



The development of a new e-HRM module

A study of the essential e-HRM components in the greening sector

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Management summary

The e-HRM components that are essential in an e-HRM module are researched for Infogroen, a company that already delivers software for the greening sector. The company would like to expand their software program by adding an HR module. Using an external HR package was not an option: the preference goes out to developing their own HR module.

The focus of this HR module is on e-HRM, where both the manager and the employee have an important role. The possible components of the HR module are based on the five HR best practices, namely (1) Selective recruitment and selection, (2) Compensation and performance-related pay, (3) Appraisal and performance management, (4) Training and development and (5) Employee involvement (Boselie, 2010). The components for the managers are directly based on these best practices, whereas the components for employees have a different focus. These were first established from the point of view of employee self-service (ESS), a relatively new trend in HR information systems. These ESS principles are: (1) Informing, (2) Streamlining, (3) Change and (4) Collaboration (Schouwstra, 2008). Later on, the possible components for employees are also translated into the HR best practices. This led to a first draft of e-HRM possibilities for both the managers and the employees.

The set of components is tested twice: first by comparing these components to the components used in the current range of HR packages. Twelve companies that deliver HR software were selected, of which eight are used in the comparative analysis. The other four companies were left out because of a lack of available information. All the information about the HR software was gathered using information the companies provided: brochures, online trials, demo videos and demos. The comparative analysis led to a list of more than hundred possible e-HRM components. Some of these components were used in multiple HR programs, but some components were used in a small number of programs. These less popular components were tested through the interviews. The findings of both the comparative analysis and the field research were used to establish a final list of e-HRM components. More information about this list can be found in Chapter 5 (Discussion) on p. 39 and further.

It is recommended for Infogroen they gather more interviews in order to be more certain about the e-HRM components list. The final lists contains components that are most likely useful, components that are most likely not useful and components that find themselves in between these categories. Gathering more interviews would resolve these uncertainties and give the list more credibility.

Table of Contents

Management summary	3
Table of Contents	4
1 Introduction.....	6
1.1 Human Resource Information Systems.....	6
1.2 Problem statement.....	7
1.2.1 Goal.....	7
1.2.2 Research question	7
1.2.3 Sub questions	8
1.3 Structure of the report	8
2 Theoretical framework	9
2.1 Best practices in human resources.....	9
2.2 Stakeholders.....	11
2.2.1 Manager	11
2.2.2 Employee	14
2.3 e-HRM components	18
2.4 Framework.....	20
3 Methodology	21
3.1 Comparative analysis of HR software programs	21
3.1.1 Companies.....	21
3.1.2 Method.....	23
3.2 Field research	24
3.2.1 Interviews	24
3.2.2 Interviewees	25
3.2.3 Interview framework.....	27
3.2.4 Validity	27
4 Findings.....	29
4.1 General.....	29
4.1.1 Comparative analysis.....	29
4.1.2 Field research	30
4.2 Selective recruitment and selection	31
4.2.1 Comparative analysis.....	31
4.2.2 Field research	31
4.3 Compensation and performance-related pay	32
4.3.1 Comparative analysis.....	32
4.3.2 Field research	33
4.4 Appraisal and performance management	34
4.4.1 Comparative analysis.....	35
4.4.2 Field research	35
4.5 Training and development.....	36

4.5.1	Comparative analysis	36
4.5.2	Field research	36
4.6	Employee involvement	37
4.6.1	Comparative analysis	37
4.6.2	Field research	38
5	Discussion	39
5.1	General	40
5.2	Selective recruitment and selection	40
5.3	Compensation and performance-related pay	41
5.4	Appraisal and performance management	42
5.5	Training and development.....	43
5.6	Employee involvement	44
6	Conclusion	45
	Bibliography.....	47
7	Appendix.....	50
7.1	Appendix 1: Introduction e-HRM packages	50
7.2	Appendix 2: HR software packages	53
7.3	Appendix 3: Results of analysis	55
7.4	Appendix 4: Comparative analysis list	62
7.5	Appendix 5: Interview framework	67

1 Introduction

Decades ago the HR department, if there was any, was filled with paperwork and the additional folders where all the paperwork was organized. But with the advent of information systems the amount of paperwork decreased, the administrative overheads reduced, the HR staff could focus on more strategic activities, the processing time of activities was reduced to hours and so forth (Hawking, Stein, & Foster, 2004). Over the years, the information systems became more intelligent and more complex; they do not only provide straightforward information about the human resources of the company, but also support management in strategic decision-making (Hawking, Stein, & Foster, 2004). Nowadays the use of these information systems is inevitable and thus it is important to digitalize a part of the regular HRM functions if this has not been done yet.

1.1 Human Resource Information Systems

Several terms and definitions exist to describe the software that supports the HR department, such as human resource information systems (HRIS), e-HRM, virtual HRM, human resource management systems (HRMS), HR intranet and web-based HR. There are slight differences between these various terms for a human resource software program. Most of all, there is a difference between HRIS and e-HRM. An HRIS focuses mainly on the HR staff as users of the program, which makes this type of information system fundamentally different from an e-HRM system, which focuses on both the HR (or management) staff and the employees of the company. This requires active participation from both parties, something that is not expected from an HRIS (Ruël, Bondarouk, & Looise, 2004).

An e-HRM system can be seen as a form of employee participation: the e-HRM system can help the employees to engage in business activities. Employee participation has been discussed since the early 1930s and developed over the decades, giving the employees more and more participation. In the early days the focus was merely on communication with the employees, but more recently employee participation is also associated with participation in decision making, employee autonomy, teamwork, employee survey research and employee/supervisor meetings (Boselie, 2010, pp. 234-235). For this reason, e-HRM seems to embody a more modern view on HRM than an HRIS would do, for example due to the presence of an intranet where the employees *and* management could log into, even when they are at home. These types of functionalities of e-HRM yield a greater ease of use than a regular HRIS would. And whereas HRM historically used to be merely about creating a competitive advantage, the employees and the degree of their contentment is getting more attention over the years. Taking this into account, an HRIS seems more outdated than an e-HRM system, a system where the possibilities are getting endless nowadays with the emergence of smartphones and, more recently, tablets.

Before continuing with this report, first a general definition will be presented in order to create a clear vision of what e-HRM exactly is (Bondarouk & Ruël, 2009):

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

The main goal of the e-HRM is already enclosed in this definition: to create value within and across the organization. Next to the creation of value, it is also used to improve decision-making and support competitiveness amongst organizations (Haines & Petit, 1997).

1.2 Problem statement

Companies with small amounts of employees (e.g. less than thirty employees) are less likely to have an HR department or even an HR manager. A complete e-HRM solution can provide these companies with human resource management, without actually hiring an HR manager. The employer does not have to be bothered with HR issues again, since the program can handle all these issues. However, these smaller companies are relatively more reluctant in adopting e-HRM than larger companies, especially if they employ a higher proportion of unskilled workers (Bacon & Hoque, 2005).

This assignment is done for Infogroen, a company that distributes a software package (GroenVision) among gardeners, tree nurseries, greening companies, and sheltered workshops (aimed at greening/gardening). Currently, Infogroen is noticing that some of their clients are asking for HRM possibilities in the GroenVision software. Most of the companies using the software from Infogroen are small companies, who merely focus on their core business and not on HRM for instance. The advent of an HR solution could give these companies the opportunity to focus more on HRM without hiring an HR manager. Infogroen therefore would like to research the possibilities to evolve these features into the program. Although a sufficient amount of e-HRM solutions already exist, Infogroen's preference goes out to a built-in HR module in their own software. Because there is an absence of HR knowledge at Infogroen, the company reached out for someone who could research the possibilities to build an HR module in their GroenVision software.

1.2.1 Goal

The goal of this research is to explore the features and functionalities of e-HRM and how these can be integrated in the existing GroenVision software, while taking into account the different users of the software.

1.2.2 Research question

The goal of this research is reflected in the research question, which can be found below. The research question is then divided into several sub questions in order to further structure the report and to develop an as complete answer as possible to the research question.

RQ: What are the essential HR components to be embedded in the existing software of Infogroen?

1.2.3 Sub questions

Earlier on, the scope of the program was already defined and it was decided that an e-HRM scope fits best within this research and the recent emergence of smartphones and tablets and the thereby corresponding view of working mobile. The next step is to distinguish what the main features of human resource management are. The main features can be found in HR best practices, which are assumed to be just as important in an HR program as in 'real-life'. Next to that, the products of other suppliers of HR software are looked into. Successful HR programs are most likely to have some components that make them that successful and there are probably also some features than can be enhanced. The e-HRM components of these programs can be integrated with the HR best practices, evolving in the first sub question:

SQ1: What are the HR best practices and how are these embedded in existing human resource management software?

And finally a number of clients of Infogroen are interviewed in order to find out what their preferences are in an HR program. After all, some clients already mentioned to Infogroen that they are looking for HR software. The answers of these stakeholders can be valuable in order to check the established e-HRM components or to add some new components. The features, based on both theory and other programs, will be presented to customers to find out which features are valuable or useless. Therefore, the second and last sub question is:

SQ2: What is the relative importance of HR software, as perceived by the different stakeholders (employers and employees)?

1.3 Structure of the report

The first step in this research is the establishment of a theoretic framework (Chapter 2 – Theoretic Framework), consisting of theory mainly on HR best practices and their relevance in e-HRM systems. A first draft of the list of e-HRM components can be found in this chapter. This will form the basis of the research. In the next chapters, actual HR programs are researched to find out which components are widely used in these programs (Chapter 3 – Methodology and Chapter 4 – Findings). The earlier defined list of components, based on the theory, will be improved on the basis of the information provided by HR programs. Chapter 3 and 4 also cover the field research of the report. This research is partly based on the findings of the comparative analysis, earlier on in Chapter 3. Chapter 4 presents the findings of both the comparative analysis and the field research, whereas Chapter 5 involves the discussion of the findings and Chapter 6 covers the conclusion of the research.

