & Thornhill, 2003). In this view, research can be seen as a 'bricolage' (Denzin & Lincoln, 1998), as the aim is to produce a solution (bricolage) by choosing pieced-together, close-knit sets of practices. Nevertheless, this framework might not be the final research framework. Through chosen methods, the 'bricolage' is subjected to change (Denzin & Lincoln, 1998). Using research techniques for empirical inquiry alters and refines the theoretical framework based on gathered data.

Performing this research contributes to the ■■■ by handing recommendations and implications about e-recruitment implementation. In addition, it offers practitioners more understanding about e-recruitment implementation. Next to that, this research contributes to the body of knowledge about e-recruitment implementation, and hand academics a breeding ground to further exploring this field.

3.2 Role of the theory

This study combined different research approaches. First of all, developing a theoretical framework to analyse the situation at the ■■■, suggests the use of a deductive approach. Yet, refining the framework during and after the empirical data collection points to an inductive approach.

Theory can be used in different ways including as an initial guide to design and data collection, as a part of an iterative process of data collection and analysis, and as a final product of the research (Walsham, 1996; 2006). Nevertheless, as this research concerns different research approaches, the prominent purpose of the theory is to use it as an initial guide to design and data collection (Walsham, 1996, 2006).

3.3 Operationalisation of the constructs

Before continuing on the research techniques for data collection, it is important to know which constructs need investigation. This is done by means of an operationalisation. The operationalisation contains all the enablers and success indicators, including their definition, dimensions and research technique, derived from the research framework. Working from this framework, the operationalisation has been divided into three tables: e-recruitment system strengths, e-recruitment management support strengths and e-recruitment success indicators.

E-recruitment system strength enablers

Construct	Technique	Question examples
Technology quality: Refers to the quality of the e-recruitment technology and the information stemming from this technology (derived from DeLone & McLean, 2003)	Document analysis Interviews	<ul style="list-style-type: none"> ■ Can you describe what you think of the e-recruitment technology? ■ What do you think of the speed of the e-recruitment technology when reacting to an input? ■ What do you think of the flexibility of the e-recruitment technology?
Service quality: Refers to the overall support delivered by the service provider (Derived from DeLone & McLean, 2003)	Document analysis Interviews	<ul style="list-style-type: none"> ■ How would you describe the received service/support delivered by the service provider? ■ Can you describe the level of the delivered service?

Table 2: Operationalisation e-recruitment system strength enablers

E-recruitment management support strength enablers

Construct	Technique	Question examples
Empowered project team: The extent to which the manager and members are empowered in their tasks (self constructed)	Document analysis Interviews	<ul style="list-style-type: none"> ■ Can you describe the roles project members have in the project team? ■ What do you think of the composition of the project team?
Content of a plan for implementation of e-recruitment: Refers to a future situation and to the actions required to reach this situation (Derived from Arendsen, 1992; Hayes, 2007; Newton, 2006)	Document analysis Interviews	<ul style="list-style-type: none"> ■ Can you describe the available plan concerning the e-recruitment project? ■ What do you think of the clarity of the plan?
HRM and IT collaboration in e-recruitment implementation: Refers to the extent of collaboration between HRM and IT to ensure successful integration of e-recruitment	Document analysis Interviews	<ul style="list-style-type: none"> ■ Can you describe the cooperation between the HRM and IT department? ■ Can you describe the existing formal regulations related to the cooperation?

(Panayotopoulou et al, 2005; Krishnan & Singh, 2006)		
Providing learning opportunities: Refers to the extent users are trained to use the system in an appropriate way (Panayotopoulou et al, 2005; Krishnan & Singh, 2006)	Document analysis Interviews	<ul style="list-style-type: none"> ■ Can you describe what kind of learning possibilities are offered to you referring to the e-recruitment technology? ■ To which extent do you feel that these offered learning possibilities are sufficient?

Table 3: Operationalisation e-recruitment management support strength enablers

E-recruitment success indicators

Constructs	Technique	Question examples
E-recruitment appropriation: Refers to the appropriate use of e-recruitment in line with its intention (Derived from Ruël, 2001; DeSanctis & Poole, 1994)	Document analysis Interviews	<ul style="list-style-type: none"> ■ Can you explain if and how there exists consensus among users of the e-recruitment technology about the way the technology is used? ■ Can you describe the tasks for which you use e-recruitment?
E-recruitment productivity: Refers to the productivity benefits as an outcome of e-recruitment implementation (self constructed)	Document analysis Interviews	<ul style="list-style-type: none"> ■ Can you describe if and how the implementation of e-recruitment has contributed to cost reduction? ■ Can you express if and how the e-recruitment implementation has contributed to time savings?
E-recruitment quality: Refers to qualities gained by e-recruitment implementation (self constructed)	Interviews	<ul style="list-style-type: none"> ■ Can you explain to what extent the new e-recruitment technology is relevant to your work related tasks? ■ What do you think about the ability of the e-recruitment technology in relation to applicant satisfaction?

Table 4: Operationalisation e-recruitment success indicators

3.4 Data collection and Sampling

Gathering empirical data through exploring and unfolding the phenomenon of e-recruitment implementation at ■■■ was made possible by several research techniques.

Studying the situation at ■■■ can be done in different ways. This research included two qualitative techniques. First of all, document analysis. This included the analysis of all existing relevant documents about the implementation of e-recruitment at ■■■.

Second, interviews were conducted to get in touch with TOMs, and to explore their opinions and meanings about the implementation of e-recruitment. Based on this information, details and the reasons behind them were gathered.

Document analysis and interviews are two techniques that reinforce each other and enable in-depth investigation. It emphasises a sequential design. Document analysis precedes the interviews, as one of the purposes of document analysis is to provide understanding and input for the interviews.

3.4.1 Document analysis

Access to several documents allowed in-depth analyses of e-recruitment implementation at the ■■■. Different documents were analysed such as:

- The *business case* of e-recruitment. This is the business justification of the project. The business case shows in brief the purpose of the system. In order to get an overall view of the situation, this is the first document about e-recruitment implementation and provides insights about the start of the process.
- The *product description* created by the project group e-recruitment. This document was developed based on input of recruiters who need to work with the system. The report presents, for example, general information about handling the process, the activity flow for the system, listed requirements, and authorization of users. This is a useful document to gain insight into the background and development of the process.
- *The plan of approach*. This document describes the approach, results, planning and the resources required for the E-recruitment 3.0 project.
- *The functional design*. ■ introduced an e-recruitment system provided by SAP, which is a web-based solution for recruitment (Website SAP). The functional design describes the design, which is used as basis for the configuration of SAP e-recruitment.

A reason behind document analysis is that the information it offers creates a greater understanding about and their e-recruitment implementation. In addition, document analysis provides relevant information to conduct interviews. Based on this information, interview questions can be formulated more easily and specified.

Secondly, document analysis provides the opportunity to dive into the common language regarding the research topic, and to speak the language of the employees. This is important interview preparation, because these questions might be interpreted incorrectly when the researcher does not speak or understand the language of the interviewees.

Finally, this technique is used to test if all TOMs are familiar with the formulated policy concerning e-recruitment implementation. In general, this is relevant for interviews. Yet, when considering the constructs that needed to be investigated at ■, it was important to explore, for example, the enabler 'content of a plan'. A comparison can be made to investigate if alignment exists between the documented policy and the policy known by the employees.

3.4.2 Interviews

The other technique used to gather empirical data was interviewing. Before interviewing, an interview protocol was developed based on the constructs described in the research framework and the operationalisation table. The interview protocol is constructed based on the operationalisation (Appendix B). To warrant the quality of the data gathered, the interview protocol, as well the interview and transcription were in Dutch. For all interviewees, Dutch was their mother tongue.

Differences can be seen in the level of standardisation of the structure of the interview (Saunders et al, 2007). Interviews can be, for instance, semi-structured or unstructured interviews.

Though unstructured interviews appeared to be the best option for exploration and in-depth data gathering, this research made use of semi-structured interviews. The reason behind this is that semi-structured interviews provide a little structure and consistency to the interview, while unstructured interviews have no predetermined themes at all. Interviews in this research need to address some specific themes and constructs, so free floating is not entirely the intent of these interviews.

To gather data about the constructs and themes, interviewees need to elaborate on these during the interview. Therefore the interview protocol was not entirely structured, nor entirely unstructured. Semi-structured interviews provide a few predetermined themes and interview questions as examples for inspiration during the interview. It has the purpose of guiding interviewees to elaborate on predetermined themes, instead of driving interviewees to answer the exact questions, like during a structured interview. In addition, semi-structured interviews do not offer an order of questions, but depend more on the data flow provided verbally by the interviewee.

The purpose of using semi-structured interviews was, therefore, to gather the details and the reasons behind issues related to the implementation of e-recruitment at [REDACTED]. The semi-structured interview was, in this way, a perfect instrument for investigation, as on the one hand it offers some structure to cover a few themes during the interview, and on the other hand it creates room to let the interviewee talk, and to zoom in on relevant information for the research.

3.4.3 Sampling

Interviews were conducted with people relevant for this research, expressed as TOMs. TOMs can be divided into users and influencers (Klein & Sorra, 1996). In addition, a snowball technique was applied as well. Relevant interviewees were added to this list during interview sessions to enrich the data gathering. To gather a greater understanding, the emphasis was on the data collection and analysis instead of on establishing a sample size (Patton, 2002). To create a complete picture concerning e-recruitment implementation at the [REDACTED], all 'parties' needed to be involved.

For this study, the users of e-recruitment had to be involved. Recruiters were, to a large extent, the users who worked mainly with the system. Next to that, employees like Human Resource assistants (HRa's), reintegration employees, employability employees, and front office employees of Recruitment Services use e-recruitment in some cases.

Along with the users, influencers were interviewed. These are individuals who are expected to support the use of e-recruitment, including:

- IT influencers; Business development office (BDO), [REDACTED] (third party organisation)
- Business influencers; Employees belonging to Recruitment Services or any HR department

TOMs can represent different functions. Some project team members belonged to another party as well. This created overlap. For example, an interviewee can be project member and employee of the BDO. To create an overall picture of the implementation of e-recruitment, it was necessary to include all parties involved in the interviews.

In total, 26 people were interviewed. The length of interviews varied from 45 minutes to two hours, which resulted in a total length of 1690 minutes or 28.17 hours. In total, 11 users were interviewed and 18 influencers. Three interviewees were defined as user and influencer. Table 5 through Table 7 visually present the interviewee sampling.

TOMs	Number interviewees
Users	11
Influencers	18

Table 5: Interviewees set out by TOMs (Users and Influences)

Users	Number interviewees	Participation during implementation		
		In steering board	In project Group	In neither
Recruiters	8	0	2	6
Other users	3	1	2	2

Table 6: User interviewees specified by type and participation during the implementation

Influencers	Number interviewees	Participation during implementation	
		In steering board	In project Group
IT influencers	8	2	6
HR/Business influencers	10	5	5

Table 7: Influencer interviewees specified by type and participation during the implementation

3.5 Role of the researcher

The researcher was present at the research scene for the entire duration of the research. In addition, the researcher interacted with relevant TOMs during as well after and before interviews. This happened through participation at meetings, as well during informal coffee breaks, lunches and receptions.

There are different roles a researcher can adopt, which range along a spectrum from an outside or neutral observer to an involved or action researcher (Walsham, 1995; 2006). In light of this research, the role of the researcher can be characterised as an involved researcher. Involved researchers can also be seen as participants.

The choice for being an involved researcher stemmed from the opportunity for in-depth access to people and data in their real-life context. This reinforces the qualitative way of doing research, because in-depth data regarding opinions of TOMs can be gathered for exploration and analysis. This rendered a more complete picture about the situation at the ■■■, and provided support when, for example, performing interviews. An involved researcher gains more understanding about the real-life context. This allows the researcher to better understand the common language spoken by the employees. This understanding helps when interpreting the interviews.

3.6 Data analysis

Data analysis is an extensive process, since before actually analysing the gathered data these need to be transcribed. The conducted interviews were transcribed along the themes of the framework. This is referred to as template analysis (Sunders et al, 2003). Themes used in this research are referred to as e-recruitment system strengths, management support strengths and e-recruitment success indicators. These themes subsequently consist of constructs. The data gathered during the interviews was transcribed in more detail per construct.

Transcribing these interviews is based on notes taken during the interviews. Occasionally, these notes were reinforced by sketches or drawings made by interviewees. The total amount of transcription resulted in 95 pages of data.

3.7 Trustworthiness

After transcription, interviewees received the transcription of their interview for a member check. It is important to perform this check when a study is interpretive. In this case, a member check provides feedback by the interviewees about the reliability of the transcripts. In total, all 26 interviewees responded on the member check.

After interviews were transcribed and the analysis was finalised, the findings were debriefed with several parties. Ongoing discussions with people from the organisation and the university reinforced the understanding and interpretation of the collected data.

All interviews were conducted by one interviewer, who also constructed the theory and interview protocol. Due to this, the interviewer possessed the required knowledge to perform the interviews in the proper manner. In addition, using one interviewer to interpret all interviews created consistency.

Despite being an involved researcher during this research, the aim was to act in some aspects as outside researcher as well. This relates to not becoming completely socialized to the views of the TOMs, but trying to maintain a fresh outlook on the situation and keeping a critical distance to warrant the value of the contribution of this research (Walsham, 2006).

4.0 Findings: E-recruitment implementation at the [REDACTED]

Based on the interviews and document analysis, this chapter describes the findings. Firstly, the contextual background of [REDACTED] and their implemented system SAP E-recruiting 3.0 are outlined. Subsequently, the implementation enablers, e-recruitment system strength and e-recruitment management support strength are described. Following, are the issues that emerged and are not addressed in the research framework. Fourth, the success indicators of e-recruitment implementation are presented.

Finally, the research framework is adapted and an overview of the strengths and weaknesses of the project, including corresponding recommendations, are outlined.

4.1 E-recruitment at the [REDACTED]: Contextual background

4.1.1 Introducing [REDACTED]

[REDACTED] is a worldwide airline organisation located in the Netherlands. It was founded in 1919 and has its hub at the Schiphol Amsterdam airport. In 2007, [REDACTED] merged with [REDACTED], which is known today as the largest airline partnership. In addition, [REDACTED] is member of the SkyTeam, which is the second largest airline alliance considering market share.

From its website, [REDACTED]'s strategic aim is 'to achieve profitable and sustainable growth. To achieve this growth [REDACTED], together with [REDACTED], is further developing its core activities in the most attractive markets, by working more closely with its fellow SkyTeam members, and by continuing to reduce costs. Next to their strategic aim, [REDACTED] has the mission that 'by being part of the most successful airline alliance and running an excellent airline, [REDACTED] wants to create value for its customers, employees and shareholders'. In total, [REDACTED] consists of 33,000 employees.

To provide readers with an idea of the activities performed by [REDACTED], its annual report states that in the fiscal year 07/08, a total of 23.4 million passengers and 657,022 tons of [REDACTED] [REDACTED] cargo were transported. [REDACTED] owns a fleet of 203 aircraft, and booked a profit of € 291 million.

Recruitment Services is one of the HR departments within 000, and is the 'owner' of the recruitment process. They are the initiator of the implementation of e-recruitment. This department includes many users of the system, like recruiters who are considered head users. As in many organisations, HR or Recruitment Services is a staffing department, which implies that Recruitment Services does not belong to the core business of [REDACTED] (Interviewee 21).

4.1.2 Project timeline

The SAP E-recruiting 3.0 project was characterised by an extensive timeline. To clarify the time span of the project, an approximate timeline of the project has been constructed below:

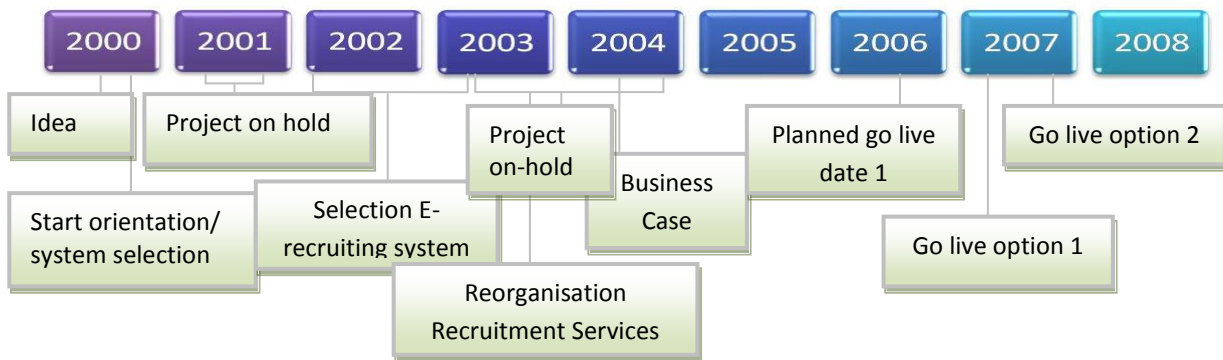


Figure 6: Approximate timeline of the e-recruitment project at [REDACTED]

In 2000, Recruitment Services became aware they needed a recruitment system (Interviewees 8, 9). This was due to several reasons:

'First of all, the customer [Recruitment Services] was dissatisfied about their recruitment process. This related especially to the turnaround time and quality of the process. Second, Recruitment Services was in need of management information. This department wanted to work in a results-driven way, based on management information' (Interviewee 9).

Before the project started, a selection was held to choose a system. Due to the plane crashes on September 11th, 2001, the project was put on hold. Sometime around 2002, the project was restarted again.

In this period, preliminary research concerning e-recruitment was carried out. This started with the writing of a project plan to select an e-recruitment system (Interviewee 9). The plan formulated the recruitment process flow, the needed requirements, and the kind of system Recruitment Services should implement. Yet the most important conclusion considered something else. After some investigating, the responsible project leader concluded that:

'the former recruitment process at Recruitment Services was not ready for automation. [REDACTED] carries the view they possess a special recruitment process, one like no other organisation. Next to this, the recruitment process at [REDACTED] was not standardised. This resulted in a recruitment process that did not match with existing e-recruitment systems' (Interviewee 9).

Therefore, Recruitment Services was advised first to reorganise its own recruitment process before implementing a new e-recruitment system (Interviewees 9, 12).

When continuing the project, a second incident occurred; the airline industry became aware of SARS (Severe Acute Respiratory Syndrome). Due to the collapsing airline industry, the project stopped again from April 2003 until November 2004 (Interviewees 5, 9). From the perspective of the e-recruitment project, this was seen an advantage. Due to fewer vacancies, the project could be put on hold. This created time to reorganise the recruitment process (Interviewees 9, 12).

From November 2004, the project restarted again. Also, the selection process for an e-recruitment system restarted. Finally, they started to implement the technology from SAP, SAP E-recruiting 3.0.

During projects, ■■■ is working according to the Prince (PProjects IN Controlled Environments) 2 method. This is a project-based method for project management. In April 2004, there was a first sign of a Business Case (BC). In November 2005, a Plan of Approach was formulated. This document contained the approach, results, planning and resources of the SAP E-recruiting 3.0 project.

A notable detail is that this document states that the project was going to last six months (Appendix C). The project should have lasted from December 2005 until April 2006. In practice, it turned out that ■■■ implemented SAP E-recruiting 3.0 in 2007. As to the exact date, different views exist. Some stated that this was in March (Interviewees 2, 21), whereas others said it was September (Interviewees 16, 20).

Recap 4.1.2

Concluding, several issues can be observed:

- The implementation of e-recruitment cannot be considered an independent project. As seen above, different developments influenced the implementation of e-recruitment. For example the airplane crashes on September 9th 2001, or the internal focus and attention paid to core activities.
- These developments characterised the timeline of the project. Yet, it appears that there is no clear view about the exact history of the project.

4.1.3 E-recruitment goals and involved parties

During the project, several parties were involved. First of all, Recruitment Services served as initiator of the project. This department represents most users of e-recruitment. For example it includes recruiters, who are head users of the technology. In addition, it also includes recruitment assistants, who use the system as well. Yet, outside Recruitment Services there are other users of e-recruitment, such as HR assistants.

Recruitment Services and all other users and influencers from the HR department are in this research referred to as 'the Business'.

Next to the Business, this project includes an IT component. IT is represented by different departments. Generally, ■■■ is self-supporting in IT projects. In these cases ■■■, consults the departments Business Development Office (BDO) and Information Services (IS) (Interviewees 6, 25).

The BDO is positioned within the ■■■ Businesses. Their focus is on business architecture. Within this focus they create business cases, formulate functional requirements and develop strategic ICT planning's. In addition, they are responsible for the day-to-day application support and maintenance within their business (Intranet ■■■).

In general, the BDO and IS work together on IT projects. Yet, when it comes to HR, this is a different story.

'HR is a stranger among IT projects, because HR appears to be strongly country specific' (Interviewee 6).

Because of the specific nature of HR IT projects, IS is less specialised and thus able to support these projects. Therefore, ■■■ chose to work together with ■■■. ■■■ is an external software and service consultant, specialised in Human Resource business solutions (Website ■■■). ■■■ works together with

██████ to support by HR IT implementations, like SAP HR, and is a trusted partner of the BDO (Interviewee 12).

Different parties involved might result in different goals for implementation of the system. Table 8 presents these goals. The left column describes the reasons perceived by interviewees, and the right column refers to goals gathered from existing documents regarding SAP E-recruiting 3.0.

Goals perceived by interviewees	Goals gathered from documents
<ul style="list-style-type: none"> ■ To increase efficiency in the recruitment process (Interviewees 3, 5, 7, 21) 	<ul style="list-style-type: none"> ■ To decrease recruitment costs and process turn-around time (BC) ■ To create more effective and efficient overview and fine tuning of supply and demand (BC) ■ To automate the administrative part to increase efficiency (PoA)
<ul style="list-style-type: none"> ■ To follow competitors (Interviewee 7) 	-
<ul style="list-style-type: none"> ■ To increase user-friendliness/ customer focus (Interviewee 16) 	<ul style="list-style-type: none"> ■ To improve the applicant handling process (BC)
<ul style="list-style-type: none"> ■ To be in possession of management reports (Interviewees 5, 16, 21) 	<ul style="list-style-type: none"> ■ To make recruitment a measurable process (BC)
<ul style="list-style-type: none"> ■ To recruit in a modern way (like using a talent pool) (Interviewees 16, 21) 	<ul style="list-style-type: none"> ■ To have appropriate candidates available in talent pool and to prevent capital elimination (BC) ■ To create a candidate database to increase the quality of Recruitment Services (PoA)
<ul style="list-style-type: none"> ■ To standardise the recruitment process (Interviewees 9, 21) 	<ul style="list-style-type: none"> ■ To warrant continuity and standardisation of the recruitment process (BC) ■ To create uniformity of recruitment processes at ████████ (PoA)
-	<ul style="list-style-type: none"> ■ To run down WISE (former recruitment system) and SAP 4.5 W&S-module (PoA)

Table 8: Overview reasons to implement E-recruitment (BC: Business Case PoA: Plan of Approach)

From this table, one can observe that the views of interviewees and data gathered from documents concerning reasons or goals to implement e-recruitment are largely overlapping. In addition, it can be said that there were several reasons to implement e-recruitment, and that different people had different views about reasons to implement. Possible explanations might relate to when the interviewees were involved during the project, or the spreading and communication of the goals.

Another remark can be made about the different parties expressing these goals: When relating these perceived goals to involved parties, it appears that these goals are mainly known among business project members. This might imply that other involved parties were not familiar with these or any other clear goals. Although business project members acknowledged these goals, they expressed different goals, which might have caused conflicts during the project.

Recap 4.1.3

Summarising this section, two issues can be noticed:

- Different parties were involved during the project, which causes different lines of interdependencies to be present. For example, between different departments, but also between people or users.

- Different goals for the implementation of e-recruitment exist. Especially business project members expressed these different goals. This might indicate that there existed no alignment among different goals and parties, and probably influences the collaboration.

4.1.4 SAP E-recruiting at the [REDACTED]

WISE was the recruitment technology that preceded SAP E-recruiting 3.0. Users perceived this technology to be basic, referring to the services the technology offers.

'WISE was a very basic technology in which vacancies could only be posted, and candidates could be attached to vacancies' (Interviewee 24).

The new technology, SAP E-recruiting 3.0, is more complete. This is a fully web-enabled tool for recruiting (Website SAP). SAP E-recruiting 3.0 is an extension of the SAP HR core system that [REDACTED] already works with (Interviewee 19). This system offers services to users like:

- Registration of vacancies
- Recruitment of candidates
- Rejecting candidates
- Creating a talent pool
- Gathering data about the recruitment process
- Handing an overview about recruitment process
- Publication of vacancy texts

In using the technology, several user groups can be differentiated. Table 9 outlines these groups:

Department	User	Sort task
Recruitment Services	Recruiters (Head user)	For complete recruitment process
	Recruitment assistants	For assisting with tasks during the recruitment process
	Front office employees	Supporting tasks of users
Decentral HR departments	HR assistants	Registration of vacancy
	(HR) managers	Only view function
Employability Services	Reintegration managers	Recruitment process tasks for reintegration candidates

Table 9: Users SAP E-recruiting 3.0

The system is accessible for users through the intranet of [REDACTED]. All users possess a personnel number and password and receive varying levels of authority based on this number and password.

[REDACTED] developed their e-recruitment process along five different steps, referred to as vacancy enrolment, pre-screening, selection and investigation, negotiation about labour conditions, and commencement of employment. Figure 7 presents this process.

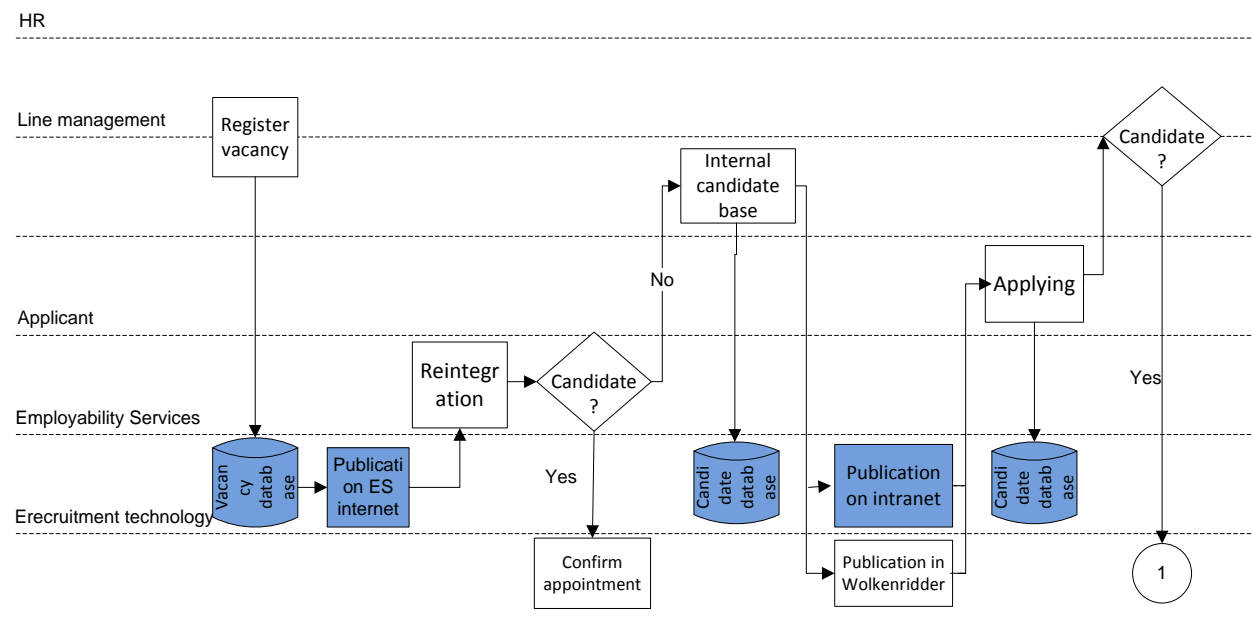
The first step is characterised as the vacancy enrolment. The recruitment process starts when a position or function becomes vacant, and a HR manager (or, most of the time a HR assistant) registers this vacancy in SAP E-recruiting. A vacancy is registered by filling in required information. The required information is entered based on seven guide cards. These guide cards present General function related information, Organisational information, Employee Recruitment, Educational qualifications, Attachments, Data overview, and Send application (Jobsite [redacted]).

After a vacancy is registered and sent, a recruiter takes over. After all information is gathered, a vacancy text is formulated and the vacancy is sent out. According to the policy of [redacted], the vacancy is first offered to Reintegration candidates. After a period of five days, the vacancy is made public for internal employees as well. After this period has expired, also external candidates can apply to the vacancy.

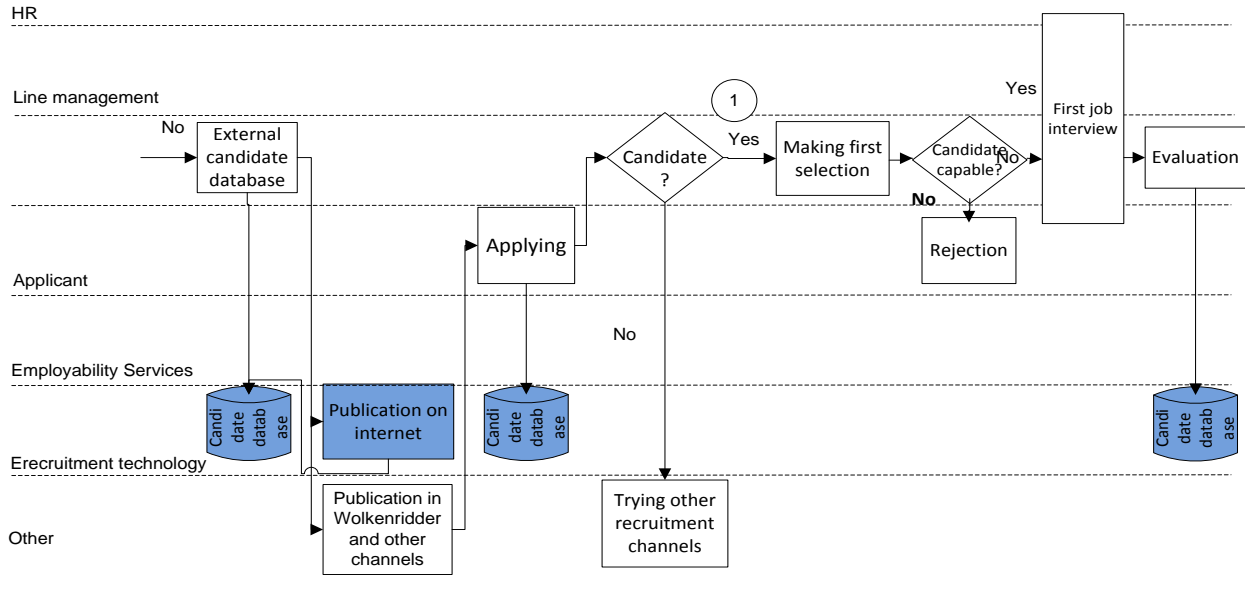
Candidates can apply through the internal and external job site of [redacted]. They can register online and create a personal profile. All incoming resumes are first pre-screened, to do a first sifting among all candidates. Resumes perceived to be eligible for a vacant position are selected. Based on these applicants, a further selection is made by using different techniques. A common technique is a job interview (E-recruitment process description).

When a candidate passes, a working condition meeting determines under which agreements and secondary conditions a candidate would be possibly hired. When the outcome of this meeting is positive, a candidate's commencement of employment is a fact.

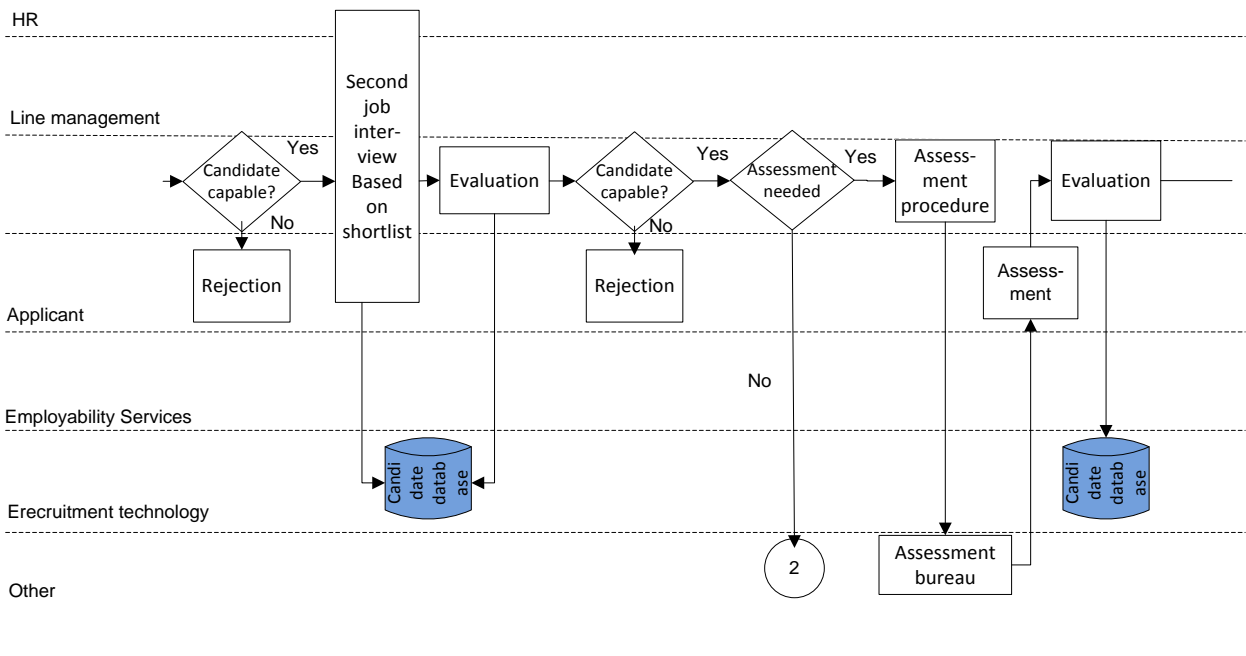
- 1 -



- 2 -



- 3 -



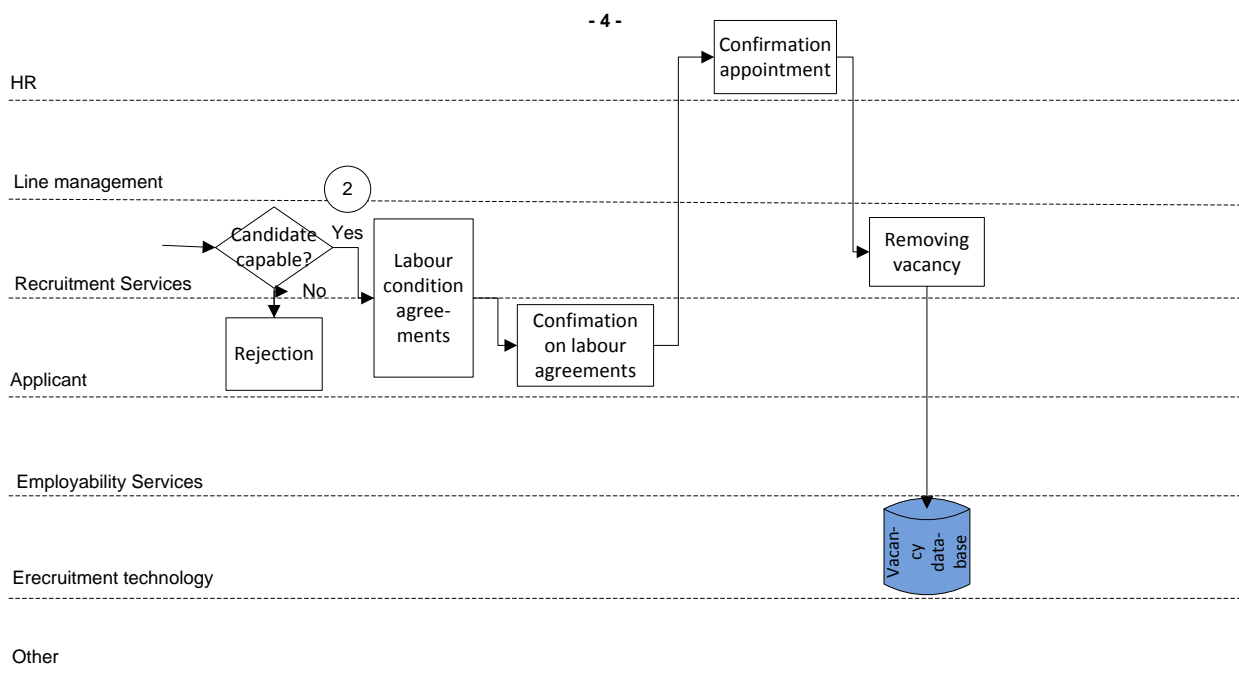


Figure 7: E-recruitment process at [REDACTED] Represents actions performed by the technology

The actions under line 'Other' in Figure 7 represent actions taken by parties other than those mentioned in the figure. These can be an assessment bureau, or using other recruitment channels.