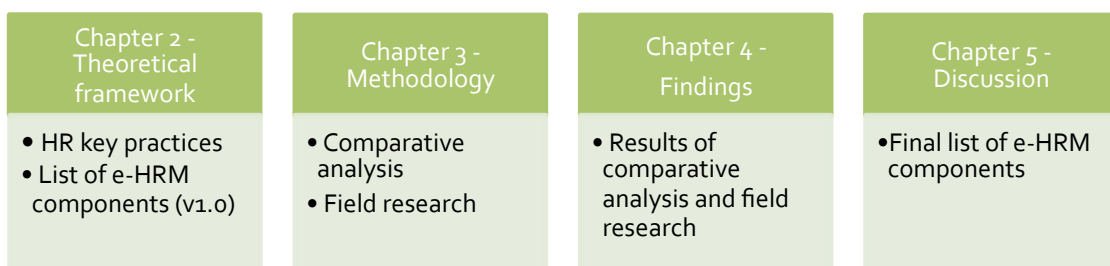


Figure 1: Structure of the report (Chapters 2-4)

2 Theoretical framework

Due to the rise of human resource information systems (HRIS) the work tasks of the employees in the HR department has changed, since most information is now more easily accessible than without a human resource system. And for every employee (and manager) in the organization an HRIS means more freedom: there is no need anymore for the HR department to interfere in every task, so the employees can take care of more HR questions themselves and the HR employees can now put the focus more on the core businesses of HR. For example, the exact details of a collective labour agreement (CLA) can be published on the intranet of the company, abating the need of the HR department (Schouwstra, 2008).

This chapter specifically focuses on what the HR best practices and the online possibilities of HR in general are and how these are adjusted to the stakeholders.

2.1 Best practices in human resources

The features that are going to be embedded in Infogroen's software will be based upon a bundle of HR key practices. These key practices can be seen as some of the basic and essential elements of human resources. These elements can be adjusted and specified for Infogroen's situation, which is covered in this paragraph.

Different authors have tried to define what the most important key practices are and other authors have tried to evaluate the usefulness and validity of these practices (Pfeffer, 1999; Boselie, 2010). Pfeffer (1999) for example defined the key practices of HR as follows: 1) employment security, 2) selective hiring, 3) team working, 4) performance-related pay, 5) training and development, 6) egalitarianism and 7) information sharing (Pfeffer J. , 1999). Next to that, Boselie (2010) also defined a set of key practices, which he calls 'high performance work practices (HPWP) that almost cover the same topics as Pfeffer (1999) but in different words: 1) selective recruitment and selection, 2) performance management, 3) compensation, 4) training and development and 5) employee participation (Boselie, 2010, pp. 134-135).

The key practices as defined by Boselie (2010) are more suitable for this research than Pfeffer's key practices. Pfeffer for example stated that employment security and egalitarianism should be seen as an HR key practice, but these are difficult to integrate in an e-HRM program. On the other hand however, the key practices of Boselie (2010) are less difficult to operationalize in the light of this research. For that reason, these key practices will be used from now on. A general elaboration of the key practices can be found below and after that, the practices will be further customized before coming up with a list of features.

1. Recruitment and selection

Recruitment can be defined as 'the different activities of attracting applicants to an organization' (Bloisi, 2007), whereas selection consists of 'sifting through the pool of applicants and making decisions about their appropriateness' (Bloisi, 2007).

This key practice concerns every part of the recruitment and selection process. Starting with advertising the vacancy, followed by receiving the motivation letters and the curriculum vitae of the potential employees, interviewing the candidates and possibly subjecting the candidates to some form of a test. Eventually, the best candidates will be selected and, in our case, will be added in the system.

2. Appraisal and performance management

Appraisal and performance management is used in order to '*inform, guide, monitor and evaluate employees to achieve organizational goals*' (Boselie, 2010, p. 171). Employees are informed and guided about the company's strategy, goals and key performance indicators (KPIs) for example and the monitoring and evaluating of employees is done through periodic reviews or assessments on the employee's performances.

3. Compensation and performance-related pay (PRP)

Another administrative task that the application can take over is the administration of salaries and other forms of appraisal. Both compensation and PRP can contribute to the motivation of employees, for example by paying for performance; an employee feels appreciated if he gets paid for outstanding work, which in turn can reduce employee retention.

Another form of compensation is non-financial compensation. Non-financial compensation is thought to have a positive affect on employees, stimulating the motivation of employees. Companies can readily make use of these compensations, but most companies primarily focus on financial compensations (Boselie, 2010, p. 193). Because the GreenVision software is also distributed amongst smaller companies and especially these companies are probably eager to use non-financial compensations (because of financial limitations), the program should also focus on these forms of compensation.

4. Training and development

Although most employees will probably be skilled in some way, learning on the job is in some cases just as important as an education. It is also possible that some extra training is necessary. An extra benefit of training and development for the HR department are the benefits associated with it: the employees usually experience this, albeit implicitly, as an appreciation from the management team, making them more keen on staying at the company. Another form of development is the sharing of knowledge and experiences of skilled workers so that other employees can improve their skills, knowledge and abilities (Boselie, 2010, pp. 212-217).

5. Employee involvement

Employee involvement is most visible for employees if they can participate in decisions or if they are asked for their opinion in certain issues within the company. Opinions can be asked through polls on the company's intranet, face-to-face or through a works council.

Especially in the AMO theory (Abilities, Motivation and Opportunity to participate) the importance of employee involvement is stressed out. The Opportunity to participate involves the following topics (Boselie, 2010):

- Employee participation in decision making;
- Employee autonomy;
- Teamwork;
- Employee survey research;
- Regular employee/supervisor meetings.

Before continuing on it is important to differentiate between the different users of the e-HR system. The management team or the managing director is an obvious user of the system, but in e-HRM the employee is also valued as an important user. Therefore, the components are divided into the requirements for the employer and the employee.

2.2 Stakeholders

Different stakeholders can be assigned for this research. The most obvious stakeholder is the company itself, although the company will most likely not be a user of the system. Stakeholders that will use the program are the clients of Infogroen, or more specific, the owners of the companies that are currently using the GroenVision software. And because of the interactive scope of e-HRM, employees at those companies will use the program as well. For the development of the HR components Infogroen will not be as relevant as a stakeholders as the employers and the employees are in their client's companies. Therefore, this paragraph researches the possibilities for both the employers/managers and the employees who will use the program and what their different needs are in this.

2.2.1 Manager

The manager or the employer will most likely use the HR module for strategic decision-making and creating value within the organization. The earlier defined HR best practices form the basis of the development of the e-HRM components. The possible components are discussed per best practice.

1. Selective recruitment and selection

The application could help the recruitment and selection process by (automatically) generating overviews of vacant jobs. For example, when an employee quits or gets fired, he/she is erased from the system or you can indicate the contract is terminated. If wished, the job can become vacant immediately and every person in the management team can see this vacancy. Since competency profiles can make it easier to attract new personnel it is possible to add a competency profile to each job/job description. This makes it easier to add a job description/competency profile when the vacancy is published.

When there is a possibility to apply online to a job, the program needs to automatically import all the online application letters and if the company still receives letters, these can be scanned and imported into to program as well to create a clear overview of the application letters. After that, job interviews can also be scheduled through the program

and the results of those interviews can be added to the program as well. In this case, the job vacancy, applicants and their results are all digitally available.

Together with hiring a new employee, the program needs to be updated. The employee gets registered together with his/her function, with an automatic option to delete the vacancy for this job or to keep it. Next to that, basic information has to be filled in, such as their full names, bank account number, social security number, and a copy of the signed contract. The new employee should also get an account to use the computers, get access to the building and to use the program and so forth. This can be integrated into the module as well, or reminders can be set that these forms of access still need to be requested.

2. Compensation and performance-related pay (PRP)

PRP could for example be distributed on the basis of overtime, tacitly assuming that working overtime has a positive effect on the company and shows dedication from the employee. The overtime hours can be registered by the application, creating the opportunity to use the PRP in a simple manner. Compensation can also be registered via the application and be distributed around the company's intranet, so that the employees can access at any time information about when they receive their salary and, when it is received, can request their pay slip with the details of their salary. The amount of worked hours should also be visible: for the employer or manager this means that the payment of salary can be based on the information available in the program, and for the employee this means that he/she can check whether the stated amount of worked hours is correct.

Next to financial compensation, companies can also use non-financial compensation, such as organizing social events to celebrate success of a team/department/company, giving extra days off or publishing excellent achievements online (Boselie, 2010, p. 193). This could also be done through the program by using the calendar to organize the social events, putting in an option to add extra days off for an employee in case of an achievement and to use the module to publish information on excellent achievements.

3. Appraisal and performance management

This key practice concerns the monitoring and evaluation of the employees, which is mostly done through employee/supervisor meetings. The program should make it easy for the employer to schedule these kinds of appointments with the employee, taking into account both the calendar of the employer and to employee to calculate a date. Afterwards, the employer should publish some of the key outcomes on the employee's personal page in the program, which is useful in case an employee needs to improve some skills but it can also act as a motivation if positive characteristics or attitudes are published.

Another part of appraisal and performance management is the informing and guiding of employees. The welcoming page in the program for example could be used to inform the employees on the company's strategy, goals and latest achievements in order to reach these set goals.

4. Training and development

Employees should be able to enrol online or via the application for courses that the company offers. The enrolment process gets simplified, since paper forms no longer need to be filled out, and the management gains insight in who is participating in which course and who has already participated in a course. Whenever an employee completes a course or a training program, this new information has to be entered into the program so that every member of the management staff can see the competencies of each of his/her employees.