As the blue blocks indicate the actions performed by the technology, it can be noticed that in the beginning of the process the technology is used most. For the rest of the process, the technology serves as a database in which the process steps can be stored. The other part is performed mostly based on human actions.

Recap 4.1.3

From the above, three aspects can be noticed:

- The new system SAP E-recruitment 3.0 offers more services to users than the former system WISE did
- Different departments are using e-recruitment. Especially due to the fact that all HR departments are decentralized, system use is dispersed throughout the organisation
- SAP E-recruiting 3.0 is most used at the beginning of the process whereas the rest of the process is performed mainly based on human actions. The technology serves in these cases to store the recruitment process.

4.1.5 Reflection on the Contextual background.

Contextual influence relates to developments in the environment or sector of an organisation, or developments on organisational level that influence the e-recruitment project. Examples of the [REDACTED] are SARS, 9/11, and the affect of being a staffing department. Among other things, these developments influence the project and characterise the extensive timeline.

The foundational goals of the project correspond with the goals found from literature, like efficiency, time savings, cost savings, ease of use of candidates, etc (Chapman & Webster, 2003; Jones et al, 2002; Lee, 2005; Parry, 2006; Singh & Finn, 2003). In addition, the project at the ■■■ expressed goals other than these, like the desire to extract management information and to standardise their processes.

The project had different goals for the implementation of e-recruitment. The existence of goals other than efficiency might point to a greater reward in the end (Singh & Finn, 2003). Yet, this concerns a more strategic point of view. Implementing e-recruitment is rewarded more when this is based on strategic reasons. As ■■■ goes beyond the efficiency motivation to use e-recruitment, they do not succeed in aligning e-recruitment goals to an e-HRM or organisational strategy in order to realise optimum results (Singh & Finn, 2003). Another remark concerning the awareness of project goals is the fact that mostly business project members are familiar with the goals. In addition, they express different goals. This might lead to conflicting views when working on the project.

Next to different goals, different parties were involved in the project. This creates different lines of interdependencies. In addition, departments spread over the ■■■ are involved. Parties need to cooperate effectively and need a solid ground to do so.

A final remark concerns the recruitment process at ■■■. When comparing this process to the steps provided by Cappelli (2001), it is evident that these two do not completely match. The process at ■■■ is characterised by more human actions than the e-recruitment process described by Cappelli (2001). On the one hand, this emphasises the importance of the human touch during the process. On the other hand, it can be wondered if ■■■ possess a real e-process.

Concluding, a project like e-recruitment implementation could be influenced by several developments besides the activities performed during the project itself. In addition, incorporating e-recruitment more strategically creates greater benefits and connects e-recruitment to the overall development of e-HRM. Context and strategy alignment are, therefore, two factors that might influence e-recruitment implementation.

4.2 E-recruitment system strength enablers

4.2.1 E-recruitment technology quality

Around 2000, Recruitment Services employees brought up the idea to implement e-recruitment (Interviewees 8, 9, 12). People dedicated to this subject started a selection process with suppliers of e-recruitment systems. When the project was stopped for awhile (2003/2004) and restarted again, people from Recruitment Services made their choice. They preferred the e-recruitment system from JobPartners (Interviewees 2, 8, 9, 12, 13). Recruitment Services perceived JobPartners to be developed especially for recruitment, where as they believed SAP E-recruiting 3.0 to be just an extension of SAP HR.

Yet, when the project restarted for the second time, another system selection was held. In this selection, Recruitment Services was supported by IT. After this selection, IT decided to continue with another supplier, SAP. Noteworthy in this decision is that SAP was listed third or fourth during this selection (Interviewees 6, 8, 25).

SAP was chosen for several reasons. First of all, ■■■ uses the policy 'SAP, unless' (Interviewees 1, 6, 8, 10, 12, 25, 26). Due to this policy, ■■■ works principally with SAP systems, unless there are pressing reasons not to. Secondly, ■■■ had already implemented SAP HR, which made it easier to integrate these systems, and their support and maintenance (6, 9, 12, 19, 25). Finally, SAP possessed several other useful functionalities, like management reports and a talent pool (6, 16, 25).

As mentioned before, interviews pointed out that, in comparison to the old technology WISE, SAP E-recruiting 3.0 was perceived to be more advanced (Interviewees 23, 24). What this meant was that the technology contains more tools that are relevant for recruitment tasks.

Only two of the 11 interviewed users were able to give a comparison between the former and new system, because functions like recruiter or HR assistant are characterised by a high turnover rate. Consequently, most recruiters did not experience WISE because they started to work as recruiter after the implementation of SAP E-recruiting 3.0.

Thus, in comparison to the former technology, SAP E-recruiting is perceived as relevant. Yet, when SAP E-recruiting 3.0 is looked at separately from the old technology, users view the technology less positively. Users often indicated that they perceive the new technology to be 'slow' or 'time-consuming' (Interviewees 1, 2, 3, 4, 5, 17, 18, 23). This can be explained in twofold.

First of all, the technology becomes slow when it needs to process a high amount of data (Interviewees 13, 23). This resulted in a lower response time of the system perceived by users.

Second, this is also due to poorly designed or missing tools so completing some tasks asks for many steps. This makes working with the technology cumbersome and inflexible (Interviewees, 4, 13, 18). One example of poor design is the tool management reports. One reason to implement SAP E-recruiting 3.0 was to generate management information. Up until today, the technology cannot offer this tool due to its design (Interviewees 13, 16, 17). Recruitment Services is therefore working with an Excel spreadsheet, which is time-consuming and inaccurate (Interviewee 13). Another example is the registration of the vacancy. To do this, users need to complete several fields that contain some irrelevant information (Interviewees 17, 18). In this sense, users perceive that working with the technology costs them more time because some functionalities were not designed to be 'handy'. The degree to which users perceive the technology to be time-consuming depends upon the tasks they need to perform (Interviewee 3). For example, there are differences in tasks between a normal recruiter and a project recruiter. The latter recruits large groups of people (Interviewee 14).

Next to poor design, missing functionalities cause users to perform many steps to fulfil a task. The technology knows smart functionalities, like 'batch completion'. With this functionality recruiters can reject several candidates at one time, instead of rejecting one by one (Interviewee 3). However, there are tasks which require more steps, due to the absence of 'handy' functionalities (Interviewees 3, 4, 17, 18, 22). One example of this is mailing from the system. This is not possible, so recruiters start doing this in another way. Another example is the talent pool functionality, which SAP E-recruiting 3.0 should offer (Interviewees 17, 16). Yet, after the system is implemented, this functionality does not work. So, recruiters need to find a solution themselves to create a talent pool or to solve it another way.

A positive remark is related to the overview the technology creates. It keeps track of all actions a user performs (Interviewees 4, 13, 17). In addition, this also guides a user through the recruitment process, by filling in all information.

In general, recruiters seem to perceive the technology more negatively than those who partly use the system, like HR assistants. Especially among recruiters, the technology caused loss of courage because of the difficulty working with it (Interviewee 5). HR assistants perceive this to a lesser extent because they need to perform a small task of the recruitment process. Still, under this condition the system is cumbersome (Interviewees 17, 18).

A possible explanation might be the choice made in the beginning. As users preferred JobPartners, their expectations might be high because this technology is designed for recruitment. SAP E-recruiting 3.0 is an extension and offers different tools.

Of course, the system had some start up problems, like its availability. The system went down sometimes in the beginning (Interviewee 2). In addition, the technology contained strange word use. SAP E-recruiting 3.0 is a German technology. The text on monitors was literally translated into Dutch, which resulted sometimes in strange sentences and word use and caused confusion among users (Interviewee 18).

'Nowadays the technology works relatively well. In the beginning it had some start up problems, which have been resolved to a large extent' (Interviewee 2).

Overall, these above-mentioned problems were solved after the technology went live (Interviewees 2, 13, 21).

Recap 4.2.1

When summarising this section, the following statements can be made:

- In comparison to the former system, WISE, SAP E-recruiting 3.0 is perceived to be more useful
- The new system provides users with an overview and status of their recruitment processes and structures the way they work
- Yet, when looked at separate from the former system, SAP E-recruiting 3.0 was described less positively. Interviewees believe the system to be slow, cumbersome, inflexible, and time-consuming. This was caused by missing or poorly designed functions. In addition, the preference for JobPartners created high expectations of SAP.
- Two important tools for which the system was purchased were its ability to generate management reports and to create a talent pool. Both tools are still missing today.

4.2.2 E-recruitment service quality

When a technology is implemented, it is monitored by Exploitation Management. Exploitation management is a part of the BDO. Under this supervision, exploitation management takes care of the maintenance and supervision of technologies. One of the tasks of Exploitation management is to make service agreements with the customer. These agreements are listed in a so-called Service Level Agreement (SLA) (Interviewees 20, 21).

'In this SLA, it is arranged that when problems occur, the BDO will provide support. In case of incidents or changes, key users or 'DAP's' [decentralized contact persons specialised in SAP] are appointed to approach when users experience questions or problems. When such a person cannot answer the question or solve the problem, a call [a registered problem] will be sent out to the BDO' (Interviewee 20).

Exploitation management frequently arranges meetings with Recruitment Services to discuss the actual calls. When providing service and support for the system, a change manager is responsible for the process part of the service. (Interviewee 20). In addition, a production manager is responsible for performing jobs. In the case of SAP E-recruiting 3.0, this is, for example, the maintenance of the interaction between SAP HR and SAP E-recruiting. SAP HR is the core HR system ■■■ uses for, among other things, pay rolling. Finally, a SLA manager reports to the customer based on the agreements in the SLA.

As soon the technology was implemented, Recruitment Services internally developed the support for the technology by means of a 'service desk'. When users experience difficulties with the technology, they can send an email to the service desk (Interviewee 2).

Response to these kinds of questions or problems is most of the time given by a DAP or key user. The support delivered by the help desk is perceived to be sufficient (Interviewees 3, 4). Solving a problem depends on the difficulty of the problem. In case a problem cannot be solved, a call is passed to the BDO, as agreed upon in the SLA. The handling of these calls by the BDO is perceived to be sufficient and in time (Interviewees 21, 2).

It became clear that some users know what to do in case of problems (Interviewees 3, 4). Nonetheless, some do not know what to do (Interviewees 14, 17, 18). This process seems to be unclear. For example, one interviewee commented that:

'Some communication about what to do in case of questions or problems would have been helpful (Interviewee 14).

From what is stated above, it is clear that not everyone knows what exactly to do in case of questions or problems.

At the end of the project, the technology had to go live due to time and budget pressures. Yet, some tools were not developed enough. Therefore, steering group members agreed that some actions would be further developed under the supervision of exploitation management. Along with some small changes, this also concerned significant tools like management information.

'When bottlenecks that originate during the project are moved up to the maintenance situation, it provides the BDO with additional time, manpower and funds to solve them. However, when bottlenecks are moved up to the Maintenance organisation, they have a different priority' (Interviewee 16).

When the system went live and the steering group was abandoned, maintenance was executed insufficiently. Due to time pressure, project members agreed to pass design issues into the maintenance organisation. This might put a more negative stamp on the service delivered by exploitation management, while the actual delivered service is perceived positively.

During this period, the decision was made to implement a release of SAP E-recruiting, the 6.0 version. This technology offered a solution to several existing problems in the 3.0 version (Interviewees 7, 16). This is one of the reasons that the existing ‘bugs’ stayed unresolved and were moved up to a new release of the project.

Recap 4.2.2

Concluding on this section, following issues can be mentioned:

- At first, users can contact the service desk that Recruitment Services established. In case of more comprehensive questions or problems, Recruitment Services turns to the BDO
- The BDO (department Exploitation management) takes care of the service and support related to SAP E-recruiting 3.0. They have developed a SLA (Service level agreement) with their customer, Recruitment Services, concerning the provided support
- Although this procedure is present, many users are not familiar with it. It became clear that almost no one could describe what to do in case of questions or problems. This might be due to communication issues
- Users perceive the delivered support and service to be sufficient. In addition, the timeliness of support and service is understood to be sufficient as well.
- The design of some tools was moved up to the maintenance organisation due to time pressure. This might put a more negative stamp on the maintenance organisation because these tools were important for working with the system.

4.2.3 Reflection on the E-recruitment system strength

When reflecting on the construct e-recruitment system strength, several issues can be highlighted.

First of all, there is the issue of *technology quality*. When comparing SAP E-recruiting 3.0 to its predecessor WISE, the technology quality was perceived to be improved. This especially is due to the variety and completeness of the tools the technology offers. Yet, when judging the technology independently, its technology quality was perceived to be lower. This decrease in perceived technology quality is caused by different technology characteristics like inflexibility, low response time, and that it is time-consuming. The structure the technology provides to users was seen positively.

Other characteristics defined in theory like availability, reliability and ease of understanding were not perceived as obstacles in using the technology (DeLone & McLean, 2003). Some of these characteristics were present as start up problems in the beginning, like ease of understanding, yet they were solved within a reasonable amount of time.

A possible reason why users perceived the technology quality as they did might be due to their expectations. The users would have preferred a system other than SAP, based on the tools the technology had. Their expectations might have been set too high in for the SAP technology, which

possibly caused disappointment and a lower perceived technology quality in comparison to the system they had chosen.

The second issue is *service quality*. Interviewees believed that service and support for questions and problems related to the system was sufficient and on time. This corresponds with the dimensions defined in the theoretical model (Parasuraman, 1994). In this way, it should result in enhanced satisfaction and retention of users, and consequently, in an increased organisational performance (Berry & Parasuraman, 1997; Grönroos, 2007, Rodgers, Negash & Suk, 2005).

An additional issue concerned the communication of the service and support procedure. Many users were not familiar with this, and consequently, for some it was not clear where to turn in case of questions and problems.

Time pressure caused unfinished tools to be moved up to the maintenance organisation. Dissatisfaction with this situation might affect the positivity of users regarding to the service quality. According to research, this could have an effect on the motivation of users to work with the system, as positive experiences are critical to motivate users (DeLone & McLean, 2003).

4.3 E-recruitment management strength enablers

4.3.1 Empowered Steering board/ Project team

Before elaborating on this construct, clarifications should be made about the project structure at ■■■. ■■■ is works according to the Prince (PProjects IN Controlled Environments) 2 method. This is a project-based method for project management (Website Prince2). Based on this method, ■■■ has designed its project organisation with a steering board and project group(s) (Interviewees 7, 12). For IT-related projects an IT, Business and overall project leader are assigned. Figure 8 visually presents this project organisation at the ■■■.

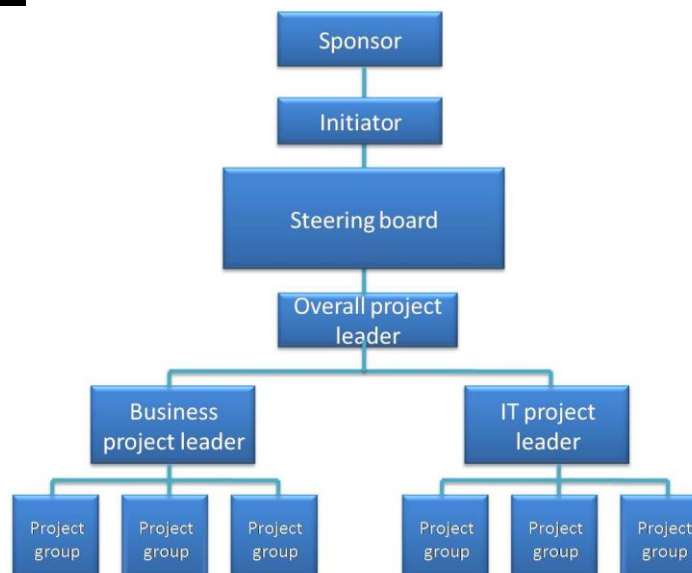


Figure 8: (IT) project organisation at the ■■■

In the steering board a chairman is in charge, whereas project groups are directed by a project leader and an overall project leader. These people are mainly responsible for control during the project. During

interviews it became clear that the project lacked in qualities like leadership and control, stemming from the project organisation (Interviewees 2, 5, 6, 7, 8, 13, 26, 25). Some interviewees felt they were not directed enough:

'There was no higher management that guided the Business through the project, or who could escalate when things went wrong' (Interviewee 13).

Interviewees who elaborated on this issue expressed that this was caused due to several reasons. First of all, frequent changeovers among chairmen and project leaders (Interviewees 1, 5, 6, 8, 12, 13, 25) created different views on the project (Interviewees 1, 8, 15). Different people work from different mental blueprints and thoughts, and this caused already-made decisions and formulated plans to be discussed again (Interviewees 8, 15). In addition, frequent changeovers affected the continuity of the project (Interviewees 1, 6, 8, 13, 15, 25). Roles were taken by various persons, and led to double effort because tasks and responsibilities were handed over to the successor (Interviewees 1, 8, 13).

Due to the extensive time span of the project, several chairmen and project leaders passed through. This could even reach up to six IT project leaders (Interviewees 6, 25), yet this pattern applies for Business project leaders as well (Interviewee 5). They were offered other jobs or projects. In addition, some project leaders left due to a perceived high workload (Interviewee 15).

A Second issue was related to the abilities of the people who needed to monitor and execute control during the project. Only some chairmen possessed the correct or sufficient skills to lead or direct the project effectively (Interviewees 6, 12, 15, 16, 25). In addition, the steering board members did not take over this responsibility for the steering board or in directing the project group(s).

'Because of this, everybody could just mess around' (Interviewee 12).