5. Employee involvement

A simple method to make the employee feel more appreciated and more involved in the company is through the use of teams (Boselie, 2010). However, it may not always be clear for the manager in which team his/her employees are situated and if this is the optimal formation of a team. Therefore, the program should make it visible how many teams there are in the company, which employees are which team, and what their capabilities are.

In the case the company distributes shares to their employees, current stock prices and current values of their shares can be displayed. Most companies in the greening sector however, are smaller family business and the likeliness of these companies distributing shares amongst their employees is very low. Other forms of employee involvement include the involvement in decision-making processes. Surveys or polls can be held on the intranet asking for the employees' opinion or discussions can be started about a certain topic in which the management staff is interested.

Table 1 (below) summarizes the information stated in Paragraph 2.2.1.

HRM best practice	e-HRM possibilities for managers
Selective recruitment and selection	<ul style="list-style-type: none"> • Overview job vacancies • Competency profiles • Automatically import online application letters • Schedule job interviews • Reports on results of the job interviews • Automatic registration of new employees • Contract information of all employees
Compensation and performance-related pay (PRP)	<ul style="list-style-type: none"> • Registration of hours • Registration of overtime hours • Online pay slip • Receiving dates for salary • Non-financial compensation possibilities
Appraisal and performance management	<ul style="list-style-type: none"> • Regulate employee/supervisor meetings for periodic review • Online results • Visibly publish company's strategy, goals and KPIs
Training and development	<ul style="list-style-type: none"> • Enrolment in courses • Overview of completed courses for relevant employees • Knowledge and skills sharing

(Continues on next page)

Employee involvement	<ul style="list-style-type: none"> • Surveys/polls online (intranet) • Employee/supervisor meetings for improvements within the company • (Overview of teams: members + competencies)
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Table 1: Best HR practices and the e-HRM possibilities for managers

2.2.2 Employee

The perspective of the employee will not be discussed with the use of the HR best practices, but a different scope is chosen here in order to optimize the ease of use for the employer as well as the employee. The components are later on translated into the HR best practices. In paragraph 2.3 these two perspectives will be put together into one comprehensive perspective.

A relatively new trend in e-HRM is the use of employee self-service (ESS) systems, where the employees can register the information themselves in the program. This helps avoiding errors made otherwise by the personnel on the HR department and it also can give employees a degree of freedom because interference with the HR department is not necessarily needed (Schouwstra, 2008). The ESS-system can be put to use in four different categories (Schouwstra, 2008):

1. Informing

The HR department usually also answers questions about the organization and the working conditions in the company. If all this information is enclosed in a program, the employee can look up the answers himself without the interference of the HR department (Schouwstra, 2008). The employees can look up this information easily and at all times, so that this part of the administrative task of the HR department becomes superfluous.

Important changes in the company or any other form of news should be displayed in the program or through an intranet page. Every company probably already used a news page that is only accessible for employees, so the integration of this in the program should be fairly easy.

2. Streamlining

Possible streamline-applications could be for example an electronic roster planning, filling in declarations or enrolment in courses, all done online or in the program by the employee (Schouwstra, 2008). If an employee puts in a request for a vacation or some days off, this could be done through the application. The manager can decline or accept this request. If this request is accepted, the program should display this information automatically (for example, it should be visible if the request is accepted, the date(s) at which the employee is absent and returns, and when the employee is on a day off or on vacation this should also be visible), so the manager knows at all times which employees are available.

3. Change

The change processes in which the company is involved usually concern the opportunities for education within the company, ranging from general courses to more specific options for management development (Schouwstra, 2008). The employees can enrol themselves in

the appropriate courses or remind them in case of annual courses for example. Employees should only be able to enrol in courses that are suited for them. Courses that cannot be taken by the employee should not be displayed.

Period reviews are used to evaluate an employee's performances on the basis of set criteria. The evaluation criteria should be accessible for every employee on their own portal within the program/module. Also, the program can arrange the employee/supervisor meetings and the results can be published on the employee's portal afterwards.

4. Collaboration

Because several parties are working together within the management of human resources, the advent of an e-HRM application can support this by using applications such as an online forum for discussions, videoconferencing or a platform for sharing knowledge (Schouwstra, 2008). Furthermore, all relevant documents and protocols should be readily available for the employees and the intranet page can be used to share knowledge. Knowledge sharing could be done through a forum for example, where discussions are possible and where every employee can answer questions from other employees. As stated before, the management staff can also use this forum or discussion board by asking the opinion of the employees on current issues in the company. The employees' opinions can also be revealed through the use of surveys/polls.

These four categories will form the basis of the ESS in the e-HRM application. It is expected for the employee that he/she will use the e-HRM application extensively, in order to benefit completely from the utility of the program.

ESS category	e-HRM possibilities
Informing	<ul style="list-style-type: none"> Working conditions (CLA – Collective Labour Agreement) Contract information News (general, strategy-specific, changes in the company) Frequently Asked Questions (FAQ)
Streamlining	<ul style="list-style-type: none"> Registration of hours Registration of overtime hours Online pay slip Electronic roster planning Receiving dates salary Declaration forms Special requests for vacation/day off
Change	<ul style="list-style-type: none"> Course enrolment Evaluation criteria Employee/supervisor meetings for periodic review Employee/supervisor meetings for improvements within the company <p><i>(Continues on next page)</i></p>

Collaboration	<ul style="list-style-type: none"> • Surveys/polls online • Forum (for discussions, surveys etc.) • Platform for knowledge and skills sharing • Online access to documents and protocols
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Table 2: ESS categories and their e-HRM possibilities

Because the HR best practices are leading in this research, the e-HRM possibilities for employees will now be split up into these best practices instead of per ESS category. Because some of the e-HRM possibilities for employees are the same as for managers, these are easily converted. These are contract information, registration of hours, registration of overtime hours, online pay slip, receiving dates salary, regulate employee/supervisor meetings for periodic review, online results periodic review, course enrolment, platform for knowledge and skills sharing, survey/polls online, and employee/supervisor meetings for company improvements.

The other components are not yet specified for each HR best practice. These components are stated below, including an elaboration in which category they were put and why. While integrating the applications for employees into the HR best practices it becomes clear that not every application can be integrated into a best practice. Therefore, a new topic is defined although this should not be seen as a best practice, namely 'General'. This topic covers the general features that should be visible when the program is started, for example company news. For the manager this means that relevant information should be published and for the employee this means that they are always aware of what is going on in the company. Next to that, from this introduction screen it should be easy to navigate to certain topics using shortcuts. These shortcuts can consist of topics determined by the company or the employee can create its own shortcuts for the topics that he/she uses the most.

Working conditions (CLA)

The CLA concerns contract information, which is already specified under 'Selective recruitment and selection', and therefore this is put into the same category.

News (general, strategy-specific, changes in the company)

This does not concern an HR best practice and is therefore listed under 'General'.

Frequently Asked Questions (FAQ)

This does not concern an HR best practice and is therefore listed under 'General'.

Electronic roster planning

This component can be put into two categories: 'General', because it can be viewed as a general function of the program, or in 'Compensation and performance-related pay' in case salary is paid on the basis of the electronic roster planning. However, in case the client chooses not to use electronic roster planning it does not concern a 'Compensation' function anymore. Therefore, this component is listed under 'General' for now.

Declaration forms

Again, this is component that does not concern any HR best practice and is therefore listed under 'General'.

Special requests for vacation days/day off

A vacation and days off concern mostly the HR best practice of 'Compensation and performance-related pay' due to its influence on compensation.

Evaluation criteria

Because the evaluation criteria concern the criteria used for periodic reviews, this component is listed under 'Appraisal and performance management'.

Forum

This component is listed under the ESS category 'Collaboration', which shows similarities with the HR best practice of 'Employee involvement'. The forum is meant to greaten the involvement of employees and is therefore listed under 'Employee involvement'.

Online access to documents and protocols

Again, this is a component that can concern two HR best practices. First of all, it can be a part of training and development of the employees if these documents and protocols are uploaded to broaden the knowledge of the employees. Or it could function as a way to inform the employees, in which case it would concern the involvement of employees in company issues. Because it is more likely this component is used to broaden the knowledge of the employees, it is listed under 'Training and development' for now.

The table below displays the e-HRM possibilities for employees split up into HR best practices.

HR best practice	e-HRM possibilities for employees
General	<ul style="list-style-type: none">• News (general, strategy-specific, changes in the company)• Frequently Asked Questions (FAQ)• Declaration forms
Selective recruitment and selection	<ul style="list-style-type: none">• Contract information• Collective Labour Agreement (CLA)
Compensation and performance-related pay	<ul style="list-style-type: none">• Registration of hours• Registration of overtime hours• Online pay slip• Receiving dates salary
Appraisal and performance management	<ul style="list-style-type: none">• Regulate employee/supervisor meetings for periodic review• Online results periodic review• Evaluation criteria
Training and development	<ul style="list-style-type: none">• Course enrolment• Platform for knowledge and skills sharing

(Continues on next page)

(Training and development)	<ul style="list-style-type: none"> • Online access to documents and protocols
Employee involvement	<ul style="list-style-type: none"> • Survey/polls online • Employee/supervisor meetings for improvements within the company • Forum

Table 3: Best HR practices and the e-HRM possibilities for employees

2.3 e-HRM components

After defining the two lists of e-HRM components for both the manager and the employee, these can now be put together into one comprehensive list. The earlier defined HR best practices form the basis of this list. This list functions as a basic list of e-HRM components that will be further elaborated in the next chapters.

Due to the size of the table, the list of e-HRM components can be found on the next page. Table 4 is a combination of Table 1 (p. 15-16) and Table 3 (p. 17-18).

HRM best practice	e-HRM for managers	e-HRM for employees
General	<ul style="list-style-type: none"> • Visibly publish company's strategy, goals and KPIs 	<ul style="list-style-type: none"> • News (general, strategy-specific, changes in the company) • Frequently Asked Questions (FAQ) • Electronic roster planning • Declaration forms
Selective recruitment and selection	<ul style="list-style-type: none"> • Overview job vacancies • Competency profiles • Automatically import online application letters • Schedule job interviews • Reports on results of the job interviews • Automatic registration of new employees • Contract information of all employees 	<ul style="list-style-type: none"> • Collective Labour Agreement (CLA) • Contract information
Compensation and performance-related pay (PRP)	<ul style="list-style-type: none"> • Registration of hours • Registration of overtime hours • Online pay slip • Receiving dates salary • Non-financial compensation possibilities 	<ul style="list-style-type: none"> • Registration of hours • Registration of overtime hours • Online pay slip • Receiving dates salary • Specials requests vacation days/day off
Appraisal and performance management	<ul style="list-style-type: none"> • Regulate employee/supervisor meetings for periodic review • Online results periodic review • Visibly publish company's strategy, goals and KPIs 	<ul style="list-style-type: none"> • Employee/supervisor meetings for periodic review • Online results periodic review • Evaluation criteria
Training and development	<ul style="list-style-type: none"> • Course enrolment • Overview of completed courses for relevant employees • Platform for knowledge and skills sharing 	<ul style="list-style-type: none"> • Course enrolment • Platform for knowledge and skills sharing • Online access to documents and protocols
Employee involvement	<ul style="list-style-type: none"> • Surveys/polls online (intranet) • Employee/supervisor meetings for improvements within the company • (Overview of teams: members + competencies) 	<ul style="list-style-type: none"> • Surveys/polls online (intranet) • Employee/supervisor meetings for improvements within the company • Forum (for discussions, surveys etc.) • (Platform for knowledge and skills sharing)

Table 4: Basic e-HRM components for HR best practices

2.4 Framework

This chapter researched and described the theory concerning HR best practices, management self-service and employee self-service and how this can be used for defining the different e-HRM components. The relationships of these theories are displayed below. This framework functions as a guideline throughout the report.

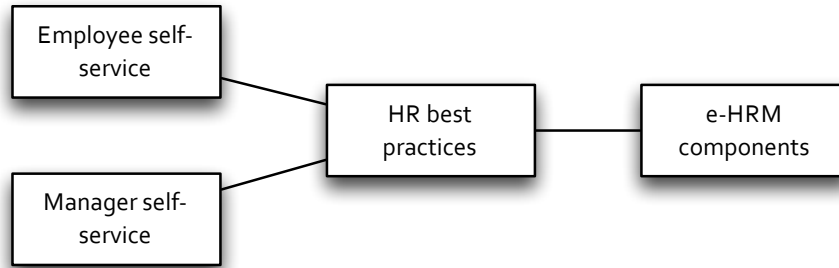


Figure 1: Framework report

Both the manager and the employee are discussed as individual entities throughout this report. Different e-HRM components are derived from the views of employee self-service and management self-service, after which they are translated into HR best practices and put into one table consisting of e-HRM components. A first draft of this table has already been made on p. 19 and the final version of the e-HRM components list can be found in Chapter 5 (p. 39).

3 Methodology

This chapter serves to address both the comparative analysis and the field research. Different HR programs were researched in the comparative analysis to find out which e-HRM components are integrated in these programs and how this corresponds with the earlier defined list of e-HRM components. The comparison of the e-HRM components in the existing HR programs functioned as a way of refining the earlier defined list of components. After this list was refined, field research was done through interviewing some of the stakeholders in order to refine the list of components for the last time. The definitive list of e-HRM components can be found in Chapter 5 (Discussion) on p. 39.

3.1 Comparative analysis of HR software programs

Existing HR programs were researched to find out which components and features are integrated in these programs that are or are not adapted in the current list of e-HRM components. In the end, some components may need to be deleted whereas other components need to be added to the list in order to create an as complete list as possible. The first step of this analysis was selecting to companies that were going to be compared, followed by researching which HR components they used in their software. The final step was to compare these components with the earlier defined e-HRM components and to establish a new, refined list of e-HRM components.

3.1.1 Companies

The comparative analysis started with finding multiple HR programs, preferably programs that addressed e-HRM. An enormous amount of companies that deliver HR programs exist, each with their own packages, which can be adapted to your own personal preferences. It is, however, impossible to research every available HR solutions. Companies were therefore selected on the basis of popularity, relevance, e-HRM possibilities and if their solutions were cloud-based. Some programs were merely selected on their popularity and some merely on the presence of a cloud-based solution. Companies that were selected to be compared, were:

- AFAS
- ADP
- CTB Personele Systemen (Cobra)
- eMerus
- Natural HR
- NorthGate Arinso
- People Inc.
- Raet
- rexx Systems
- TOPdesk
- Tribe HR
- Visma

Raet, AFAS and ADP are in the top four of most used vendors for HR cloud solutions (Hulsman, 2012). CTB is also named in the list of most used vendors for HR cloud solutions.

eMerus was selected mainly on relevance instead of popularity. Their cloud-based software matched with the view on e-HRM in this report and the features of their application seemed relevant for Infogroen and Infogroen's stakeholders. Natural HR was also selected on relevance and the possibility to test the application due to their free trial. Although Natural HR is not very active in the Dutch market, it does deliver software to 2,708 companies with a total of approximately 565,000 employees (Natural HR, N.D.). NorthGate Arinso (NGA) is foreign-based company, but is also active in the Netherlands. Their popularity is illustrated by their client-base, which consists of companies like Sodexo (catering) and Airbus (NorthGate Arinso, N.D.). People Inc. is a big player in the Dutch market for HR solutions, distributing their software among 4,500 organizations (People Inc., N.D.). rexx Systems is an international player on the HR solutions market, but is also active in the Netherlands. Their popularity is illustrated by their clients, like Starbucks (coffee), Erdinger (beer), Europcar (car rental) and Zurich Airport (rexx Systems, N.D.). TribeHR was selected because it offered a completely cloud-based HR solution. Their application is not merely aimed at larger companies but it is also useful for smaller companies. This matched the possible users of the HR module. The two other companies on this list were a suggestion from the Infogroen (TOPdesk and Visma). In Appendix 1 (p. 50), a general description of the companies can be found.

Most of the companies that were researched also offered packages on non-HR related issues, whereas some companies only focused at delivering HR software and some companies aimed at delivering all kinds of IT solutions. The packages for this research were chosen on the basis of relevance. For example, AFAS is a company that delivers many software packages, whereas only two are aimed at HR (Payroll and HRM). And although the main focus is on HR packages, it is possible to integrate some salary components in the software. For this reason, payroll packages were also researched if these were available. Though it must be noted that the idea of the HR module is not to take over the payroll functions. Most of the clients of Infogroen have probably outsourced their pay rolling administration.

Information about the HR/Payroll packages from the companies was gathered from their websites. Most of them offered a brochure, some offered demos or videos and a few even offered free access to their program. There were great differences in the quality of information that the companies offered and therefore different quality types of information were established:

- *Good*: lot of useful information, such as demos, screenshots and extensive information in their brochures.
- *Medium*: limited information, but the quality of the information is fine.
- *Limited*: limited information, not very useful.
- *Very limited*: almost no information; mostly standardized slogans.

Table 5 displays an overview of the selected companies, which packages they offered (if any), how they provided the information and what the quality of this information was.

Company	Package	Information Type	Quality
AFAS	HRM, Payroll	Brochure	Good
ADP	Perman PM	Brochure	Limited
CTB Personele Systemen	Cobra Personeel (HRM)	Brochure + online demo	Very limited
eMerus	HR2day	Brochure + online demo (1 hour)	Good
Natural HR		Free trial	Good
NorthGate Arinso	HR Outsourcing, HR Consulting	Brochure	Limited
People Inc.	HRM, Time, ESS, Salary	Brochure + online demo videos	Good
Raet	e-HRM, Payroll	Info + online demo video	Medium
rexx Systems		Online screenshots	Medium
TOPdesk (IG)		Online info	Very limited
Tribe HR		Free trial + online info	Good
Visma (IG)	Talent & Salaris	Brochure	Medium

Table 5: Overview of the companies, their packages and their information quality

Note: a more elaborated list of companies and the information they supplied can be found in Appendix 2 (p. 53).

If there was only limited or very limited information available about the HR software, the choice was made not to compare these packages to the earlier defined e-HRM components (Table 4, p. 19). It was expected that the limited amount of information would not provide any valuable insights in e-HRM components. This means that from the twelve companies that were selected earlier, only eight (AFAS, eMerus, Natural HR, Raet, rexx Systems, TribeHR, People Inc. and Visma) were actually taken into account. First, the companies that scored a 'Good' were compared and from these comparisons the most information was gathered. Secondly, the remaining companies that scored a 'Medium' were compared.

No distinction of the different packages was made in the comparison; if a company offered more than one (relevant) HR package, information from all of these packages was gathered and regarded as one. In other words, the packages are not discussed separately. This choice was made because this research also focuses on one package instead of multiple.

3.1.2 Method

After sorting out the components in each program, an analysis was made to compare these software programs to the list of e-HRM components in order to find out which components were missing. Because the companies used several terms for the same components, such as time-off request, leave request and day off request, it was necessary to first standardize all these terms in order to make a reliable comparison. This was done by selecting the clearest terms. After the terms were standardized, it was possible to count how many companies

used certain components. Before continuing, an important note has to be made. Because the information was gathered mostly from brochures, it is not likely that every component in the researched software programs could be written down. This lack of information influences the validity of the research, but it was inevitable since not every program could actually be tested in a real setting due to financial restrictions and time restrictions.