A similar development can be seen related to project leaders (Interviewees 5, 8, 12, 13, 15, 21). Someone pointed even out that there was no overall project leader (Interviewee 12). Several IT project leaders were provided by ██████ (Interviewee 2, 5, 12, 15). In addition, interviewees perceived that IT project leaders were less familiar with the Business, which caused frustrations (Interviewees 2, 5).

A third issue was the budget issue. Because the budget was not sufficient anymore, project leaders were placed on projects for just a day, which was too short (Interviewee 15). Also, 'less expensive' project leaders were hired, which could indicate insufficient abilities. Budget pressure was felt most at the end of the project.

Finally, time pressure influenced the lack of leadership. The perceived time pressure increased during the project. The system had to go live (Interviewees 12, 15, 16). Consequently, completing activities was accelerated, and project members were caught unprepared (Interviewee 15). People were not alert anymore.

In addition, it appeared that the workload was estimated differently. Interviewees mentioned putting in more time than what was expected at the outset. Many project members had to perform project tasks along with their daily jobs, and this caused a lack of time to be spent on the project. Project members

who were first involved for one day a week, were involved full time when it appeared that the project took more effort (Interviewee 2, 13). In the end, it appeared to be a mega project (Interviewee 5). This was not planned. The project planning formulated in the Plan of Approach scheduled five months for the project (Appendix C). From all of these comments, one might assume that the project was underestimated.

The lack of control affected the project organisation. Project groups directed by project leaders were experiencing less direction and were loosely managed. One interviewee commented:

'I ran into a group of people who were working on the project to get the system live. There was no sign of a clearly defined project group'. (Interviewee 21)

It also affected the information flow between the project group(s) and steering board. For example, the steering board did not receive enough relevant information coming from the project groups. On the other hand, there was no feedback given from the steering board about relevant subjects, and input was not asked for from the project groups (Interviewee 13).

Next to the control issue, the composition of the steering board was mentioned during interviews. Generally, the steering board makes decisions related to the project. These decisions are then applied to the content by project groups (Interviewees 10, 26). In the SAP E-recruiting 3.0 project, this went differently.

'It was remarkable that some people belonged to the steering board, considering their function in the organisation. They could have better taken a seat in the project group(s). Due to the composition of the steering board, the focus was more on the content of issues instead of controlling the project' (Interviewee 7).

Steering board meetings were occasionally characterised as a project group (Interviewees 2, 7, 12, 16). This refers to the subjects discussed, and the level at which these subjects were discussed (Interviewees 2, 7, 12, 16). Instead, a steering board should make decisions concerning the project. Due to the composition of the steering board, meetings were characterised by frequent discussions. As a consequence, decision-making was lacking (Interviewees 12, 16).

Finally, several interviewees pointed out that clear role descriptions were lacking during the project (Interviewees 2, 6, 7, 13, 21, 25). Although some interviewees perceived that roles were secured in a document, or were theoretically clear (Interviewees 1, 8), several interviewees perceived the roles to be undefined (Interviewees 2, 6, 7, 13, 21, 25). This applied to steering board members and project group members. One interviewee commented:

'It was unclear who fulfilled which role during the project. Who is doing what? For example, during the project several people thought [a project member] to be a project leader. The person itself, thought something else. It was quite a chaos' (Interviewee 21).

When turning to the available documents, the project letter describes the project organisation. First of all, the structure is set out by a chart. In this chart, only one project leader is defined. In addition, roles are described, and steering board members are linked to roles (Appendix E). Next to the project letter, the Plan of Approach describes the project organisation and roles as well (Appendix D).

When comparing these documents, different structures are set out, different roles are defined, and different people are assigned to these roles. The absence of one clear project organisation and assigned roles might explain the lack of clarity among project members. The problem of vaguely defined roles during the project was aggravated by the changeovers among project members (Interviewee 2). It was unclear who was responsible for what, which caused confusion (Interviewee 13). This all led to a project organisation that was far from optimal (Interviewee 21).

Recap 4.3.1

Summarising this section, the important observed issues are:

- The lack of control during the project caused confusion and loosely managed project members and teams. This is caused by frequent changeovers among project chairmen, project leaders and project members, the inability of mainly chairmen and project leaders, budget issues, and time pressure
- Due to the composition of the steering board, discussions focussed on content-based issues dominated instead of decision making
- Involved project members experienced unclear roles. As documents show that roles were defined, these role descriptions appear to be inconsistent, and varying among the documents. This caused confusion during the project.

4.3.2 Content of the project plan(s)

Almost all interviewed influencers described the existence of some plans (Interviewees 1, 2, 5, 6, 7, 8, 12, 13, 21, 26). Although many interviewees mentioned knowing at least some documents, they also mentioned all different kinds of documents. The table below express the diversity of documents available during the project. The left column outlines the available plans during the project mentioned by the interviewees, whereas the right column defines the documents found during document analysis.

Awareness of documents	
By interviewees	By document analysis
General project plan	No general project plan. There was -a Plan of Approach
Planning	Described in general in the Plan of Approach (2005, version 2.2)
List of actions	In meeting records (2006). Actions are set out by current situation, specified what needs to happen next, and coupled to a responsible person. Actions are described in all available meeting reports
List of decisions	In meeting records (2006) Decisions are noted, and if necessary coupled to actions. Not every meeting record describes clear decisions.
Business Case	Business Case (2004)
Communication plan	There was no communication plan found. Yet there are two

	presentations available about SAP E-recruiting for the HR organisation (October 2006). In addition, an email about the implementation for the HR organisation (November 2006) and a publication text for the Wolkenridder were gathered (November 2006).
List of requirements	In the product description, the requirements are included (2003).
Technical design	Technical design (2006, version 2)
Basic design	Basic design (2007, final version 1.0)
Resource planning	Described in the Plan of Approach (2005, version 2.2), based on the planning

Table 10: Overview of (perceived) documents available

Due to the time span of the project, it was hard to compare if the documents gathered for the document analysis were exactly the same documents, or the same versions as the ones mentioned by interviewees. Yet, what can be noticed is the availability of different plans. This was recognized by the interviewees as well as during document analysis. Nonetheless, different interviewees acknowledged the existence of different documents. This causes inconsistent spread of information, might point to different background information, and possibly to different views and goals.

Interviewees characterised the existing documents as falling short. This relates to clearness and extensiveness of the content (Interviewees 1, 2, 5, 6, 7, 8, 12, 13, 21, 25).

Documents formulated concerning the SAP E-recruiting 3.0 project were perceived to be unclear. This was related to the general character of these documents (Interviewees 2, 6, 8, 12, 21, 25). For example, this was noted in the project planning. This planning was available, but described in a too general sense. Related to this, one interviewee pointed out that:

'The planning did not contain what exactly needed to happen, and was described very generally. A project needs 'handles' created by planning and list of actions. These were available, but too general to use as handles. The project required more extensively described documents, to support the existing, general documents. These seemed to be not further defined' (Interviewee 2).

Due to this general character, some labelled the documents as incomplete (Interviewees 2, 5, 8, 21).

When turning to the documents, the Plan of Approach presented a planning for the SAP E-recruiting 3.0 project (Appendix C). According to this planning, the project should have started in December 2005, and ended in April 2006. In practice, the project went live in 2007 (Interviewees 2, 8, 16, 20, 21).

When analysing the planning, the general character of this document can be observed. As the planning is designed based on mainlines, it only consist of five lines. During this research there were no other planning documents available.

Another document that points out the general sense of the documents is the Business Case. The Business Case is the statement of the project, and only consists of two pages (Interviewee 21). This might imply

that project members thought the project would be uncomplicated, which contradicts the fact that this document describes that the project should receive high priority (Business Case).

As mentioned before, documents did not provide clearly defined roles. This caused problems in the project organisation because it was unclear who was responsible for what (Interviewee 21).

'During projects it is important that it becomes clear for everyone who is doing what, and what their responsibilities are. It sounds obvious, but this was not taken care of during this project' (Interviewee 21).

Due to the general character of documents, project objectives and goals were unclear as well. This changed when a resource planning was done, which indicated the required time and manpower necessary for the project (Interviewees 13, 21). Based on this resource planning, the Business was of the opinion to spend more time on the project.

Another remark made concerns the commitment to these documents (Interviewees 1, 2, 5, 16). During the SAP E-recruiting 3.0 project, the commitment to documents was perceived as low. As a result, due dates were postponed and goals were not held on to. This was caused due to several issues.

First, due dates were affected by time pressure, so project members could not entirely immerse themselves in the documents and direct strictly based on goals (Interviewee 15).

A second reason interviewees highlighted concerns the lack of control. A project should be executed according to a plan and planning. Due dates and project objectives should function like 'handles' with which a project is guided (Interviewee 8). Steering board members and project leaders should monitor these. The absence of a clearly defined plan resulted in ad hoc actions, and no structure (Interviewee 13). An additional factor was the changeovers among chairmen and project leaders. Due to these changes, it became difficult to direct the project in a more strict way (Interviewees 5, 8).

Thirdly, requirements were not clearly defined, which caused problems during the design stage (Interviewees 6, 25). Recruitment Services perceived that they had formulated their requirements clearly. IT started to design based on these requirements, yet when the system was tested, it appeared that the Business and IT did not understand each other about the formulated requirements (Interviewees 2, 6, 8, 15, 25). Consequently, requirements were adapted.

Finally, some additional problems arose, such as less manpower or technical deviancies of the system (Interviewees 1, 6, 25). This led to more workload and time spent, and resulted in postponed due dates.

When the system went live, Recruitment Services developed a communication plan. This referred to the way the new system would be communicated throughout the organisation. Yet, when the system went live, this plan was not put in practice because of the dissatisfaction about the system and its performance (Interviewee 21).

Although the original plan was not put in practice, there was some communication. The implementation of SAP E-recruiting 3.0 was published in the *Wolkenridder*, the magazine of [REDACTED]. In addition, the implementation was announced on the My[REDACTED] portal (intranet [REDACTED]) (Interviewee 1). Next to that, the HR organisation was extensively informed. They were informed by means of presentations about the implementation, and its effects (Interviewees 1, 21).

Recap 4.3.2

Concluding this section, four issues can be noticed:

- Plans or documents regarding e-recruitment implementation existed, however, due to the extensive time span of the project, interviewees acknowledge the existence of different documents
- Documents were perceived as falling short because of their general characteristics and incompleteness
- The commitment to the documents was low. Due dates were postponed often, because of time pressure, lack of control and steering according to these plans, the general character of the plans, manpower issues, technical deviancies, and underestimation of the project.
- Recruitment Services developed a communication plan to inform everyone about e-recruitment. This plan was not put into practice because of the performance of the technology. However, there was some communication to the (HR) organisation based on publications in the Wolkenridder and on My■■■■, and through presentations.

4.3.3 HRM and IT collaboration

Before the actual SAP E-recruiting 3.0 project started, the choice of SAP E-recruiting 3.0 by IT influenced the collaboration between the Business and IT from of the beginning. This choice led to resistance from the Business (Interviewees 5, 8, 9, 12, 15).

This was because, first of all, Recruitment Service was already working with SAP HR, which they perceived as negative.

Next to that, Recruitment Services was of the opinion they could choose their system. After they made this decision, it appeared that the choice for SAP had been made for them (Interviewees 2, 8, 12, 13, 15).

One interviewee expressed:

'Users expect they can make the choice, yet it appeared not to work out this way. Users were already looking forward to this [JobPartners] system. It is like you are at a car dealer to choose a new car. You can make the choice between a nice Mercedes and an Opel Corsa. You may choose which car you want. Finally you choose the Mercedes, but then people tell you that despite your choice, it is going to be the Opel Corsa' (Interviewee 8).

During this process, expectations were poorly managed (Interviewee 8). Due to this, the project started with a disappointment. This caused resistance at the start of the project, which is not a good circumstance as starting point (Interviewees 8, 9, 12, 15).

Whereas SAP was the supplier of the SAP E-recruiting 3.0 system, ■■■■ decided to work together with ■■■■ (Interviewees, 2, 8, 9, 12, 13, 16, 21).

This choice was based, among other things, upon former experiences with ■■■■. They had proved before to be a good HR partner. Next to that, ■■■■ is perceived to be more than an external party that the BDO sometimes works with. They are considered a partner of the BDO, therefore they can count on a certain loyalty (Interviewee 12). Another reason was because ■■■■ is less expensive than SAP. Finally, e-recruitment was a relative new technology, and SAP E-recruiting had not been implemented before by any organisation in the Netherlands (Interviewees 5, 6, 25). Yet, ■■■■ had already implemented SAP E-

recruiting 3.0 at organisations abroad (Interviewees 6, 25), so the BDO invited ██████ to support the implementation of e-recruitment at the ██████. SAP itself did little support on the background.

Yet, during the project it became clear that SAP E-recruiting 3.0 did not work as expected. It appeared not to work when integrated with SAP HR. Secondly, the Business made clear that the new e-recruitment system needed to require the functionality for management reports (Interviewees 2, 5, 12, 13, 16, 21). To establish this in SAP E-recruiting 3.0, Business Intelligence (BI) was needed. This could be developed for SAP HR, but it turned out not to be available for SAP E-recruiting (Interviewee 12).

Another remark made during the interviews refers to knowledge. The Business listed requirements they perceived to be useful to their work. The supplier of the system (SAP) kept telling them that it was all possible. Yet, when the BDO and ██████ started working on the system, it appeared that possible tools promised by SAP turned out not to work in practice. This caused confusion among the Business about who was right (Interviewees 6, 15, 25). As this created a difficult situation, interviewees described that project members put in a lot of effort to get acquainted with the technology (Interviewees 2, 12, 13, 15, 16).

In this state of confusion, interviewees described that IT lacked knowledge to implement the system in a proper manner (Interviewees 2, 5, 8, 13). This was due to several reasons. First of all, SAP itself had recently purchased the system, so it was rather new. Second, ██████ was one of the first organisations who implemented SAP E-recruiting 3.0. This meant that the system had not evolved yet. Finally, ██████ possessed experience with SAP HR, and claimed to have enough knowledge on SAP E-recruiting, based on such implementations abroad. Yet, HR seems to be strongly country-specific, and ██████ lacked experience to properly implement the technology (Interviewees 6, 25).

‘Suddenly, people from IT came to me [employee Recruitment Services], asking if they could borrow my books about SAP E-recruiting 3.0’ (Interviewee 13).

This lack of knowledge about the system caused IT to need to figure out the working of the technology while the project started. Although IT did not possess the knowledge to implement the system, they worked hard to get more acquainted with the system (Interviewees 13).

Due to this lack of knowledge, Recruitment Services started to doubt to the capabilities of the IT professionals. This affected the cooperation between the Business and IT (Interviewees 2, 8, 13). The lack of knowledge raised suspicion among Recruitment Services toward IT.

Finally, another issue that became clear from interviews concerns the communication and direct cooperation between the Business and IT. They communicated frequently by telephone or mail. While both parties assumed they were on the same page, it became clear afterwards that the intention of the messages were not clear to each other (Interviewee 2, 13). The Business and IT differ too much to communicate and cooperate directly with one another. Both parties were working from different understandings.

Problems arose with the cooperation between the Business and IT. One example of this is in regard to the design of the technology. Normally the Business, in this case a HR department, defines together with a (J)BA or an IT consultant ‘what’ they require. A (Junior) Business analyst ((J)BA) from the BDO translate

the ‘what’ into ‘how’. Finally, IT designs the ‘how’ in the system. A (J)BA, who belongs to the BDO or, in this case, a consultant from █████, is the link between the Business and IT (Interviewees 10, 26). Figure 9 visually presents this process, and relates this to the actual process.

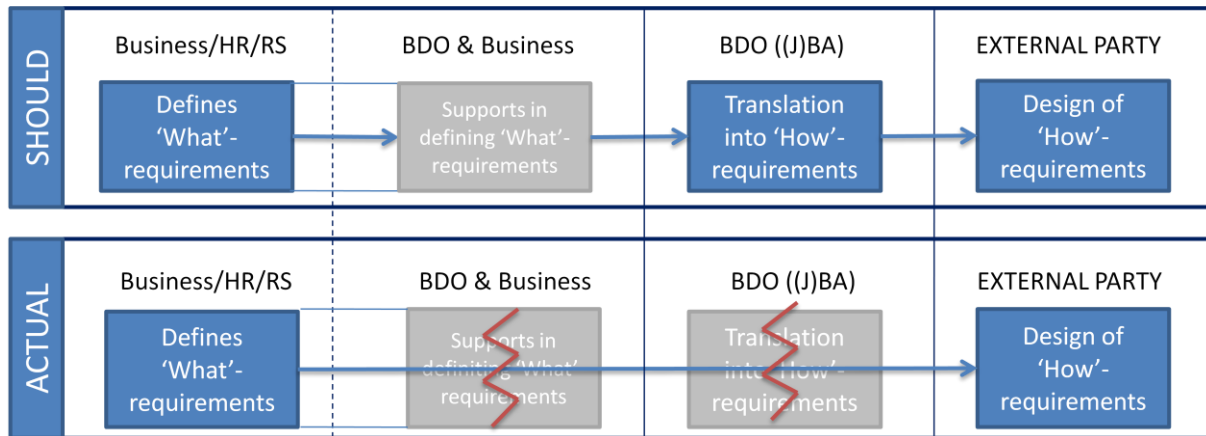


Figure 9: Collaboration between the Business and IT during the project

During this project, the Business defined their requirements themselves. These were not specified enough, therefore it was unclear for IT how they should design. Most of the time, this was noticed when the system was tested. The technology appeared not to be designed as the Business wished. In addition, interviewees perceived that IT meddled too much with the preferences of Recruitment Services concerning the system, without having sufficient knowledge about the recruitment process (Interviewee 8). This became cyclical occurrence (Interviewees 6, 13, 15, 25), which cost time, but especially caused frustrations.

During the SAP E-recruiting 3.0 project, interviewees believed that a (J)BA or consultant was involved too late, whereas others point out that there was no (J)BA involved. Due to this (temporary) absence, the Business and IT communicated directly. A consultant or (J)BA should advise about, for example, desired requirements and the best way to design or formulate requirements.

What reinforces this situation is the way Recruitment Services held on to their traditional process, and became rigid in their approach (Interviewees 2, 3, 7,8, 9, 12, 13, 16, 21). As a consequence, the traditional recruitment process was copied straight into the system (Interviewees 2, 7, 8, 12, 13, 16). Especially in this situation, the role of a (J)BA or consultant was missed (Interviewees 7, 10). Such a person should advise Recruitment Services in the way to how to develop an e-recruitment system for modern recruitment.

The situation as expressed above, led to a mismatch because the traditional recruitment process differs from the modern recruitment process offered by the recruitment system. As a result, the system was adjusted to the traditional process, which caused the technology to become everything other than modern. █████ is more often characterised by the habit to adjust systems to their processes (Interviewees 5, 12, 13, 16, 19).

█████ colours systems Blue’ (Interviewees 5, 12, 13).

Finally, the system was adjusted in such a way that some functionalities, like management reports and the talent pool, could not work anymore. It is especially remarkable because these are tools that support modern recruitment and that Recruitment Services wished for (Interviewees 13, 16). During the project, one of the most important goals of e-recruitment implementation was not held on to.

From what is mentioned above, a well-established cooperation between the different parties seems to be important. The different parties should be blended into one team, yet during this project they worked together as if they were like different islands (Interviewee 5). Recruitment Services, the BDO and ██████ should have been bonded together from the beginning of the project (Interviewee 7).

The above is illustrating that the project knew different issues. Especially the accumulation of these caused the project to fall into a vicious cycle (Interviewees 7, 9, 15). People got tired of the process.

At a certain point in time it became like Murphy's Law, everything went wrong' (Interviewee 15).

During this project, frustrations surfaced. To resolve frustrations, these issues were discussed. After these sessions, frustrations seemed to be lessened. Yet, as the project continued, they sometimes returned (Interviewees 13, 15).

When steering board members observed the project was coming along with difficulty, they rescheduled their bi-weekly meetings into weekly meetings (Interviewees 2, 7). Besides steering board and project group meetings, project members met with each other if necessary (Interviewee 2).

Interviewees perceived the project as a burden, which can be observed by interviewees by who describe this project as one of their projects they are least proud of in their career (Interviewees 12, 15). Some even described experiencing the project as emotional (Interviewees 2, 5). Yet they could not exactly specify why. The frustration among project members was noticeable when answering what they perceived to be most positive during the project. One common answer was that the system went live at all, regarding the progress of the project (Interviewees 1, 2, 7, 10, 15, 21, 26). Although the project 'went down', the other common answer was the high effort project members put in. They stayed motivated and this was experienced as admirable (Interviewee 7). The social discourse among project members was, considering the circumstances, perceived to be good (Interviewees 2, 5, 12, 13, 15, 16). Due to this, the project continued for as long as it did. This drive was supported by new project members (Interviewee 16). Though changeovers were described as a disadvantage, in this case they turned out to be an advantage.

Recap 4.3.3

To summarise this section, the following aspects can be emphasised:

- The choice made to implement SAP E-recruiting 3.0 influenced the collaboration negatively during the project from the beginning, and seemed not to work as expected beforehand.

- There was a gap between the promises of SAP (supplier of the technology) about the possibilities of the technology, and about the actual possibilities designed by ██████. This led to confusion about who was right
- The BDO and ██████ did not possess sufficient knowledge to design and implement the technology in a proper manner. This was reinforced by the fact that the technology was new, ██████ was the first organisation to implemented SAP E-recruiting 3.0 in the Netherlands, and that ██████ (an external software and service consultant) did not possess the knowledge and experience as they claimed in advance. The lack of knowledge caused postponement of the project and raised suspicion among Business project members
- The communication and cooperation between HRM and IT had different purposes. The absence of a 'party in between' resulted in a lack of control and guidance on this situation. Therefore, HRM and IT needed to communicate and cooperate directly with one other. Due to this, different understandings caused inefficiently defined requirements, project delay and frustrations.
- The Business held on to their traditional recruitment process. Consequently, by approaching the technology from the traditional process, a modern technology was adjusted in a traditional way and desired tools did not function. On the other hand, the Business should have been supported and advised more in this process by the BDO and ██████.
- The cooperation during the project did not have the character of one team. Instead, different parties worked together as if on separate islands
- The accumulation of issues caused the project to become difficult. Yet, the drive of project members secured the continuity of the project.

4.3.4 Providing learning opportunities

When a system is implemented, users need to be trained. As this is part of the implementation, the Plan of Approach formulates that this project is supported by a project group, 'Education'. In addition, the planning incorporates training, although this is mentioned in just one line.

Yet, the document present at the end of the project did not secure e-recruitment training (Interviewee 21). Due to this, the project organisation found out too late that users needed to be trained (Interviewee 13). In this situation it was unclear who was responsible for developing learning programmes and manuals. In addition, the project was characterised by time pressure, which does not contribute to the quality of these training and manuals (Interviewee 13). As a result of these issues, manuals were not ready at time of implementation, for example (Interviewee 21).

The actual training was developed by an employee who was reintegrating into the organisation. The background of this Interviewee was in training and development (Interviewees 2, 13, 23). This person developed a training programme together with employees from Recruitment Services who were involved during this project (Interviewees 1, 3, 2, 7, 13, 20, 21). Some interviewees described that developing training programmes and manuals usually belongs to the BDO (Interviewees 2, 10, 13, 20, 26).

'Users used to be trained, not to develop training and manuals themselves' (Interviewee 2)

Some interviewees added that BDO did help by developing procedures, but that due to time pressure they developed a general manual, which Recruitment Services developed further (Interviewees 6, 10, 25, 26).

In addition, █████ developed, in collaboration with the BDO, 'Trainer trainer' sessions. During these trainings, key users were trained (Interviewees 5, 10, 25, 26), who would in turn train the other users.

After the implementation, only the 'head users' were trained (Interviewees 1, 2, 21). This refers to the recruiters. Other users, like HR assistants, were not trained. This was decided based on time and capacity available (Interviewee 21). Later on, HR assistants and managers were trained by employees of Recruitment Services (Interviewees 1, 6, 25). A HR assistant registers a vacancy, which a recruiter takes over. They fill in the information necessary about the vacancy. For a recruiter, it is important that this is done correctly (Interviewee 21).

Among the interviewed users, only three employees could describe the training when the system went live. This was caused by the high turnover among, for example, recruiters and HR assistants (Interviewee 21). There are different opinions about the training of users. One employee expressed that users were trained during a training weekend (Interviewee 1), whereas another described that presentations were held. After this presentation, recruiters were trained in groups of four (Interviewee 3).

New users said that they received different kinds of training when they became users. Some described being trained on-the-job by colleagues. They sat and worked together with the system (Interviewees 4, 14, 17, 18). For some, this period lasted only two hours (Interviewee 4), while others were accompanied for a longer period (Interviewee 14).

It is a difficult system to teach because it needs many different actions to fulfil a task (Interviewee 4). Users need to get used to the system. Next to training on-the-job, trial-and-error is an often-used method (Interviewees 3, 4, 14, 17). Users best learn to use the system when actually working with it (Interviewee 21).

Concerning the developed manual, there were different views. Some used the manual (Interviewees 3, 4, 14, 18), whereas some did not (Interviewees 17, 22). The manual was published on the internet. The manual was characterised as extensive and supported with screenshots (Interviewee 18).

After 'go live', employees of Recruitment Services organised 'question rounds' for users, to see if there were problems. In addition, when the system went live, Recruitment Services opened a telephone number that users could dial in case of problems. After a while this number was dissolved. The Front Office of Recruitment Services is now handling these phone calls (Interviewee 2).

In general, all users perceive that they received sufficient training (Interviewees 3, 4, 14, 18). However, some influencers wonder if new users are trained enough to use the system in the proper manner. This could affect the way users use the system (Interviewees 6, 25).

As users were trained to use the system, only hands-on training was perceived to be not enough. An IT implementation brings along a business change as well (Interviewee 7). This is the responsibility of the project leader. A project leader needs to prepare the Business about the effect the system has on their processes.

Recap 4.3.4

Stemming from this section, four aspects can be observed:

- Learning opportunities were not well secured in a document or planning. This caused confusion about who was responsible.
- Actual training is developed and performed mainly by Recruitment Services self. █████ trained key users, who in turn trained all other users
- There exist different views about the received training, especially among new users. Yet, overall they perceived the received training as sufficient. Training focused mainly on hands-on-training.
- Some interviewees doubt if users are trained enough to use the system in a proper manner, and if only hands-on-training is sufficient. Implementing a technology brings about business changes as well.

4.3.5 Reflection on the E-recruitment management support strength

When considering the e-recruitment management support activities performed during the e-recruitment project at the █████, several issues can be noticed.

First of all, there was an *empowered steering board and project team*. Notable is the lack of control during the project. This was caused by frequent changeovers among steering board members and project leaders, budget restrictions, time pressure, and lack of abilities of steering board members and project leaders. In addition, the project was characterised by distorted communication and information flow between the steering board and project groups.

When further exploring this construct, the following issues were discovered. The composition of the steering board was characterised as incorrect. A steering board should contain members who are capable and responsible for making decisions. Members who are an expert on the subject, yet not responsible for making these decisions, should have been in project groups. The composition of the steering board as formed during this project, lead to discussions based on content issues instead of decision-making.

A final issue addressing this construct refers to the roles. From research, it appeared that role descriptions were present, yet for steering board and project members this was unclearly defined. As a result, there was confusion concerning who was responsible for what and why.

When relating these issues to the research model, the dimensions 'position and roles' were addressed, and both were perceived to be insufficient. Yet another dimension can be added, referred to as the control expressed by steering board members and project leaders. Research supports the fact that project members who fail to execute control during a project are not able to deliver the promised scope or performance on time or on budget (Kappelman, 2006; Newton, 2006; Yeates, 1991).

The second construct is the *content of project plan(s)*. When specifically referring to the content, a plan is supposed to contain a vision, strategy, and scheduling of the project (Kappelman, 2007; Kotter, 2007). From the document analysis, it appeared that all these elements were present in the different documents. So far, this construct corresponds with the dimension expressed in the research model. Yet, when further exploring these documents, they were perceived to be general and incomplete. This made it unclear to interviewees what exactly to do. The presented findings correspond with research expressing that proper plans lead to employees who work all in the same direction, and to manage individual mental blueprints (Kappelman, 2006).

In addition, these documents were not held to during the project. Due dates were postponed several times and goals were not lived up to. This indicates that the commitment to these documents or plans was low. In this situation, developing a plan overshoots the mark of monitoring the progress of the project and as mentioned before to clarify the project to project members, and to distribute tasks and responsibilities (Newton, 2006). This might be caused by several reasons, such as a lack of control, or the fact that these documents were too general so they could not function as 'handles' to guide the project along. As a consequence, due dates were postponed and goals were not held to.

Commitment to developed plans is one of the dimensions that could be added to the research model. In addition, clarity of the documents seems to be an important factor for execution of the plans. In this case, it relates especially to the extensiveness and level of detail of the plans.

Third, there is the issue of *collaboration between HRM and IT*. Interviewees perceived the day-to-day social discourse to be 'fine'. When referring to collaboration regarding to project issues, this was perceived less positively. This is due to the management of expectations regarding to the choice for SAP, lack of IT knowledge and steering, rigidity of Recruitment Services with their traditional process, and the missing link between HR and IT. The direct collaboration and communication between HR and IT caused the largest problems, whereas these two parties acted from different blueprints and understandings. This caused misunderstandings, frustrations among project members, and suspension of the project.

In addition, this influenced the approach to the project. On the one hand, mainly Recruitment Services held on to their traditional recruitment process instead of putting the technology and its tools as basis. Putting the traditional recruitment process into a modern technology results in adjusting the technology, and thereby removing its modern tools. On the other hand, Recruitment Services missed receiving support and advice in practicing the best approach by [REDACTED] and the BDO. One of the consequences of this approach is that tools like management reports and talent pool are missing, though these are tools that are part of modern recruitment.

Finally, decreased trust and increased suspicion among project members occurred, which negatively influenced the collaboration. This supports the idea that for example, a needs assessment is important in establishing system quality (Panayotopoulou et al, 2005; Krishnan & Singh, 2006). In this case, the needs assessment was not done properly because a lack of understanding and guidance during this process. Incongruence between system needs and system abilities leads to unsuccessful integration of the system into HR processes and insufficient quality (Krishnan & Singh, 2006). This is what happened during the SAP E-recruiting 3.0 project, and consequently affects the integration and the performance of the system.

When the steering board noticed that the project had become more difficult, they decided to schedule their formal meetings more frequently. In addition, also due to underestimation of the project, project members became aware that the project required more time. This caused some project members to be involved full-time instead of one day a week. Overall, steering board and project team meetings were on fixed times. In case more contact was necessary, project members arranged this by themselves.

As joint actions might be performed in light of the project, interviewees expressed that the different parties who should operate like one team did work together, although like separate islands. Although,

from interviews it appeared that project members put in tremendous effort despite the progress of the project, which is what secured the continuity of the project.

Deriving from the above, the collaboration during the project was perceived to be insufficient. Nonetheless, interviewees were of the opinion that enhanced collaboration might have led to better project results. The biggest instigator was the difference in background and understanding of these parties, which calls for more guidance.

Finally, to the issue of *provided learning opportunities*. Although training and manuals were developed based on unclearly defined responsibilities and planning, many users perceived the training to be sufficient. Interviewees reported that they receive mainly hands-on training. New users most of the time used of manuals, and were trained on-the-job by colleagues. This implies users received hands-on-training and, to a lesser extent, application area training, which refers to two of the three types of training expressed by Yeates (1991).

As users defined the training as sufficient, some interviewees suggested that users might have received not enough training to use the system in a proper manner. This might be a correct comment, as a lack of knowledge and skills appears to result in incomplete use of system tools (Krishnan & Finn, 2003). In addition, a remark was made questioning if only hands-on-training is adequate enough, as technology implementation requires business changes as well. This might point to orientation training, expressed in the research model as one of the three kinds of training (Yeates, 2001). Users might be trained more in establishing a proper cultural environment for the technology change. ■ was already using an e-way in recruiting to a lesser extent. Yet introducing a system that captures almost the entire recruitment process demands transformation. Training users in this way not only enables them to work appropriately with the system (Singh & Finn, 2003; Pin et al, 2001; Panayotopoulou et al, 2005), it also decreases the resistance among users. Orientation training focuses on this change and can establish an organisational foundation and grow (Yeates, 1991).

In addition, proper training requires proper plans. This might be an in addition to the research model as this project was characterised by ad-hoc training. However, strong statements are not really justified, as users perceived to be trained well. To further explore this dimension, the effect of training on the system use needs to be investigated.

4.4 Emerged enablers

Besides the constructs defined during this research, there were other issues that were mentioned more often during the interviews. These issues are not embraced included in the model and are new to the literature.

4.4.1 Recruitment Services experience with IT implementations

Related to the approach of the project is the experience of Recruitment Services with IT projects. Since the recruitment process was reorganised in 2003, Recruitment Services was perceived as still not ready for 'e'-recruitment (Interviewee 13). This opinion was especially based on the process itself. Recruitment Services was barely automated and did not possess standardised processes to implement a recruitment system. When e-HRM evolved, ■ felt the need to transform into 'e'. Implementing e-recruitment is

one step further in getting into the 'e' world. Yet, HR pretends to be a department of ■■■ that stays behind in the development of IT (Interviewee 9).

One reason for this is that HR receives less priority because it does not belong to the core business of ■■■. The airline business is characterised by small margins. Therefore, ■■■ needs to invest its money wisely, and puts everything into work to increase their margins. If investment decisions need to be made, logically it is core business first (Interviewees 21, 22).

Next to the processes that were not 'e' proof, the mindset of HR might not have been ready (Interviewee 15). HR needs to get used to working 'e'. Although ■■■ is good at 'e'-projects and an innovator in, for example, E-ticketing, HR stays behind (Interviewees 9, 12). Due to some inexplicable reasons, HR just cannot make this change. One interviewee made the comment that:

■■■ customers can work 'e' [E-ticketing], yet ■■■'s own employees appear not to. Deriving from this, HR is apparently not ready to work 'e' (Interviewee 15).

Based on less experience and preparation of all parties involved, Recruitment Services somewhat unpreparedly ran into this e-recruitment project. Without developing a clear e-HRM policy, ■■■ started with e-recruitment (Interviewee 9, 11, 12). One interviewee commented:

'After sleeping for years, HR was torpedoed into the 21st century' (Interviewee 9).

In addition, the Business held on to their traditional process, and adjusted the system to it.

Due to this approach, the contemporary system was not designed effectively. Because HR pursues to recruit in a modern way, they started a project to implement a new release of SAP, SAP E-recruiting 6.0. The new release offers solutions to outstanding issues concerning the 3.0 version (Interviewee 2). In addition, by getting a second chance, the Business approaches this project differently by putting the technology in the lead.

Next to the fact that IT implementations are relatively new for Recruitment Services, it appeared that the Business did not support the change. Among the employees of Recruitment Services, little fear existed (Interviewees 5, 15, 21). The promise of e-recruitment was to eliminate the administrative burden, and consequently to reduce the workforce.

Imagine you are working at Recruitment Services, and you are informed about this, would you be willing to cooperate? (Interviewee 15).

The decision to work with e-recruitment is made for the employees, rather than by the employees themselves. Yet this decision has a great impact on the employees, and not so much impact on people who made this decision. This decision impacts for the entire HR department. Employees were not used to working digitally, and did not let go their old ways easily (Interviewee 5). HR is often consulted when other departments are involved in a change process, yet HR seems to change difficult themselves (Interviewees 12, 15).

In addition, as e-recruitment should eliminate the administrative burden, HR professionals lose some control because some knowledge they possess is removed from them and put into a system (Interviewees 5, 15). For example, when using e-recruitment, collective labour agreements are automated. The system adapts input in the system according to these agreements. Yet, this is one of the specialties of HR employees (Interviewees 15, 21). E-recruitment removes this ground, and changes their role.

However, though e-recruiting should eliminate the administrative burden, during testing and after implementation it appeared that the system generated more administrative tasks than before, especially in the beginning (Interviewee 21). This had the most impact on recruiters, because the administrative tasks before SAP E-recruiting 3.0 were carried out by recruitment assistants. With SAP E-recruiting, recruiters needed to do more administrative work themselves (Interviewee 23). Yet, when the system went live, it turned out to be better accepted than expected in advance (Interviewee 21).

Recruitment Services employees should be more prepared. Change management is not a strong point at the ■■■ (Interviewee 9). Most of the time, cooperatively formulated business cases miss, and from the moment an idea arises, ■■■ has already started the project (Interviewee 9). In these cases, preparation is skipped.