The functionalities of the packages of the above named companies were put into a table in order to compare the components. The table consists of the HR best practices, the earlier defined e-HRM components, and the e-HRM components of the researched packages. It turned out that most of the components were already thought of. Some components kept returning at practically every package, such as online pay slips, time-off/leave requests and any other form of time management, KPIs, declaration forms, any form of absence registration, course management in any form and so forth. Although this could be expected, it also functioned as a confirmation of the defined components. However, some of the defined components did not exist at any of the packages and little attention was paid to the best practices 'Recruitment and Selection' and 'Employee involvement'. Most of the components in these practices were not mentioned in any of the researched packages. For example, non-financial compensations were never mentioned. TribeHR was the only company that offered some form of non-financial compensation, albeit small, namely to tell your employee that he or she did a good job. The field research was used to find out of these less popular components could have an added value for the HR module.

For a more detailed conclusion on the comparative analysis, see Chapter 4 (Findings) and Chapter 5 (Discussion) on p. 29 and further.

3.2 Field research

During the comparative analysis, it became clear that a lot of components were not as popular as expected. Field research was done in the form of interviews to check these less popular components: could they have an added value for the HR module or are these components less popular for a reason? The interviewees were asked for their opinions on several components in order to explore what the clients find important in the e-HRM module that they were going to use and what they need.

3.2.1 Interviews

The field research was done through the use of face-to-face semi-structured in-depth interviews. An interview framework with predetermined topics was already defined, but there was also room for improvisation to ask questions that were not earlier defined. This method is most-used in qualitative research in information systems (Meyers & Newman, 2007). The stakeholders that were interviewed are clients of Infogroen. Infogroen approached the clients by e-mail, describing the goal of the interviews. Participation was voluntary. Four companies stated they were willing to participate in the interviews. The small number of companies that were willing to take part in the interviews also influenced the choice of semi-structured in-depth interviews, since these types of interviews can gather more information than a standardized questionnaire would do for example. However, consensus theory (Romney, Weller & Batchelder, 1986) argues that as long as the

participants have a certain degree of expertise within a certain context in which this leads to a consensus, a small sample may be enough to gather the needed information.

Because of the small amount of interviews, it was even more important to eliminate any possible problems. A number of problems and pitfalls can be defined (Meyers & Newman, 2007), shown below, and what was done to minimize the likelihood of occurrence of these problems.

- *Artificiality of the interview* (Meyers & Newman, 2007): inevitable, because the interviewees are strangers.
- *Lack of trust* (Meyers & Newman, 2007): partially inevitable, but the interviewees were told that their answers and opinions would only be used in this research for Infogroen. Next to that, they were ensured that there were no right or wrong answers and that the goal of the interviews was to find out the opinions of the possible users of the module.
- *Lack of time* (Meyers & Newman, 2007): the interviews were thought to take an hour. The interviewees were told it could take up to an hour and a half, so a lack of time could easily be avoided. However, if an interview took less than an hour and a half, the interviews were finished and not stretched to fill the time (saturation). This was done in order to avoid a less reliable set of data.
- *Constructing knowledge* (Fontana & Frey, 2000): the interviewee may construct knowledge during the interview. This cannot be avoided, but it is important to be aware of this.
- *Ambiguity of language* (Fontana & Frey, 2000): before the interviews started, the framework in which the interviews were conducted was explained. A minimal amount of technical terms were used in the interviews, because the interviewees most likely were not aware of the exact meanings of these terms. Before the interview started, the terms HR and e-HRM were explained to be sure the interviewee know what they are talking about.

3.2.2 Interviewees

Four companies agreed to do the interviews. In the table below, a list of companies that participated in the interviews can be found, as well as the names of the interviewees and the time that was needed for the interviews. After that, the visited companies are briefly introduced.

Company	Interviewee	Function	Date	Time
Jonkers Hoveniers BV (Venlo)	Peter Grubben	Project leader	May 1, 2013	45 minutes (1.15 pm – 2.00 pm)
GKB Realisatie (Barendrecht)	Maarten van Rietschoten	Head of administration	May 13, 2013	75 minutes (11.00 am – 12.15 pm)
Snoek Hoveniers	Peter Dijkstra	Controller	May 15, 2013	45 minutes (12.50 pm – 13.35 pm)
Copijn Realisatie BV (Utrecht)	Angela Vergouw	P&O Consultant	May 22, 2013	40 minutes (12.50 pm – 13.30 pm)

Table 6: List of interviewees

Jonkers Hoveniers BV, Venlo

Jonkers Hoveniers was founded in Venlo (Limburg) in 1948 and traditionally their core business focused on planting and maintaining gardens. However, in recent years they specialized in more segments, such as irrigation systems, swimming ponds, swimming pools, artificial grass lawns, tree anchoring, flower meadows, and roof gardens (Jonkers Hoveniers BV, N.D.). It is originally (and still is) a family business and the management team consists of Bart Jonkers and his wife Mariet Jonkers (Jonkers Hoveniers BV, N.D.). Currently, Jonkers Hoveniers employs about 30-35 employees, dependent on the season.

The contact person and the interviewee at Jonkers Hoveniers was Peter Grubben, he is one of the project leaders at the company. Mr. Grubben is specialized in the development of nature, swimming ponds and swimming pools. His involvement in HR and HR issues is minimal.

GKB Realisatie, Barendrecht

GKB Realisatie is also a family business, situated in Barendrecht (South Holland) and founded by two brothers in 1946. The company specializes in greening and civil engineering projects, such as hydrological projects and road constructions. At this point, the third generation is managing the company (GKB Realisatie BV, N.D.). GKB has about hundred employees of whom 30 employees are family. Next to that, they employ about forty employees from sheltered workshops.

The contact person and the interviewee at GKB Realisatie was Maarten van Rietschoten, who is the head of administration at GKB. Due to his administration work, he has some knowledge of HR and HR issues.

Snoek Hoveniers, Grou

Founded in 1979 in Grou (Friesland), Snoek Hoveniers has been a family business ever since. The greening company started as a sole proprietorship, but steadily grew to 50 employees (Snoek Hoveniers, N.D.). The company is specialized in almost every thinkable subject in greening, such as harvesting trees, green roofs, green playgrounds, park management, periodic maintenance, gardening advice, garden design and so forth (Snoek Hoveniers, N.D.).

The contact person at Snoek Hoveniers was Peter Dijkstra, a controller who recently started working at the gardening business. He has some knowledge of HR, albeit minimal.

Copijn Realisatie BV, Utrecht

In line with the three other visited companies, Copijn Realisatie started as a family business. In the early years Copijn was specialized in trees, but nowadays the company consists of three operating companies (Copijn Realisatie BV, N.D.): (1) Copijn Landscapers and Landscape Architects, (2) Tree Specialists and (3) Green Construction and Green Management. The operating company that was visited for this research was Green Construction and Green Management. They are responsible for the practical implementation of the client's wishes (Copijn Realisatie BV, N.D.). Copijn Realisatie employs about sixty employees (Copijn Realisatie BV, N.D.).

The contact person at Copijn Realisatie was Angela Vergouw. She is the P&O consultant of the company and regulates personnel matters. Out of all the interviewees, she had the most experience in the HR field. Next to that, she already mentioned her interest in an HR module to.

3.2.3 Interview framework

Instead of using a list of questions, an interview framework with predetermined topics was established, that functioned as a guideline during the interview. The framework consisted of six broad topics, reflecting the five HR best practices and a 'General' topic. These topics were further specified using the components from the e-HRM component list (Table 4, p. 19) and the information that was gathered from the comparative analysis, which can be found in Appendix 4 (p. 62 and further). All the components that were found during the comparative analysis are stated in this Appendix. Some of these were used by (almost) every company, whereas other components were less popular. Since there were more than 100 components and time was limited on the interviews, the choice was made not to ask questions about every component that was found, but on the components that were used by less than 50% of the packages.

Because the interviews concern a hypothetical situation in which the companies are using an e-HRM system, the interviewees were asked for their opinions about their likeliness of using certain element, what they thought would be useful or what they would like to see. Where possible, open questions were asked.

The framework for the interviews can be found in Appendix 5 (p. 68).

During the interviews, the topics that were discussed were marked in yellow and were rated: if the interviewee did not think it would be a useful component, the topic scored a minus (-). On the other hand, if the interviewee believed it would be a component that could add value to the company, the topic scored a plus (+). However, in some situations the interviewee thought a component would not add any value at the moment, but could in the future or sometimes the interviewee was not sure if a component would be useful. In those cases, the topic scored a plus/minus (-/+). In Chapter 4 (Findings) and Chapter 5 (Discussion), the findings of the interviews and the preferences per topic for each company are set out.

3.2.4 Validity

The low number of participating companies will affect the validity of this research and specifically the external validity. The results cannot be generalized to a great extent, but it is expected that the information that was gathered from the interviews is generalizable enough for this research. It is not expected that other companies can build their own e-HRM module on the basis of this research/these interviews. The target group of this study are greening companies, and in particular the users of the software program in which the e-HRM module is going to be embedded. The goal of this study is not to provide a general framework for building an e-HRM module, but to provide a framework to build an e-HRM module for the greening companies that are currently using GroenVision.

The internal validity researches the causality of variables, and since no causality was researched in this report, this type of validity is not relevant.

4 Findings

This chapter presents the findings of both the comparative analysis and the interviews. The results are presented per best practice. In each best practice the findings of the comparative analysis are discussed first, followed by the findings for the field research.

The sequence that is used in this chapter is the same as in the other chapters: general, selective recruitment and selection, compensation and performance-related pay, appraisal and performance management, training and development and lastly, employee involvement.

The findings are based on the tables that can be found in Appendix 3 and Appendix 4, p. 55 and further.

4.1 General

The general e-HRM components concern topics that were hard to put into a HR best practice category. Not every component in this category is specifically aimed at HR, but it can also form a basic component for a software program in general. To a large extent, the components for this topic were derived from the comparative analysis, since the results from the interviews contradict in some cases.