Recap 4.4.1

To summarize this section::

- Recruitment Services is perceived as not ready to work 'e'. This is mainly based on their own process.
- HR does not belong to the core business of ■■■ and therefore receives no first priority, which makes being advanced more difficult. This can be seen as an organisational factor influencing the e-recruitment project.
- The mindset of Recruitment Services needs to change. It is difficult to cooperate on a project when employees perceive it to lead to a reduced workforce. Yet, this department needs to be prepared and informed about a complete role change. As Recruitment Services is not used to technology implementations, lack of experience is noticeable.
- ■■■ does not work from an overall e-HRM view, of which the e-recruitment project is part of, and in which e-practices are aligned and mutually reinforcing each other.

4.4.3 Reflection on the Emerged enablers

Interviewees believed, based on the approach Recruitment Services practices, that they were not ready to work 'e'. Putting a traditional recruitment process in a modern technology does not optimise modern recruitment. In their opinion, this was due to the design of their own recruitment process.

Another issue might be related to the *mindset* of the employees, which requires change. When these employees are only informed about the upcoming change, they will fear for their existence, one of the goals of e-recruitment implementation is to decrease the administrative burden. It can be characterised as a transition from administrative expert towards another role like employee champion, strategic partner or change agent (Caldwell, 2003). Employees need to become aware of the *role change*, which implementing this technology brings along. This is in line with providing orientation training as mentioned before. Facilitating this change or transition is important.

In addition, implementing e-recruitment is not perceived from an overall e-HRM strategy, but rather as a singular project. This does not match with the view based on Porter's competitive strategies, that business performance will improve when HR practices are mutually reinforcing the organisation's choice of competitive strategy (Schuler & Jackson, 1987). To gain more advantage, e-HRM practices need to be aligned as well (Hayes et al, 2007).

These findings reinforce the statements made in former research that implementing e-recruitment is not just swapping the medium (Parry & Tyson, 2008; Ruel, Bondarouk & Looise, 2004). It requires greater organisational change and preparation.

4.5 E-recruitment success indicators

4.5.1 E-recruitment appropriation

From interviews, it appeared that interviewees perceived that users use the system for the same purpose, which is recruiting people. In doing so, users generally make use of the system in the same way (2, 3, 4, 14, 17, 18, 22). This means that most of the time, the way in which users execute their recruitment process is correct and highly similar. The exact process users need to follow depends on the tasks required. For example, there are differences in tasks between a normal recruiter and a project recruiter. The latter recruits large groups of people (Interviewee 14).

Yet, the steps taken to perform the process can be executed differently (Interviewees 4, 14, 22). This was perceived as undesirable. However, because the functionality management reports were lacking, management information could not be drawn from the system, and therefore this was not harmful (Interviewee 2, 13). As a consequence, there exists no urgency among users to execute tasks exactly as described in the manuals (Interviewees 2, 13).

The missing management information does not adequately urge users to work exactly as prescribed, and they started 'to work around the system' (Interviewees 2, 13). This means that people started to complete some tasks in another way than provided by the system.

An additional reason to work around the system is the extensiveness of the system. Especially new users (new employees who start working with e-recruitment) started to avoid the system for some tasks, because it is too time-consuming. ■■■ is working with a 'flex shell' of freelance recruiters (Interviewee 23). For example, new recruiters started to publish on websites like Monsterboard.nl, without publishing the link to the e-recruitment job site of the ■■■. Instead of doing this, they put their name and email. In this way, recruiters were working from their own mailbox because it saves time (Interviewee 2, 13, 14).

Working around the system leads to pollution of the system. The system can provide users an overview of finished tasks. Yet, the system does not recognize finished tasks anymore, when they are performed outside the system. This changed after a while, and users started to work more and more from within the system (Interviewees 13, 24).

These comments suggest that users are using the system in different ways. Yet, interviewees perceive users to use the system to a large extent in a similar way, and for the same intention: namely, for recruiting people (Interviewees 2, 3, 4, 14, 17, 18, 22).

A reason given by interviewees to clarify why users use the system in a similar way, is that manuals 'teach' users to work with the system as is described in the manual. However, not all users use the

manual (Interviewees 2, 4). They for example believe that uniform use among users caused by (new) users being trained on-the-job by user colleagues (Interviewees 2, 17, 18).

Recap 4.5.1

Concluding this section, two issues can be stated:

- In general, all users appropriate the system in a proper manner. They use the system for the purpose of recruiting potential employees. In addition, among users there exists consensus about the way they use the system. Reasons for this are manuals users follow when using the system, and on-the-job training where through users learned to use the system in the same way as their colleagues.
- However, because of missing or inefficiently designed tools, users are looking for solutions. In doing this, they start to work around the system, which causes pollution of the system

4.5.2 E-recruitment productivity

The SAP E-recruiting Business Case (2004) describes, among other things, the initially expected benefits of the system. These benefits include, first of all, decreasing recruitment costs by matching supply and demand, proactive recruitment of personnel, decreasing the turnaround time of the recruitment process, and purposeful use of recruitment channels. Secondly, the new system was expected to reduce the turnaround time from 90 to 50 days. Finally, the time spent on resume handling was to be decreased by at least 2.5 hours per resume

Next to the Business Case, the Plan of Approach (2005) contains an appendix, which outlines expected quantitative benefits. With implementing e-recruitment, several productivity outcomes were expected, like:

- 20 minutes time saving per application
- These time savings are expected to result in cost savings of €69,840.00 on application handling per year
- Total cost savings of € 239,575.00 per year
- Total time savings of approximately 828 hours per year

The mentioned outcomes were the initially expected outcomes. The actual benefits delivered by the implementation of the system are hard to gather.

For interviewees, it was hard to describe the actual benefits brought by the technology after its implementation. This is due to the current system, which is not able to generate the management information that can provide these numbers. Next to that, users of the system are characterised by a high turnover rate, so only a few interviewees could make a distinction based on a comparison with the former situation (Interviewee 21).

Unless interviewees were not able to provide factual information about the productivity benefits of the technology, they did express their perceptions about it. Stemming from these perceptions, the new situation appears not to differ much from the old one (Interviewees 2, 13, 21, 24). One of the intended benefits of e-recruitment was formulated as reducing the administrative burden, by automation of this part (Interviewee 2). This should lead to reduced workload for the back office of Recruitment Services. In

turn, this led to a decline in manpower expressed by a demand for less recruitment assistants (Interviewees 13, 21). During the reorganisation, manpower was cut down, based on this assumption. Yet, in practice it appeared that in relation to the former system, the administrative burden increased (Interviewee 13). Especially for recruiters. Regarding the former technology, administrative tasks were performed by recruitment assistants, whereas with the new system recruiters need to perform these tasks themselves by using the system.

‘When working with WISE, the administrative tasks to recruit were performed by the recruitment assistants. Yet, when SAP was introduced, this changed. With the new technology, the division between administrative and recruitment tasks is different. For a recruiter the division is 50 % administrative tasks, and 50 % recruitment tasks. As recruiter I think it is not our purpose to perform so many administrative tasks, given the fact that a recruiter needs to focus on recruiting potential employees’ (Interviewee 23).

In addition, the implementation of the new system did not reduce the back office workload, and consequently did not result in less recruitment assistants needed than before (Interviewee 21).

Due to these reasons, interviewees perceived SAP E-recruiting as generating no cost savings. Secondly, due to the design of the system, it demands many actions that have turned out to increase the administrative burden, and this does not save time (Interviewees 2, 13).

Recap 4.5.2

Two issues can be derived from the above:

- Whether initially forecasted benefits of the system have been achieved is not measurable. One of the reasons is because management reports cannot be drawn from the system
- Based on the perception of users, the new system does not deliver the desired outcomes. As decreasing the administrative burden is one of the goals of e-recruitment implementation, this only increased. In addition, time and cost savings are not met.

4.5.3 E-recruitment quality

Users made the remark that SAP E-recruiting offers the functionality to create an overview of the application process. The system keeps track of the status of an application and all previously performed actions. This is especially handy when users hand over work to each other (Interviewees 3, 13, 21).

Next to this, the process provides structure to the recruitment process. To fill a vacancy, several steps need to be finished. The system guides users through all these steps (Interviewees 4, 12, 13). A user could complete the recruitment process by using the system. This is different in relation to the former system, which new limitations in this. The former system, WISE, only offered users to post vacancies and to attach candidates to this vacancy (Interviewees 24, 14)

Although the system provides users a structure to work with, interviewees still perceive the system as user-unfriendly. As mentioned before, users perceive the system to be time-consuming and cumbersome. This diminishes the relevance of the system for users. In some cases, users even start working ‘around the system’ to save time (Interviewees 2, 13).

Although users perceive the system to be unfriendly for themselves, they believe that it is more striking that the system is user-unfriendly for applicants (Interviewees 2, 4, 7, 13, 14). Users became aware of this by checking out the e-recruitment site for applicants by themselves (Interviewee 3, 7, 22). Another matter that indicates that applicants perceive the system to be user-unfriendly, were the received calls (Interviewees 2, 13, 24).

Applicants perceive the system as too extensive. For example, they need to navigate through nine fields. These guide cards are defined as: remarks about the application wizard, personal information, communication information, work experience, education, attachments, data overview, letter, and Send application (Job site ■■■). Completing all this information costs applicants much time and effort (Interviewees 2, 3, 7, 14). They are creating a personal profile. This is only useful when applicants are applying more often than once (Interviewee 3).

In addition to the system being perceived to be time-consuming, problems arose related to completing applications. ■■■ possesses a varied workforce, which represents the internal applicants. Among these internal applicants, but also external applicants, especially lower educated and more elderly people experienced problems related to navigating through the system (Interviewee 2). This resulted in sent applicant forms that only contain name and email address (Interviewee 14). Other common problems were that people forgot to push the 'Send' button, people forgot their password, or were logged out when applying took too long (Interviewee 2, 13, 18)

Some interviewees commented that after SAP E-recruiting was implemented, less people applied (Interviewees 2, 13, 24). Interviewees noticed this pattern, especially in the beginning. Again this feeling cannot be supported by management information, because of the absence of this functionality. People supported their feeling based on vacancies which usually were very popular, however received fewer applications when the new system went live.

In general, but especially when the labour market is loose and many jobs are available, an unfriendly system is undesirable. Due to its unfriendliness and unattractiveness, applicants turn faster to companies where they need less effort to apply, and where they have more attractive job sites (Interviewee 14).

As mentioned earlier, besides applicant unfriendliness, the system is also user-unfriendly. Working with the system gives a recruiter more administrative burden (Interviewees 13, 21).

'As recruiter you want to go out to recruit. But with the implementation of this system it appears that a recruiter has more administrative work to do. This negatively influences the quality of the recruitment process' (Interviewee 13).

The approach of the project contributed to the system that Recruitment Services is using right now. Whether it is due to the lack of guidance and control, or the persistence to hold on to the traditional recruitment process and adjust the system, the system is missing certain useful functionalities that could positively contribute to the quality of the recruitment process (Interviewees 10, 25). For example, the talent pool is missing. The system is designed in such manner, that this function is not useable. Due to

this, finding and approaching talented applicants is not possible. In this way, ■■■ is failing to catch the best ones out there (Interviewee 13).

Yet, interviewees are convinced that the system could work more optimal (Interviewees 13, 14, 17, 18).

'The system possesses 'handy' functionalities which users cannot use. It works twofold. On the one hand, the system offers functionalities that positively contribute to the recruitment process of the ■■■. These are currently not in use because these 'steps' are not included in the recruitment process of the ■■■. On the other hand, the system misses some functionalities which could be handy for the recruitment process' (Interviewee 14).

Recap 4.5.3

This section can be summarised based on the following issues:

- The system provides users several tools with which they can better handle their recruitment process, like the possibility to check the status of an application. It brings structure to the recruitment process
- Yet, the system has a downside as well. It is unfriendly. First of all for the users. In addition, for the applicants. Users perceive this as harmful because applicants are the target group of the recruitment process. Most disadvantageous for applicants are the extensiveness of the system, its difficulty to understand, and that working with the system requires too much time.
- After implementing the e-recruitment system, users believed the number of applicants decreased
- Users feel that working with the system requires performing many administrative tasks. However, a recruiter should go out and recruit. The coming of the new system decreased the time to actual recruit. This influences the recruitment process negatively.

4.5.4 Reflection on the e-recruitment outcomes

Missing functionalities seem to influence all kinds of outcomes of e-recruitment implementation.

When regarding *e-recruitment appropriation*, users seem to appropriate the system to a large extent in a proper manner. They use the system with the intent of recruiting potential employees. There also exists consensus among users regarding to appropriation of the system.

However, the inefficiency of the system design causes users to 'work around the system'. The absence of management reports enables users to do so, because currently it does not asks users to fill in all information correctly to draw this information upon. Working around the system causes pollution, as, for example, application statuses are not kept up to date by the system because of the tasks performed outside the system.

E-recruitment productivity outcomes are hard to measure, as management reports cannot be drawn from this system. As there might be some time and cost efficiencies, these are not measurable. Nonetheless, perceptions of interviewees provide information to interpret the productivity benefits of e-recruitment. According to these perceptions, e-recruitment does not deliver the expected benefits. As decreasing the administrative burden was one of the goals to implement e-recruitment, users feel this has only increased. Consequently, expected cost- and time-savings are not realised. As a successful e-recruitment implementation should result in cost- and time benefits (Cappelli, 2001; Chapman & Webster, 2003;

Galanaki, 2002; Maurer & Liu, 2007; Parry, 2006; Singh & Finn, 2003; Torkzadeh & Doll, 1999), the contrary might imply an unsuccessful implementation of e-recruitment.

Finally, *e-recruitment system quality*. Regarding to this construct, interviewees perceived the system to be relevant. The system provides users several tools through which they can perform and structure their recruitment process. Especially in comparison to the old system, this is seen as an advantage. Yet, SAP E-recruiting 3.0 is not designed exclusively for recruitment, but as an extension to the core system of SAP HR. This is noticeable by the user-friendliness of the system. Users perceive the system to be time-consuming, inflexible, and slow. In addition, users express that the system is unfriendly for applicants as well, which they experience as worse because it is related to the core activity of Recruitment Services. Applicants perceive the system as extensive, difficult to understand, and time-consuming. This was observed by the decrease in applicants, and by the phone calls received about the system. Referring to previous research, increased applicant convenience was the least-mentioned goal by organisations at the outset, but it was nonetheless the goal most often met (Parry & Tyson, 2008). User satisfaction was rated lower. In case of ■■■, this is opposite.

This is reinforced by the fact that the administrative burden increased, which causes the time for actually recruiting decrease. Yet, this is the essential function of Recruitment Services, and therefore influences the quality of the recruitment process negatively.

Concluding, to a certain extent the system is relevant to its users. Yet, there are issues that make user perceive the system to be less relevant, especially when considering applicants.

The perceived performance of the system caused project members to consider a new release of the technology. This new technology is more evolved and offers solutions to deviancies in the current technology.

4.6 Refining the theory

When considering these findings, one might conclude that enablers of management support strengths which were related to executed control, general defined documents, role ambiguousness, cooperation between HRM and IT, and project approach, led to an inefficiently designed system. Consequently, this system appears to not have delivered the success indicators.

Nonetheless, when comparing the SAP E-recruiting to the former technology, it shows improvements in constructs like technology quality. Yet, due to design and approach issues, the technology is characterised by some inefficiently developed tools.

Based on these findings, the constructed theoretical framework can be refined. The framework serves as a guideline that can be used when confronting e-recruitment implementation. To refine and adjust this guideline, constructs and dimensions are added to the ones described in the operationalisation table. Doing this in a clarifying way, the three enabler groups (e-recruitment system strength, e-recruitment management support strength, and the emerged enablers) and the success indicators are separated into four tables instead of in one figure. Tables 11 to 14 present the constructs of the guideline.

The constructs and dimensions in *italics* confirm those from the theoretical framework based on literature. The constructs and dimensions in **bold** have been added based on the findings.

Constructs	Dimensions
<p><i>Technology quality;</i> Refers to the quality of the e-recruitment technology and the information stemming from this technology (derived from DeLone & McLean, 2003)</p>	<i>Adaptability</i> - TOMs' perceptions about flexibility of the technology
	<i>Availability</i> - the extent to which TOMs feel that they can easily access the technology
	<i>Reliability</i> - the extent to which the TOMs believe that the technology is able to perform its required functions under stated condition for a specific period of time
	<i>Response time</i> - the perceived speed the technology reacts to the inputs of TOMs
	<i>Ease of understanding</i> - TOMs perceptions that interpreting the information stemming from the technology does not require much effort
<p><i>Service quality;</i> Refers to the overall support delivered by the service provider (Derived from DeLone & McLean, 2003)</p>	<i>Reliability</i> - the extent to which TOMs feel that the service is able to perform its required support under a stated condition in a specific amount of time
	<i>Responsiveness</i> - the extent to which TOMs believe they get timely support from the service
	Clarity – the extent to which users understand the procedure of what to do in case of questions and problems

Table 11: Refining the guideline regarding to E-recruitment system strength

Constructs	Dimensions
<p><i>Empowered project team;</i> The extent to which the manager and members are empowered in their tasks (self constructed)</p>	<i>Position</i> - perceived authority of e-recruitment project team (members) during the implementation process
	<i>Role</i> - the perceived function of a project team member by TOMs
	Level of executed control - the extent to which the presumed control is actually put into practice
<p><i>Content of a plan for implementation of e-recruitment;</i> Refers to a future situation and to the actions required to reach this situation (Derived from Arendsen, 1992; Hayes, 2007; Newton, 2006)</p>	<i>Content of a plan</i> - perceived presence of a vision, strategy and scheduling in the implementation plan
	<i>Clarity</i> - the extent to which TOMs believe that the implementation plan is understandable and transparent
	Extensiveness – the amount of detailed information perceived by project members as necessary to perform a project
	Commitment – the extent to which a project is guided by the formulated plans or documents
<p><i>HRM and IT collaboration in e-recruitment implementation;</i> Refers to the extent of collaboration between HRM and IT to ensure successful integration of e-recruitment (Panayatopoulou et al, 2005; Krishnan & Singh, 2006)</p>	<i>Formal regulations</i> - number of prescribed rules perceived by TOMs, which enable cooperation between HRM and IT departments
	<i>Perceived collaboration</i> - the extent to which TOMs perceive the cooperation between HRM and IT department as qualitatively suitable
	Level of understanding – the extent to which communication and interpretation between HRM and IT project members is clear to each other
	<i>Joint actions</i> - a number of activities with shared goals performed together by IT and HRM departments
	Familiarity - the extent to which HR and IT project members are knowledgeable of each other's processes
	Training plan - securing the development and execution of training in a document
<p><i>Providing learning opportunities;</i> Refers to the extent users are trained to use the system in an appropriate way (Panayatopoulou et al, 2005; Krishnan & Singh, 2006)</p>	<i>Orientation training</i> - refers to the extent TOMs believe that a correct cultural environment for the technology has been created
	<i>Application area training</i> - Refers to the extent TOMs believe that they receive hands-on training about the use of technology
	<i>Hands-on training</i> - training on the actual operation of the technology by the end user, and providing any kinds of digital material

Table 12: Refining the guideline regarding to E-recruitment management support strength

Constructs	Dimensions
Contextual influences; Refers to internal and external developments which effect the e-recruitment implementation project (Self constructed)	External influences - the extent to which developments from outside the organisation affect the project
	Internal influences - the extent to which developments from inside the organisation or department affect the project
HR transformation support; The level of guidance of HR regarding a mind-set and role change (Self constructed)	Clarity - the extent to which employees are familiar with what is going to happen
	Beneficial awareness - the perceived notion of employees about the positive consequence of the transformation
	Culture change - the ability of employees to transform
Strategic alignment The extent to which e-HRM strategy reinforces the overall strategy (Self constructed)	Availability - the extent to which a strategy regarding e-HRM exists
	Alignment – the degree to which the e-HRM strategy corresponds or reinforces the overall strategy

Table 13: Refining the guideline regarding to Emerged enablers

Constructs	Dimensions
<i>E-recruitment appropriation;</i> Refers to the appropriate use of e-recruitment in line with its intention (Derived from Ruël, 2001; DeSanctis & Poole, 1994)	<i>Faithfulness of appropriation</i> - the extent that TOMs perceive that they use e-recruitment in line with its intention.
	<i>Consensus towards appropriation</i> - the extent to which TOMs agree upon how e-recruitment should be used
<i>E-recruitment productivity;</i> Refers to the productivity benefits as an outcome of e-recruitment implementation (self constructed)	<i>Cost reduction</i> - the extent TOMs perceive that e-recruitment contributes to costs saving
	<i>Time savings</i> - the extent TOMs feel that e-recruitment saves their time in working on recruitment processes
<i>E-recruitment quality;</i> Refers to qualities gained by e-recruitment implementation (self constructed)	<i>Relevance</i> - the extent users believe that e-recruitment is useful in performing recruitment-related tasks
	Applicant friendliness - the extent that users believe e-recruitment to be useful in when applying

Table 14: Refining the guideline regarding to E-recruitment success indicators

4.7 Recommendations

The project is characterised by several strengths and challenges. To generate an overview of these issues, the following tables present the strengths (Table 15), and the challenges of the project at the [redacted] with matching recommendations (Table 16 through Table 19).

E-recruitment implementation strengths
Technology quality
SAP E-recruiting 3.0 provides more tools than the former technology WISE
The technology provides structure to the recruitment process
Most start-up problems were resolved
Service Quality
The provided service/support is sufficient
The provided service/support is on time
Empowered steering board/project group
Content of plan(s)
The existence of plans
HRM and IT collaboration
Great day-to-day social discourse between project members

The effort project members put in
Provided learning opportunities
Provided hands-on training and to a lesser extent application area training
Users perceive they received enough training
Emerged issues
E-recruitment appropriation
To a large extent, the technology is appropriated in a right manner
There exists consensus among users regarding appropriation, regardless some differences due to the type of tasks a user needs to perform
E-recruitment productivity
E-recruitment quality
The system offers users a more complete set of tools to guide them through the recruitment process
The system provides users tools to structure the recruitment process

Table 15: Strengths of e-recruitment implementation at the [REDACTED]

The following challenges and recommendations are presented in four tables, the three enabler groups (e-recruitment system strength, e-recruitment management support strength, and emerged issues), and the success indicators.

E-recruitment system strength

Challenge	Recommendation
Technology quality	
The technology is perceived to be slow	<ul style="list-style-type: none"> Perform usability test to discover these issues and its origins
The technology is perceived to be time-consuming	<ul style="list-style-type: none"> Change the recruitment process based on the technology, instead of adjusting technology
The technology is perceived to be inflexible	<ul style="list-style-type: none"> Change the choice of the system
Service quality	
Lack of communication regarding to support procedure	Inform users what they can do when experiencing problems in using the system.

Table 16: Challenges and recommendations regarding E-recruitment system strength

Management support strength

Challenge	Recommendation
Empowered steering board/ project group	
Lack of control	<ul style="list-style-type: none"> Appoint the right steering board members who are able and responsible for executing control
Composition of steering board	<ul style="list-style-type: none"> Held people responsible for their executed control
Unclearly defined roles	<ul style="list-style-type: none"> Define clear roles and matching responsibilities Make one core document which is used during the complete process
Content of plan(s)	
Plans are too general/incomplete	<ul style="list-style-type: none"> Make plan that is extensive enough to guide the project

	<p>along</p> <ul style="list-style-type: none"> ■ Check extensiveness and clarity among project members by asking them about it
Low commitment toward developed plans regarding due dates and goals	<ul style="list-style-type: none"> ■ Monitor project progress based on documents ■ This provides the steering board moments to check and adjust the project if necessary
HR and IT collaboration	
Management of expectations concerning technology choice	<ul style="list-style-type: none"> ■ Before choosing a system, be familiar with the restrictions and possibilities of the organisations ■ Inform or include parties that need to be involved in this choice, to gather all necessary information to base a choice on ■ Be transparent in requirements and restrictions related to choosing a system
Lack of knowledge by IT	<ul style="list-style-type: none"> ■ Be critical of people and parties who are going to be involved in the project ■ Create an open culture, in which people and parties feel they can be honest about the knowledge they possess
Conflicting understandings between HR and IT when collaborating and communicating directly, which caused insufficient needs assessment	<ul style="list-style-type: none"> ■ Supporting communication between HR and IT with a linking intermediary. In case of ■■■, this can be a Business Analyst. ■ This linking intermediary needs to be involved from the beginning to get familiar with the processes, and to be able not only to act as the linking pin, but also to perform an advisory role in <i>what</i> to do best in order to gain the greatest advantage.
Different parties were working together like singular Islands	<ul style="list-style-type: none"> ■ Stress the fact that the project is one joint effort, in which working together from different domains leads to a synergy effect ■ Reinforce this by supporting inter-departmental collaboration and bonding
Traditional recruitment process too dominant, which caused the technology to be adjusted ineffectively	<ul style="list-style-type: none"> ■ When implementing a recruitment technology to recruit in a more modern way, the technology needs to take the lead. Organisation can benefit from the tools a technology offers. ■ Take a critical look at the traditional recruitment process ■ Support a change culture by emphasising the benefits of this technology for the ones who need to change the most, and the consequence of the implementation to eliminate confusion and vagueness
Accumulation of issues related to project progress, caused frustration and tiredness among project members	<ul style="list-style-type: none"> ■ Establishing 'check moments' to monitor the progress and deviances of the project. This makes it possible to signal issues and act if necessary. This prevents the project from becoming an accumulation of negative

	<p>issues in the end</p> <ul style="list-style-type: none"> ■ When prevention is too late, secure that there is a ‘valve’ mechanism where through people can vent their frustrations and focus on the project again. This can be done by organising a special meeting when tensions get too high, or appointing a contact person to whom project members can go to escalate the situation
Provided learning opportunities	
Learning opportunities were not secured enough in a document	Develop a document, or part of a document where enough attention is paid to securing learning opportunities. This can include who is going to be trained, who is going to develop the training, who is responsible for giving training, when training starts, what training comprises, etc
Absence of orientation training focusing on organisational change	Next to the training related to work with the system, a bigger overall change needs to occur. Culture and mind-set changes need to be established. This is done by emphasising the benefits of the technology for users, and the consequence of the implementation to eliminate confusion and vagueness
Overall recommendation for E-recruitment management support strength	
Pay attention to the initial stage of a project. The challenges above can be secured to a large extent by the preparation of a project. A project consists of more than the end phase, as the Prince2 method expresses as well. ‘Well begun is half done’ is an expression that can be applied here.	

Table 17: Challenges and recommendations regarding E-recruitment management support strength

Emerging issues

Challenge	Recommendation
Recruitment Services experience with IT	
The project approach by Recruitment Services	Benefit from the tools that a modern recruitment technology offers. This means that the traditional recruitment process might need adjustment instead of the technology.
Recruitment process not ready to work ‘e’	<ul style="list-style-type: none"> ■ Implementing e-recruitment brings along a role change of Recruitment Services. Administrative efforts decrease and there is more time left to actually recruit and to focus on other issues. Employees need to receive guidance in their role and mindset change. Providing information is necessary to fill in existing gaps among employees, which cause confusion, uncertainty and possibly resistance. ■ In addition, point out to users the advantages of the implementation. In which ways do they benefit from the e-recruitment implementation and consequently the role change? Make the change a positive concept.
The mindset of Recruitment Service employees	
Absence of role change guidance	

	<ul style="list-style-type: none"> ■ Prepare users for the consequences of the implementation and the situation in which they need to change. Focus on their new relevance.
<p>■ did not possess an overall e-HRM strategy</p>	<p>Develop an overall e-HRM strategy. Organisations receive greater benefits when practices are mutually reinforcing each other. The strategy needs to describe which focus ■ practices towards working with e-HRM, and how different practices like e-recruitment are correlated and reinforce each other.</p>

Table 18: Challenges and recommendations regarding Emerged issues

E-recruitment success indicators

Challenge	Recommendation
E-recruitment appropriation	
<p>Due to technology design inefficiencies, users start to work around the system and this causes pollution of the system</p>	<p>Do a usability test. The core of this challenge originates in the design of the technology.</p>
E-recruitment productivity	
<p>Productivity benefits are hard to measure because the tool management reports cannot be used</p>	<ul style="list-style-type: none"> ■ Conduct the project from the tools the technology offers. In this case, the technology is not such adapted that tools like these might not function. ■ Try to build the management reports tool. ■ If this is not possible, hand Recruitment Services another tool to track their activities.
<p>The administrative burden increased, instead of decreased</p>	<p>Put the technology in the lead. This offers modern tools. When adjusting the technology, these tools do not function anymore and this results in poor productivity outcomes. The origin lies within management support activities.</p>
<p>Based on perceptions, the implementation of e-recruitment does not result in obvious time savings</p>	
<p>Based on perceptions, the implementation of e-recruitment does not contribute to obvious cost savings</p>	
E-recruitment quality	
<p>The system is perceived as user-unfriendly because it is time-consuming, inflexible, and slow.</p>	<ul style="list-style-type: none"> ■ For all these three challenges, put the technology in the lead. This offers modern tools. When adjusting the technology, these tools do not function anymore and this results in poor productivity outcomes. The origin lies within management support activities. ■ Involve applicants. Their experience was found to be one of the most important things for recruiters. ■ For the technology as it works right now, try to intercept the administrative burden for recruiters. If this can be done, they can spend more time –on their essential function.
<p>The system is perceived as applicant-unfriendly based on its extensiveness, little ease of understanding, and the fact that the system is time-consuming. As a result, the amount of received applications decreased, and telephone calls by users with questions concerning the system increased.</p>	
<p>Due to increased administrative burden, recruiters experience less time left to really ‘go out’ and perform the essential tasks of recruitment.</p>	

Table 19: Challenges and recommendations regarding E-recruitment success indicators.

5.0 Conclusion and Implications

5.1 Conclusion

Based on the conducted research, conclusions can be derived. The first part answers the three sub-research questions, and, with that, the overall research question:

Which enablers and success indicators can be derived from the implementation of e-recruitment at the [REDACTED]?

The three groups of enablers (e-recruitment system strength, e-recruitment management support strength, and emerged enablers) are addressed first. These answer the first part of the research question. Subsequently the success indicators are described, which respond to the second part of the research question.

This chapter ends with theoretical contributions and practical implications. *Italic* words in this paragraph relate to the findings found in this research that are new to theory. The practical implications, in comparison to the recommendations in Chapter 4, are more general recommendations based on the implementation of e-recruitment at the [REDACTED].

5.1.1 E-recruitment system strength enablers

From literature research, two enablers have been developed to measure the system characteristics of e-recruitment. These are *technology quality* and *service quality*. The former is defined as the quality of the e-recruitment technology and the information stemming from this technology (derived from DeLone & McLean, 2003). The latter is referred to as the overall support delivered by the service provider regarding the e-recruitment technology (derived from DeLone & McLean, 2003).

Concerning technology quality, SAP E-recruiting 3.0 offers users, in comparison to the former technology, more tools to capture the recruitment process. The technology structures the recruitment process and provides users an overview of their processes. Nevertheless, when seen separate from its predecessor, SAP e-recruiting 3.0 is perceived to be time-consuming and cumbersome. Due to its design, several tasks ask that many actions be performed. In addition, the system is slow when processing many data simultaneously.

Referring to service quality, the support and service were perceived to be sufficient based on responsiveness and completeness. In case a question or problem arises, key users are appointed as the ones to turn to. If problems stay unresolved, a call (registered problem) is set out to the BDO. They are responsible for the maintenance and changes of the system. A SLA (Service Level Agreement) is developed by the BDO in cooperation with their customer, Recruitment Services. Following this agreement, the delivered service or support is monitored. An important factor that became clear from this research regards the *clarity of the service procedure*. Users did not always know where to turn to in case of questions or problems, and experienced unclear communication regarding to this issue. Nonetheless, this is important as service quality seems to enhance satisfaction and retention of users, and consequently affects organisational performance (Berry & Parasuramen, 1997; Grönroos, 2007; Rodgers, Negash & Suj, 2005).

5.1.2 E-recruitment management support strength enablers

Based on previous research, it appeared that management support is important, yet undervalued during many IT implementations (Parry & Tyson, 2008; Ruël, Bondaouk & Loise, 2004). Therefore, this research included four management support concepts referred to as empowered project team, content of a plan(s), HRM and IT collaboration, and provided learning opportunities.

First of all, the issue of the empowered project group, which was, in this research, referred to as the steering board. The steering board should have *executed more control* and direction during the project. Little control caused confusion among steering board members themselves, as well among project members. Different developments like frequent changeovers of project members, chairmen and project leader skills, budget issues and time pressure, all influenced this control. In addition, the composition of the steering board resulted in content-based discussions whereas the main function of a steering board focuses on decision making. Therefore, a steering board should consist of members who are able and responsible for making these decisions. Finally, unclear or inconsistently defined roles and responsibilities led to confusion and inefficiencies during the project.

Every interviewee acknowledged the existence of plans or documents during the project. When referring to their content, they are described falling short on concepts like *extensiveness and completeness*. Documents were described as too general. As a result, these documents were less useful as tools to guide the project. Next to this, the commitment to these documents was low. Due dates were postponed and project objectives were not held onto. The general character of these documents might have contributed to this. Finally, the technology quality influenced the intended communication. The actual plan of announcement was not put into practice due to the performance of the technology at that time.

The collaboration between HRM and IT and the consequences thereof was one of the most notable enablers. The accumulation of different developments caused the project to become difficult. Included in these developments are the choice of technology, the degree of available knowledge, direct communication and understanding, and mutual cooperation, which all caused the project to become difficult. Especially direct collaboration and communication between HR and IT caused problems, as these two parties act from *different blueprints and understandings*. Here arose misunderstandings, frustrations among project members, and suspension of the project. The collaboration eventually influenced the approach of the project. This resulted in a situation in which a modern technology was adapted towards the traditional recruitment process. Doing this removes the modern advantages of a technology, and occurred at ■■■. Desired tools like management reports and talent pool did not function. Finally, though the project was complicated, project members are praised for their drive during the project.

Finally, the issue of the provided learning opportunities. Though there exist different views about the provided learning and training opportunities, the overall appraisal was that this was sufficient. Training focused mainly on hands-on and application training. This caused some to wonder if users are trained enough related to system use and business change. Another remark concerns the anchoring of training or *learning opportunities in a project plan*. During this project, project members were caught unprepared when developing these opportunities, though training of users seems to be one of the most important issues in e-HRM adoption (Krishnan & Singh, 2006; Panayotopoulou et al, 2005; Pin et al, 2001).

All in all, the e-recruitment management support strength is, in case of ■ a more obvious component of e-recruitment implementation when compared to e-recruitment system strength. Actually, this component seems to influence the design of the technology.

5.1.3 Emerged enablers influencing e-recruitment implementation

Next to the above-mentioned issues, other issues that did not belong to the research framework emerged.

First of all, it appeared that the implementation of e-recruitment could not be considered as an independent project. *Contextual developments* like the airplane crash on September 9th 2001, or attention towards core businesses at the ■ influenced the project. These developments caused the timeline of the project to be extended, and might have influenced the project in other ways.

Due to the recruitment process and mindset of employees, Recruitment Service was not entirely ready to work 'e'. On the one hand, this problem originated with Recruitment Services because of the missing experience in IT-involved projects and insights into such projects. On the other hand, this was caused by project management. HR needs to be prepared and supported more in a role change, not just for the implementation of a technology. The preparation and execution of the Business change deserved more attention. *The transformation of Recruitment Services required more facilitation*. This corresponds with research findings that postulate that by implementing e-recruitment, the traditional process transforms into an e-process. This includes more transformation than only transformation of the medium itself (Jones et al, 2002).

Finally, implementing e-recruitment at the ■ was more or less a sole implementation. When introducing an e-HRM technology like e-recruitment, organisations need to establish this from a greater *overall e-HRM purpose*. In addition, business performance will improve when HR practices mutually reinforce the organisation's choice of competitive strategy (Schuler & Jackson, 1987). As a consequence, these e-practices need to be interconnected and aligned with an e-HRM and overall strategy (Hayes et al, 2007).

5.1.4 E-recruitment success indicators

A correctly implemented e-recruitment system should deliver certain outcomes (Chapman & Webster, 2003; Galanaki, 2002; Pin et al, 2001; Singh and Finn, 2003). To measure this, three success indicators of e-recruitment implementation were formulated; e-recruitment appropriation, e-recruitment productivity, and e-recruitment quality.