4.1.1 Comparative analysis

Out of the 27 defined components, only seven are used by more than 50% of the software packages. These are the possibility to alter your own details, to file declarations, to judge declaration forms, to use electronic roster planning (all 56%), to generate reports and analyses, to visibly publish the company's goals, strategy and KPIs (both 67%) and the possibility to use reminders and/or to do lists (89%). Other popular components (used by 44% of the companies) are calendar management, document management, the possibility to publish company news, to view personnel files and the use of a workflow/communication channel.

HRM best practice	e-HRM for managers	e-HRM for employees
General	<ul style="list-style-type: none"> • Visibly publish company's strategy, goals and KPIs • Judge declarations • Generate reports and analyses • Reminders/to do lists 	<ul style="list-style-type: none"> • News (general, strategy-specific, changes in the company) • File declaration forms • Alter your own details • Electronic roster planning • Reminders/to do lists

Table 7: Popular e-HRM components for 'General'

4.1.2 Field research

The opinions of the interviewees differed a lot on this topic. There were two components where the opinions could not be further away from each other: assignment of employees to managers and frequently asked questions. For example, GKB would like to see a section devoted to FAQ because a lot of employees come by during the day to ask simple questions. A FAQ option in the program would solve this problem. On the other hand, Snoek Hoveniers thinks it is better if the employees come by to ask questions because of the personal contact. Copijn Realisatie already uses intranet for these matters, so they did not see an added value in another FAQ-section in the program. The opinions on assignment of employees to managers differed also. Although the opposite could be expected, it turned out that the larger companies viewed this as a component they were less likely to use, whereas the smaller companies viewed this as a positive feature.

Another component where the interviewees were asked about was the possibility for employees to receive tasks from their managers. Although no one thought this would not be useful at all, they did not think they would use it either. They viewed it more as a possible option for in the future, when the company would most likely have more employees. Snoek Hoveniers emphasized that there needs to be some kind of interaction with the plan module (from GroenVision) in order to make the possibility to receive tasks from a manager successful.

The opinions on the photo book also differed, although three out of the four companies regarded this as positive. The differences in the opinions can most likely be appointed to the size of the companies: the smallest company (Jonkers Hoveniers, 30-35 employees) said their company is too small and this would not be useful, whereas Snoek Hoveniers (50 employees) and Copijn Realisatie (60 employees) thought it could be useful and even more in the future and GKB (100 employees) notices that new employees have a hard time remembering all their colleagues and thought it would be useful already.

General	-	-/+	+
Assignment of managers/employees	GKB Realisatie Copijn Realisatie		Jonkers Hoveniers Snoek Hoveniers
Automatically send e-mails			
Change rights/responsibilities of employees			
Contact directory			
FAQ	Snoek Hoveniers	Copijn Realisatie	GKB Realisatie
Organization management/structure			
Photo book	Jonkers Hoveniers		GKB Realisatie Snoek Hoveniers Copijn Realisatie
Receive tasks	Copijn Realisatie	GKB Realisatie Jonkers Hoveniers	
Upload templates			
Utilization review			

Table 8: Results of the interviews for 'General'

4.2 Selective recruitment and selection

The comparative analysis for this topic did not offer as many insights on this HR best practice as wished. However, the interviews offered more insights and the interviewees were mostly positive on this topic. Although the recruitment process is often outsourced to an agency, there were several components that were perceived as useful.

4.2.1 Comparative analysis

It turned out that the current HR software packages are not aimed at recruitment and selection in any way. Out of the 22 defined components, only one is used by more than 50% of the companies. This component concerns the automatic registration of new employees. Another component that is used at multiple companies (33%) is the registration of candidates. This can be useful during both the recruitment process and in a further stadium, if the job becomes vacant again or another job in the company becomes vacant and is suited for one of the earlier registered candidates.

Other useful components, that are not used in the other software packages or the companies failed to mention these components, are the contract information and the CLA, visible for the managers but also for the employee if this concerns his/her own contracts. Also the possibility to add recruitment costs, to apply online to jobs (only relevant for possible future employees), to review job applicants and to schedule job interviews can be useful.

HRM best practice	e-HRM for managers	e-HRM for employees
Selective recruitment and selection	<ul style="list-style-type: none"> • Automatic registration of new employees • Registration of candidates • CLA (automatically updated) • Contract information on all employees • Add recruitment costs • Review job applicants • Schedule job interviews 	<ul style="list-style-type: none"> • CLA (automatically updated) • Contract information on all employees • Apply online to jobs (<i>for future employees</i>)

Table 9: Popular e-HRM components for 'Selective recruitment and selection'

4.2.2 Field research

On most of the components, the interviewees agreed with each other. Some of the not so popular components are applying online to jobs and the possibility to upload CLA information for the employees. Applying online to jobs was again something that could be useful in the future, but not at the moment. The interviewees did not see any added value in automatically uploading the CLA and they were not sure how often they would use this.

On the other hand, the interviewees stated that they would like to view contract information on their employees themselves, including alerts when an employment ends, but also for the employee to see his/her own contracts. Jonkers Hoveniers however thought

this would be a step too far: all the contract information is now stored in Excel, only accessible for managers, and that was enough.

A platform where the managers can review the job applicants seemed to be useful for every company. The registration of these applicants for later use, when the job or a similar one becomes vacant again, seemed to be not as interesting as reviewing the applicants. However, it is inevitable to register the job applicants if the applicants are going to be reviewed in the program. GKB Realisatie thought it was too soon to register and review job applicants via the program, but they could imagine a future use.

Scheduling job interviews through the program seemed a superfluous component; Copijn Realisatie and GKB Realisatie both stated they use the calendar in Microsoft Outlook for scheduling appointments.

Selective recruitment and selection	-	-/+	+
Add recruitment costs			
Apply online to new jobs	GKB Realisatie Jonkers Hoveniers Copijn Realisatie		
CLA (automatically updated)	GKB Realisatie Snoek Hoveniers	Copijn Realisatie	
Competency profiles			
Contract information (for managers and employees)		Jonkers Hoveniers	GKB Realisatie Snoek Hoveniers Copijn Realisatie
Outsourcing			
Overview job vacancies	Snoek Hoveniers		
Post job openings	Snoek Hoveniers	GKB Realisatie	
Registration of job applicants		GKB Realisatie Snoek Hoveniers	Jonkers Hoveniers Copijn Realisatie
Review job applicants	GKB Realisatie		Jonkers Hoveniers Snoek Hoveniers Copijn Realisatie
Schedule job interviews	GKB Realisatie Copijn Realisatie		

Table 10: Results of the interviews on 'Selective recruitment and selection'

4.3 Compensation and performance-related pay

Again, this HR best practice is not greatly elaborated through the comparative analysis. An explanation for this could be that the registration of compensation and salary is most likely outsourced by smaller companies due to a lack of time and knowledge on this topic. The interviewees however were more positive on this topic. Although the interviewed companies all outsource their payroll, they do see added value in releasing some of this information to their employees via an HR module.

4.3.1 Comparative analysis

Eight of the ten companies stated they offer online pay slips to their employees. In addition to this, employees can request their annual statement. Most companies did not explicitly

state this possibility, but this will most likely be available. The online pay slip was the only component that was used at more than 50% of the companies. However, out of the companies that scored a 'Good' on information quality, 50% used the registration of hours and/or overtime hours.

A possible useful feature is the option to add timesheets for employees. However, this resembles the possibility of electronic roster planning, which was earlier discussed in paragraph 4.1 (p. 29). A useful feature that can be added in this is that employees can change their own timesheets. Also, adding salary costs for reports and analyses can be useful for companies but it is uncertain how useful this can be when the registration of salary is outsourced.

HRM best practice	e-HRM for managers	e-HRM for employees
Compensation and performance-related pay	<ul style="list-style-type: none"> • Online pay slip • Annual statement • Registration of (overtime) hours • Overview of salary costs per period, or • Salary reports • (Electronic roster planning) 	<ul style="list-style-type: none"> • Online pay slip • Annual statement • Registration of (overtime) hours • (Electronic roster planning + change timesheets)

Table 11: Popular e-HRM components for 'Compensation and performance-related pay'

4.3.2 Field research

The field research shows that especially the registration of hours and the possibility to view your own holidays (and to see how many vacation hours are left) are very popular.

On the other hand, viewing your own annual statement, adding timesheets and the possibility for employees to change these if necessary, are less popular. Jonkers Hoveniers was not particularly positive about the annual statement because they never thought of it and therefore perceived this as not useful. Copijn Realisatie distributed the annual statement through their pay rolling program (AFAS Payroll) and they stated they would like to continue the use of this program.

Two out of the four companies viewed the timesheets as negative, except for Snoek Hoveniers; they imagined this could be useful if timesheets could be added one week in advance. Copijn Realisatie was not exactly sure about this component but if this could be integrated with the planning module of Infogroen, it is expected it would have an added value.

The registration of hours was perceived as a positive feature at all the interviewed companies, but they all added some notes: freedom to change the hours if necessary was important, as well as a good-functioning control function. Snoek Hoveniers said this would only work if it matched with the administration of salary. The opinions on viewing the planned holidays of colleagues in order to adjust your own vacation plan differ radically.

GKB Realisatie and Copijn Realisatie were in particular searching for this component since this is costing a lot of unnecessary time at the moment, whereas Snoek Hoveniers thought this would not be useful and they would rather see these this handled personally.

The receiving dates of salary were not viewed as negative, but as not useful since salary is always paid on time and on the same dates. The non-financial compensation possibilities were perceived as a problem at Jonkers Hoveniers because they had the perception that you could never please all employees with these forms of compensation and that some employees would always feel left out. Copijn Realisatie stated they do not use any non-financial compensation at the moment and they did not plan to use this in the future either.

A suggestion from GKB Realisatie was to view the development of salary for the employees. This is an element of employment relation, where you can see the development of salary, all contract information, part-time percentage, et cetera. The other companies were not asked about their opinions on employment relation, so it is hard to make any statements about this component.