In the course of research, it became clear that especially the productivity success indicator was hard to measure because the desired tool, management report, did not function in practice. This tool should have provided productivity information. Due to its absence, e-recruitment productivity was hard to capture. Nonetheless, conclusions can be derived based on perceptions.

At the outset, time and cost savings were predicted. The actual e-recruitment productivity does not reach the presumptions made about time and cost saving. Though the administrative burden was expected to decline, it increased based on the time-consuming and cumbersome character of the technology. This resulted in more time spent on the recruitment process.

Concerning e-recruitment quality, the implementation offers users more tools in comparison to the former technology. E-recruitment quality concerns the relevance of the system for its users. The system provides users structure and overview of their processes. Next to that, the new system makes it possible to perform more tasks with the system.

Although there are aspects that influenced e-recruitment quality in a positive way, the new technology also contributed negatively to the quality of the recruitment process. Due to the increased administrative burden, there is less time left to perform the key activity of recruitment, recruiting potential employees. Another issue concerns the user-friendliness of the system. Because of its time-consuming and cumbersome design, e-recruitment requires users to perform many tasks and to perform illogical work processes.

Yet, as recruiters state that this is a disadvantage, they perceive it is more worse that the system is applicant unfriendly. This refers to the system's extensive nature, to the ease of understanding of the system, and the effort required of applicants.

With regard to appropriation of the system by its users, they appropriate the system to a large extent in a proper manner. Also, there exists consensus among users in appropriating the system. Appropriation refers to the correct use of the technology in line with its intention (DeLone & McLean, 2003). Yet, as user-unfriendliness influences e-recruitment quality, it also influences the appropriation. Due to the missing tool, management reports, users are not urged to work in an appropriately with the system. In addition, inefficient tools causes users to become smart and start working 'around the system'. This causes pollution of the system.

When relating the above reasoning to the starting assumption of this research, a successful implementation should result in a system that delivers the desired outcomes (Chapman & Webster, 2003; Galanaki, 2002; Pin et al, 2001; Singh & Finn, 2003). If this is correct, e-recruitment implementation at the KM was unsuccessful based on its success indicators.

Management support strength enablers seems to be have influenced the fact that the technology is designed in such manner (e-recruitment system strength enablers), and that system performance is insufficient.

5.2 Theoretical contribution

From this research the assumption can be made that especially management support enablers contributed to the success of the system. Due to this, the technology was designed ineffectively and influenced its success indicators. This assumption supports the statements made in previous research that implementing e-recruitment is not just swapping the medium, and requires a greater organisational change (Parry & Tyson, 2008; Ruël, Bondarouk & Looise, 2004).

During this research, additional constructs and dimensions were found that are new to the existing theory. These are highlighted in the previous paragraph by putting them in *italic* font.

First of all, several enablers emerged that were complementary to the enablers derived from theory. As mentioned above, these are defined as contextual influences, HR transformation support, and strategic alignment.

At dimension level, the clarity of the procedure to be followed in case of questions or problems with the system was found to be important. This dimension was added to the service quality of the system. When considering the management support enablers, different dimensions were complemented. In regard to the empowered project team, or in this case steering board, the level of executed control seemed to be important. This refers to the presumed control actually put into practice. When referring to the content of a plan(s), the extensiveness and commitment to these plans were observed as two significant dimensions. Extensiveness relates to the level of detail provided in the information to perform a project, whereas commitment refers to the extent to which a project is guided along in accord with the formulated plans or documents. Finally, level of understanding and familiarity are added to the enabler HRM and IT collaboration. Level of understanding is about the extent to which communication and interpretation between HRM and IT project members are clear to each other. During the project it appeared that misunderstandings between HRM and IT influenced the timeline of and collaboration during the project. Familiarity is the degree to which HR and IT project members are known with each other's processes. This is important to understand wishes and to ground actions taken on during the project.

5.3 Practical implications

If it is possible to have a second chance in implementing e-recruitment, several practical main implications could be considered, based on the recommendations in the previous chapter. Overall, four main implications can be identified. Based on the findings, most implications concern the management support activities during the project.

First of all, *establishing a proper project organisation*. The composition of a steering board is the basis of the project. It is important that this board contain members who are responsible and able to make decisions and control the project. They need to guide the preparation as well. Well-defined roles and documents serve as "handles" to guide the project along, and as a hold for project members. In addition, these provide clear criteria for monitoring a project and make it possible to adjust during the project before it is too late. Preparation is one of the phases of a project and might intercept problems that might occur in the end. As simple it sounds, a proper initial phase of a project serves as a solid ground for the rest of the project. The result of a project is the accumulation of all steps taken, instead of a sprint in which only the final result counts.

Secondly, *practising the proper approach*. Securing a proper approach to the project is very important in regard to the outcomes of an e-recruitment implementation. If an organisation's goal is to recruit in a modern way, a recruitment system is chosen because it offers these tools. It is important to consider these and to take a critical look at your own recruitment process. In the case of ■■■, this also originates in the collaboration between the Business and IT, and the link between them. Direct communication between these two parties is only possible when their understandings are on the same page. HR and IT might assume they are working together in a proper manner, yet this does not guarantee that they understand each other's 'language'. To guide this collaboration and to advise how to modernly recruit, support between these two parties is important for mutual understanding. One cannot expect the business to know everything about IT, and vice versa. Involving for example a Business consultant or Business analyst is important in linking these two. The involvement of such a 'linking pin' does not only

address the communication and understanding between these two parties, but also the advises what is best to do in regard to the design of the technology.

Thirdly, *transition support for role and mindset change*. Next to implementing a technology, a cultural change needs to set in. To a large extent, Recruitment Service was not ready to work digitally, and resistance increased as the new technology threatened to replace their work. By implementing e-recruitment, the traditional recruitment process transforms into an e-process, which includes more transformation than only the technology (Jones et al, 2002). Instead, it changes the role of, in this case, Recruitment Services. Employees need to be supported in this transformation. This can be done by reassuring employees and removing insecurities among employees that might lead to resistance. To reach this goal, substantial and correct information needs to be spread. In addition, the project has to be transparent.

Subsequently, change need to be instigated. The mindset of employees requires that this kind of change towards is positive and leads to opportunities. Therefore, benefits of the technology need to be clear to its users. Employees' fear for their existence must be alleviated, the positive effect of a role transformation must be highlighted. This can be a shift from administrative expert roles towards tasks belonging to, for example, an employee champion (who maximizes employee commitment and competences), or a strategic partner (executing business strategy and meeting customer needs) (Caldwell, 2003). This can be reinforced by making employees partly responsible for this change.

Finally, *securing knowledge* is very important in every project. Working based on adequate knowledge might prevent a project from being suspended and from and frustrations. It might also offer organisations the best possible solutions or choices based on this knowledge.

Try to involve the best possible people and parties to reinforce project outcomes or benefits. The steering board and project teams need to consist of the right people. In addition, the partners who project members need to work together with need to be chosen carefully. In doing this, try to be critical. As the dynamic capabilities approach postulates, choices that are going to be made are a function of its current position and the paths ahead. This current position is often shaped by the path it has travelled. Many current choices are influenced based on past choices (Teece, Pisano & Shuen, 1997). Yet, these past actions do not always guarantee the right choices to be made in the future. Therefore organisations or departments need to secure their critical view. Nevertheless, in establishing a team consisting of knowledgeable people, one might not be sure about this at the outset. Developing a clear plan and criteria enables the project management to monitor this process, and if necessary, to adjust.

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Appendices

Appendix A: Internet usage

World regions	Population	Internet users (Dec 2000)	Internet use (June 2008)	% Population	Usage % of World	Usage growth 2000-2008
Africa	955,206,348	4,514,400	51,065,630	5.3 %	3.5 %	1,031.2 %
Asia	3,776,181,949	114,304,000	578,538,257	15.3 %	39.5 %	406.1 %
Europe	800,401,065	105,096,093	384,633,765	48.1 %	26.3 %	266.0 %
Middle east	197,090,443	3,284,800	41,939,200	21.3 %	2.9 %	1,176.8 %
North America	337,167,248	108,096,800	248,241,969	73.6 %	17.0 %	129.6 %
Latin America/Caribbean	576,091,673	18,068,919	139,009,209	24.1 %	9.5 %	669.3 %
Oceania/ Australia	33,981,562	7,620,480	20,204,331	59.5 %	1.4 %	165.1 %
World total	6,676,120,288	360,985,492	1,463,632,361	21.9 %	100.0 %	305.5 %

Source: World internet usage statistics. www.internetworldstats.com/stats.htm. Accessed on November 19th 2008

Appendix B: Interview protocol

Duur interview :.....

Datum :.....

1. Introductie

- Doel interview
- Uitleg onderwerpen
- Uitleg procedure
- Selectie respondent
- Benadrukken van het belang van meningen
- Vertrouwelijkheid kwesties
- Member check

2. Algemene informatie

- Functie binnen ■ destijds:.....
- Aantal jaren in dienst bij ■ :
- Aantal jaren in functie ten tijde van E-recruitment:
- Duur en betrokkenheid e- recruitment:

3. E-recruitment systeem 'kracht' (E-recruitment system strengths)

- Kwaliteit van e-recruitment
 - Kunt u omschrijven wat u van e-recruitment vindt?
 - wat vind u van de beschikbaarheid van e-recruitment?
 - kunt u de betrouwbaarheid van e-recruitment omschrijven?
 - wat vindt u van de flexibiliteit van e-recruitment?
 - wat vindt u van de snelheid van e-recruitment?
 - is de technologie makkelijk te begrijpen?
 - zijn de beelden/monitoren makkelijk begrijpbaar?
 - is de informatie van de technologie duidelijk?
- Service kwaliteit van e-recruitment
 - Hoe kunt u de service/support beschrijven die geleverd wordt bij e-recruitment?
 - kunt u beschrijven wat u moet doen om de service te ontvangen?
 - is de geleverde service voldoende/naar voldoening?
 - hoe lang duurt het voordat u een antwoordt heeft/geholpen bent?

4. Management support bij de implementatie van e-recruitment (E-recruitment management support)

- projectteam leden
 - Kunt u de rollen omschrijven die de projectteam leden hadden?
 - Wat vond u van de samenstelling van het projectteam?
- Inhoud van het plan
 - Kunt u het plan omtrent e-recruitment implementatie beschrijven?
 - Wat vindt u van de duidelijkheid van het plan?
- HRM en IT samenwerking
 - Hoe kunt u de samenwerking omschrijven tussen de HRM afdeling (business kant) en de IT afdeling?
 - waaruit kunt dit opmaken?
- Aanboden leer mogelijkheden
 - Wat voor een soort leermogelijkheden zijn u aangeboden in relatie tot het e-recruitment systeem?
 - In hoeverre heeft u het gevoel dat de aangeboden leermogelijkheden voldoende zijn
 - waar leidt u dit uit af?

5. Effectiviteit van het e-recruitment systeem (Outcomes)

- E-recruitment productiviteit
 - Kunt u beschrijven of de implementatie van e-recruitment heeft bijgedragen aan kosten reductie?
 - op welke manier?
 - kunt u voorbeelden geven?
 - Kunt u beschrijven of de implementatie van e-recruitment heeft bijgedragen aan tijdsbesparingen?
 - op welke manier?
 - kunt u voorbeelden geven?
- E-recruitment kwaliteit
 - In hoeverre is de nieuwe e-recruitment technologie relevant voor uw werkzaamheden?
 - waaruit kunt u dit afleiden?
 - en relatie tot het oude systeem?
 - In hoeverre bent u tevreden over e-recruitment in relatie tot uw werk
 - Denkt u dat e-recruitment de tevredenheid van de sollicitant verhoogd?
 - kunt u dit toelichten?
- Juist gebruik van e-recruitment
 - Loyaliteit in het juiste gebruik
 - Waarvoor gebruikt u e-recruitment?
 - Hoe vaak
 - Kunt u beschrijven of u e-recruitment gebruikt voor de doelen waarvoor het vast gesteld is om te gebruiken?
 - In welke mate komt uw gebruik overeen met handleiding van e-recruitment?
- Consensus over juist gebruik
 - Hoe denken de gebruikers over het gebruik van e-recruitment?
 - Bestaat er eenheid onder de gebruikers over hoe het systeem gebruikt moet worden?

6.0 Afronding

- Wat vindt u pluspunten aan de e-recruitment implementatie?
- Wat vindt u minpunten aan de e-recruitment implementatie?
- Heeft u nog overige opmerkingen?
- Bedanken voor het interview.

Appendix C: Planning described in the Plan of Approach

Planning in mainlines

December 05	Blueprint. Commercial agreements concerning realiz realisation. Start building
January 06	Definite blueprint for system design
March 06	Designing system
April 06	Accepted system and go-live. Users are informed and trained Functional and technical maintenance and support organisation

Source: Plan of Approach SAP E-recruitment. November 25th, 2005.

Appendix D: Plan of Approach (NL)

4.2 Rollen

De volgende rollen zijn binnen het project te onderscheiden:

Sponsor

De sponsor is de promotor en supporter van het project. Draagt de visie uit en verkoopt het project aan alle stakeholders.

Opdrachtgever

De opdrachtgever is de budgethouder en als projecteigenaar verantwoordelijk voor het project.

De opdrachtgever heeft tot taak om het draagvlak binnen de █████ organisatie en in het bijzonder binnen Recruitment Services en decentrale P&O afdelingen te verstevigen en te bewaken. De opdrachtgever is de linking pin naar de decentrale organisatie.

Stuurgroep

De stuurgroep zorgt voor:

- Verlenen formele goedkeuring en acceptatie aan alle deliverables welke conform de planning worden opgeleverd.
- Formele goedkeuring van wijzigingen op de planning.

De samenstelling van de stuurgroep:

Naam	Project Rol
██████████	Project sponsor (stuurgroep gast)
██████████	Opdrachtgever
██████████	Senior leverancier IT
██████████	Projectleider e-HR project
██████████	Senior leverancier IT
██████████	
██████████	
██████████	Senior Gebruiker

Projectleider

De projectleider is verantwoordelijk voor de coördinatie van het project. Hij houdt planning, kosten en kwaliteit in de gaten en rapporteert indien zaken niet verlopen zoals voorzien. Hij houdt rekening met de gestelde randvoorwaarden en uitgangspunten.

De verantwoordelijkheden:

- Oplevering (deel)resultaten volgens gestelde tijdlijn.
- Realiseren van de benefits
- Rapportering aan Stuurgroep

Werkgroep Realisatie

De werkgroep realisatie bestaat uit deskundigen op het gebied van SAP-HR implementaties. Inhuur van deze deskundigen zal bij █████ partner █████ plaatsvinden.

Werkgroep Techniek

De werkgroep Techniek is verantwoordelijk voor het neerzetten van de juiste infrastructuur met betrekking tot SAP E-Recruitment. De groep zal bestaan uit technici van CIO/IS.

Werkgroep Testen

De werkgroep testen is verantwoordelijk voor het opleveren van goede en geaccordeerde testplannen en de juiste uitvoer van deze plannen. De werkgroep bestaat uit een procesdeskundige vanuit Recruitment Services en een business analist van P&O Information Services. Voor het uitvoeren van de testen zullen diverse gebruikers worden uitgenodigd.

Werkgroep Opleidingen

De werkgroep opleidingen draagt er zorg voor dat alle toekomstige gebruikers van SAP E-Recruitment worden opgeleid. De werkgroep bestaat uit een Business Analist van P&O Information Services.

Werkgroep inbedding

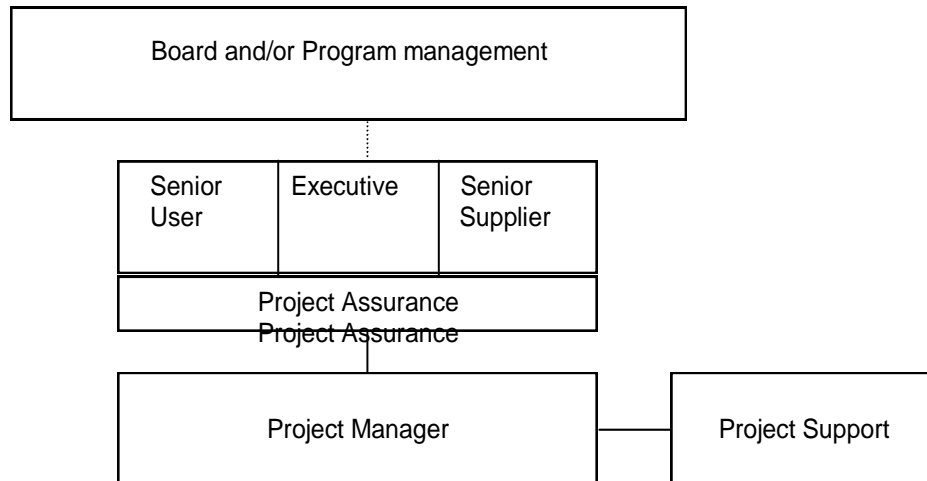
De werkgroep inbedding draagt zorg voor het implementeren van de procesveranderingen als gevolg van de ingebruikname van SAP E-recruitment. Tevens behoort het creëren van draagvlak tot de taak van de werkgroep.

Source: Plan of Approach SAP E-recruitment, version 2.2. November 25th, 2005.

Appendix E: Project letter - Project organisation structure (NL)

3.0 Project Organisatie Structuur

Indicate the members and their responsibilities of the Project Management Team.



3.1 Project management Team

Role	Responsibilities	Name(n) & Represented Business Units/Departments
Executive	Eindverantwoordelijke van het project en eigenaar van de Business Case	[REDACTED]
Senior User(s)	Dragen er zorg voor dat het product voldoet aan de gestelde requirements	[REDACTED]
Senior Supplier	Verantwoordelijk voor het leveren van de architectuur en de benodigde capaciteit en resources voor het project.	[REDACTED]
Project Manager	Verantwoordelijk voor het operationeel management van het project	[REDACTED]
Information Manager	Information Manager van de Business unit verantwoordelijk voor implementatie van de service org. en user support	[REDACTED]
Controller	Controller die het financiële verloop van de BC verrifieert.	[REDACTED]

Source: Project letter SAP E-recruitment. January 27th, 2005.