Compensation and performance-related pay	-	-/+	+
Add timesheets for employees	GKB Realisatie Jonkers Hoveniers	Copijn Realisatie	Snoek Hoveniers
Annual statement	Jonkers Hoveniers Copijn Realisatie	Snoek Hoveniers	GKB Realisatie
Employment relation (salary, contract, part-time percentage)			GKB Realisatie
Non-financial compensation possibilities	Jonkers Hoveniers Copijn Realisatie		
Receiving dates salary	Jonkers Hoveniers Snoek Hoveniers	GKB Realisatie	
Registration of (overtime) hours			GKB Realisatie Snoek Hoveniers Jonkers Hoveniers Copijn Realisatie
View holidays employees/colleagues	Snoek Hoveniers		GKB Realisatie Copijn Realisatie
View your own holidays			GKB Realisatie Snoek Hoveniers Copijn Realisatie
View/change timesheets	GKB Realisatie Jonkers Hoveniers Copijn Realisatie	Snoek Hoveniers	

Table 12: Results of the interviews for 'Compensation and performance-related pay'

4.4 Appraisal and performance management

The interviewed companies were very positive on this HR best practice in particular. In contrast to the earlier results on the HR best practices, the interviewees often agreed with each other on this topic.

4.4.1 Comparative analysis

Out of the seventeen defined components for this best practice, only four were used by more than half of the companies, namely: absence registration, absence/leave reports, file time-off/leave requests, and review time-off/leave requests. The absence registration concerns both the manager and the employee: both can report that the employee called in sick. The benefit here is that the absence registration is always up-to-date and both the managers and the employee can view the absence track.

A fifth popular component can be defined: although only 33% of the researched software packages use this feature, it was still one of the most popular: the regulation of employee/supervisor meetings for periodic review. Other components of periodic review, such as evaluation criteria and results of the review, were not as popular as expected.

HRM best practice	e-HRM for managers	e-HRM for employees
Appraisal and performance management	<ul style="list-style-type: none"> Absence registration Absence reports/Leave reports Review time-off/leave requests Regulate employee/supervisor meetings for periodic review 	<ul style="list-style-type: none"> Absence registration Absence reports/Leave reports File time-off/leave requests

Table 13: Popular e-HRM components for 'Appraisal and performance management'

4.4.2 Field research

Luckily, the field research offered more answers and insights on this best practice. Most of the components were perceived as positive and little components were perceived as negative. The most popular components were publishing the evaluation criteria for the periodic review on the portal of the employee and publishing the results of the periodic review afterwards. Snoek Hoveniers made the suggestion that before the meetings both the manager and the employee should fill in the evaluation criteria. Copijn Realisatie also viewed this as a useful function. Another popular component was reporting absence through the program. Copijn Realisatie was in particular looking for this feature. Jonkers Hoveniers on the other hand preferred a to handle things personally: the employee calls in sick and this is then registered in Excel, which is enough for Jonkers Hoveniers.

Reporting actions against absence through the program was not so popular, Copijn Realisatie stated this was due to the sensitivity of this information. Next to that, most of the companies already outsourced their absence registration. Snoek Hoveniers already uses an external program for absence registration and therefore reporting absence and reporting actions against absence are components Snoek Hoveniers would not use.

The option to visibly publish the company's vision, mission, and goals was at none of the companies received as very positive, although both Copijn Realisatie and GKB Realisatie did not see any harm in this function and thought that if you published this on the homepage of the employees' portal the employees would remember the vision, mission and goals of the company in the end.

Appraisal and performance management	-	-/+	+
Competence management			
Evaluation criteria			GKB Realisatie Jonkers Hoveniers Snoek Hoveniers Copijn Realisatie
Online results periodic review			GKB Realisatie Jonkers Hoveniers Snoek Hoveniers Copijn Realisatie
Regulate employer/supervisor meetings periodic review	Snoek Hoveniers	Copijn Realisatie	
Report actions against absence		GKB Realisatie Copijn Realisatie Snoek Hoveniers	Jonkers Hoveniers
Report absence through program	Jonkers Hoveniers	Snoek Hoveniers	GKB Realisatie Copijn Realisatie
View your own absence-track			
Visibly publish company's goals/strategy	Snoek Hoveniers		GKB Realisatie Copijn Realisatie
Warn employees/Receive warnings from manager	GKB Realisatie		

Table 14: Results of the interviews for 'Appraisal and performance management'

4.5 Training and development

The software packages advertised less about the training and development opportunities than about the previous HR best practices. Only eight components were defined and none of these were extensively used among the companies. However, the interviewees seemed more interested in training and development opportunities.

4.5.1 Comparative analysis

Out of the eight defined component, only two are used at more than 50% of the companies. Course enrolment is used at every company, except for TribeHR (or they did not mention this functionality) and the overview of completed courses is used at a little more than half of the companies. None of the other six components are used at more than one company.

HRM best practice	e-HRM for managers	e-HRM for employees
Training and development	<ul style="list-style-type: none"> • Course enrolment • Overview of completed courses 	<ul style="list-style-type: none"> • Course enrolment • Overview of completed courses

Table 15: Popular e-HRM components for 'Training and development'

4.5.2 Field research

Due to the lack in information that was gathered during the comparative analysis, there was more pressure on the field research and if this would yield any valuable information. Luckily, this was the case. The interviewees mostly agreed with each other on this best practice. It turned out that viewing the degrees of employees was a component all companies were

really interested in. The degrees of employees covered not only the completed studies of the employees, but also acquired certificates and courses. Snoek Hoveniers and GKB Realisatie both made the same, useful suggestion: to put in alerts when a certification expires. Copijn Realisatie was also very interested in these alerts.

Viewing the employment history was again a component where opinions differed radically. Although you can also view your employee's CV for this information, two out of the four companies saw an added value in an easy access to the employment history. Copijn Realisatie and Jonkers Hoveniers both stated not to be particularly interested in this information.

Online access to documents and protocols was also a component that the interviewees viewed as valuable, albeit for different reasons. GKB thought this would come in handy if an employee was sick; this way, another employee could pick up the work of the sick employee using these documents and protocols. Copijn Realisatie uses a handbook/manual and they would like to see the handbook uploaded in the program. Snoek Hoveniers did not explicitly state why uploading documents could be useful for them.

Both GKB Realisatie and Jonkers Hoveniers stated they were too small for having a platform for knowledge and skills sharing.

Training and development	-	-/+	+
Degrees of employees			GKB Realisatie Jonkers Hoveniers Snoek Hoveniers Copijn Realisatie
Employment history	Jonkers Hoveniers Copijn Realisatie		GKB Realisatie Snoek Hoveniers
Online access to documents and protocols			GKB Realisatie Snoek Hoveniers Copijn Realisatie
Performance management			
Platform for knowledge/skills sharing	GKB Realisatie Jonkers Hoveniers		
Training management			GKB Realisatie Jonkers Hoveniers

Table 16: Results of the interviews for 'Training and development'

4.6 Employee involvement

Employee involvement was a best practice that was poorly elaborated in the programs. It seemed like this best practice was hard to digitalize through a program. Both the comparative analysis and the field research did not yield any new or groundbreaking insights in this best practice.

4.6.1 Comparative analysis

The comparative only provided two new components for employee involvement; the other four components were already defined in this research (Table 4, p. 19). None of the components were used at more than 50% of the researched companies. The most used

components (used at two out of the nine companies; 22%) were a forum and online surveys/polls so the company can ask the opinions of their employees.

HRM best practice	e-HRM for managers	e-HRM for employees
Employee involvement	<ul style="list-style-type: none"> • Forum • Surveys/polls online 	<ul style="list-style-type: none"> • Forum • Surveys/polls online

Table 17: Most used e-HRM components for 'Employee involvement'

4.6.2 Field research

Just like the comparative analysis, the field research also did not yield many components. After the four interviews, it can be concluded that publishing the results of employee/supervisor meetings for company improvements and online surveys/polls will most likely be used, although not every company was very positive. Online surveys/polls was perceived as very positive at GKB Realisatie, where they already had experience in miscalculating the opinions of the employees. Using a poll could have easily avoided this situation. Copijn also saw an added value in this, although they did not provide an example illustrating the possible use. Snoek Hoveniers could also see the potential of this component, although they could not appoint any direct use of the surveys/polls.

Both Copijn Realisatie and Snoek Hoveniers stated that improvements within the company are discussed during employee/supervisor meetings, but the results of these meetings are not published. If this could be done through a news section in the program, they would both use this.

Employee involvement	-	+/-	+
Chats			
Results of employee/supervisor meetings for company improvements		GKB Realisatie Jonkers Hoveniers	Copijn Realisatie Snoek Hoveniers
Forum			
Online help desk			
Surveys/polls online			GKB Realisatie Snoek Hoveniers Copijn Realisatie

Table 18: Results of the interviews for 'Employee involvement'

5 Discussion

A first draft of the list of e-HRM components was made in Chapter 2. Chapters 3 and 4 focused on the comparative analysis of popular e-HRM packages and interviews with the possible clients. These last two chapters added valuable insights to the earlier established list of e-HRM components. This chapter focuses on addressing the changes that are going to be made since the list of e-HRM components was first established. Those differences are discussed in this chapter and to make the list of e-HRM components complete. Again, the changes are discussed per practice.

For every best practice, three columns are added to the table: FV, CA, and I. Their meanings are:

- *FV* stands for 'first version', meaning this component was on the first list of e-HRM components as established in Chapter 2. The components are marked with an x in the table if this is the case.
- *CA* stands for 'comparative analysis'. This means that this component is often used (see Chapter 4) by other HR packages. Again, the components are marked with an x if this is the case.
- *I* stands for 'interview', meaning this component was discussed during the interviews. The results are marked the same as in Chapter 4: '-' for mostly negative, '-/+' for neutral or if the interviewee was not sure, and '+' for mostly positive.

Then the results of these three columns are combined. Three colors are used to display the results:

- Green: the overall results are mostly positive and therefore the component is most likely to be useful.
- Yellow: the overall results were not positive, nor negative. It can definitely not be excluded on the basis of this report.
- Orange: the overall results are mostly negative and therefore the component most likely is not useful.

In the case the results were not clear, for example because they contradict each other, the results from the interviews were leading. Although not every component was discussed during the interviews, there was a general understanding: for some components the companies were just too small or for example in the case of scheduling interviews, reviews and more, all the interviewees stated they would rather use the calendar function in Microsoft Outlook. This way, one question can give multiple answers.

5.1 General

Overall, the results on this topic are mostly positive. All the components that were on the first version of the list were also viewed as valuable by the comparative analysis and the interviews. Except for electronic roster planning: the comparative analysis showed this was a popular component but the interviewees could not agree with each other on this component and though this would most likely be something for in the future.

Interesting is that reminders and/or to do lists was not present on the first list, although the comparative analysis showed that this was a hugely popular component. And also the interviewees could see the added value: although they have not been asked about reminders, most of them made the remark that they would like to see reminders. For example if a certificate or a license expires.

The interviewees did not see any value in the assignment of employees to managers: every employee knows who his manager is and therefore this component would be superfluous.

e-HRM for managers	FV	CA	I	e-HRM for employees	FV	CA	I
Assignment of managers/employees			-/+	Alter your own details		x	
Generate reports and analyses		x		Assignment of managers/employees			-/+
Declarations forms/Judge declarations	x	x		Declaration forms		x	
Photo book			+	Electronic roster planning	x	x	-
Reminders/to do lists		x	+	Frequently Asked Questions	x		-/+
Visibly publish company's goal, strategy and KPIs	x	x	+	News (general, strategy-specific, changes in the company)	x	x	
				Photo book			+
				Receive tasks			-/+
				Reminders/to do lists		x	+

Table 19: Results 'General'

5.2 Selective recruitment and selection

In contrast with the first topic, this best practice was not too well received. The first version turned out to be mostly wrong. The most components were, as it turned out afterwards, aimed at bigger companies. Most greening companies are traditionally family businesses and although the number of employees is rising, the mindset is still to keep the companies small and personal. Most of the interviewees viewed digitalizing the HR processes as a threat. This culture of family businesses was not taken into account while defining the components for this best practice. However, the interviewees agreed on the added value of three components: contract information on all employees for the manager (including alerts when and for the employee himself to view its own contract information, and the registration and reviewing of the job applicants in the program.

e-HRM for managers	FV	CA	I	e-HRM for employees	FV	CA	I
Add recruitment costs		x		Apply online to jobs		x	-
Apply online to jobs			-	CLA (automatically updated)	x	x	-
Automatic registration of new employees	x	x		Contract information	x	x	+
Automatically import online application letters	x			Overview job vacancies			-
CLA (automatically updated)		x	-				
Competency profiles	x						
Contract information on all employees	x	x	+				
Overview job vacancies	x		-				
Registration of job applicants		x	+				
Review job applicants		x	+				
Schedule job interviews	x	x	-				

Table 20: Results 'Selective recruitment and selection'

5.3 Compensation and performance-related pay

The results on this best practice were mostly positive, although for some components more research is needed. Especially the functionality of viewing your own holidays and those of your colleagues (for planning vacations) were well received. During the establishment of the first list of e-HRM components, requests for vacation were thought of although the option to view them was never mentioned. The component was mentioned during the comparative analysis, although only two out of the eleven companies mentioned the use of these functionalities.

Other components which were thought to be useful, such as annual statements, receiving dates of salary and the overview of salary costs, turned out to be not so popular. Although an online pay slip was received positively, publishing the annual statement strangely enough was not. And pay rolling is most likely outsourced, so the information on salary costs could be derived from another program. For the receiving dates of salary counted that this was thought to be already clear for the employees and it would not add any value.

The table is displayed on the next page.

e-HRM for managers	FV	CA	I	e-HRM for employees	FV	CA	I
Annual statement		x	-	Annual statement		x	-
Employment relation (salary, contract, part-time percentage)			+	Non-financial compensation possibilities	x		-
Non-financial compensation possibilities	x		-	Online pay slip	x	x	
Online pay slip	x	x		Receiving dates salary	x		-
Overview of salary costs per period or salary reports	x	x		Registration of (overtime) hours	x	x	+
Receiving dates salary	x		-	View holidays colleagues			+
Registration of (overtime) hours	x	x	+	View your own holidays			+
View holidays of your employees/colleagues			+				
View your own holidays			+				

Table 21: Results 'Compensation and performance-related pay'

5.4 Appraisal and performance management

Unexpectedly, the interviewees were positive about digitalizing performance management, whereas the reactions to digitalizing the other best practices were more reticent. Scheduling the periodic reviews through the program was superfluous due to the use of another calendar, but other components were surprisingly well received. Publishing the evaluation criteria for periodic review was perceived as needed and useful. This functionality was not mentioned in the first version of e-HRM components, although it is an important part of the periodic review. Publishing the results afterwards was also positively received. Interesting is that none of the HR packages in the comparative analysis mentioned this functionality, although there is most likely a need for this (based on the interviews).

Time-off and leave requests, and the judging of these, are often mentioned in the comparative analysis. No specific questions regarding this component were asked during the interviews, but most of the interviewees expressed the need of an overview of holidays for every employee. If a day off or a longer leave can be requested through the program and is granted, this can be easily extracted from their holidays. For this reason it is to be believed that the clients will most likely use this component.

Absence reports on the other hand were not as well received, because absence registration is most likely to be outsourced. An option to (also) report absence in the program was paradoxically received as useful. So although absence registration is outsourced, the interviewees stated they also want to be able to view this information in the program. Either added manually or maybe through a connection with the absence registration program.

e-HRM for managers	FV	CA	I	e-HRM for employees	FV	CA	I
Absence reports/Leave reports		x		Regulate employee/supervisor meetings for periodic review	x		-/+
Evaluation criteria			+	Evaluation criteria	x		+
Online results periodic review	x		+	Online results periodic review	x		+
Regulate employee/supervisor meetings for periodic review	x	x	-	Receive warnings from manager			-
Report absence through program		x	+	Report absence through program		x	+
Report actions against absence			-/+	Time-off/leave requests	x	x	
Review time-off/leave requests	x	x		Visibly publish company's goals, strategy and KPIs	x		+
Visibly publish company's goal, strategy and KPIs	x		+				
Warn employees/Receive warnings from manager			-				

Table 22: Results 'Appraisal and performance management'

5.5 Training and development

The most popular component in this best practice was already present in the first list of e-HRM components, namely the overview of completed courses. The interviewees suggested reminders when certificates were about to expire and needed to be renewed. Other popular components were also on the first version, such as course enrolment and online access to documents and protocols.

Employment history was a not so popular component at the comparative analysis, although some employers were definitely interested in this information.

A platform for knowledge and skills sharing was thought to be useful, but the interviewees could not imagine a situation where they would use this.

e-HRM for managers	FV	CA	I	e-HRM for employees	FV	CA	I
Course enrolment	x	x		Course enrolment	x	x	
Degrees of employees			+	Online access to documents and protocols	x		+
Employment history			-/+	Overview of completed courses	x	x	+
Online access to documents and protocols			+	Platform for knowledge and skills sharing	x		
Overview of completed courses	x	x	+	Training management			+
Platform for knowledge and skills sharing	x		-				
Training management			+				

Table 23: Results 'Training and development'

5.6 Employee involvement

Two components were interesting for this best practice and those components were also mentioned in the first version of the e-HRM components list: a place where the results of employee/supervisor meetings for company improvements can be published and, also confirmed by the comparative analysis, survey/polls to ask employees about their opinions.

e-HRM for managers	FV	CA	I	e-HRM for employees	FV	CA	I
(Overview of teams: members + competencies)	x			Forum	x	x	
Forum		x		Results of employee/supervisor meetings for company improvements	x		+
Results of employee/supervisor meetings for company improvements	x		+	Survey/polls online	x	x	+

Table 24: Results 'Employee involvement'

6 Conclusion

The study was set out to explore the possibilities of developing a new e-HRM module that is going to be embedded in an existing program. The target group of this software is the greening sector, which is traditionally split up into several family businesses. And although several e-HRM packages are readily available on the market, the preference goes out to an e-HRM module embedded in the program instead of using different programs next to each other. Therefore, the procurement of an HR package alone was not sufficient. The research question and sub questions that guided this research were:

RQ: What are the essential HR components to be embedded in the existing software of Infogroen?

SQ1: What are the HR best practices and how are these embedded in existing human resource management software?

SQ2: What is the relative importance of HR software, as perceived by the different stakeholders (employers and employees)?

There are a an enormous amount of HR best practices available, but this study focused on the following five HR best practices: (1) Selective recruitment and selection, (2) Compensation and performance-related pay, (3) Appraisal and performance management, (4) Training and development, and lastly (5) Employee involvement. These best practices are not embedded in existing human resource management software in this exact manner, but elements from all the best practices can be traced in every software package. The focus in these packages was mostly on recruitment and selection, compensation and performance-related pay and appraisal and performance management. The best practices of training and development and employee involvement are less developed in the current HR software. It is harder to greaten the involvement of your employees through a program than it is to digitalize compensation for example, but digitalizing the training and development practice has a lot of opportunities. How the HR best practices are exactly embedded in the existing software, is elaborated in Chapter 4 (p. 29) and in Appendix 4 (p. 62).

Approximately hundred e-HRM components could be established after examining the HR software packages. About 30% of these components were often used by the different HR packages, whereas the other 70% got less attention. From the thirty popular components it was assumed that these were useful. However, there was still uncertainty about the other seventy components. The stakeholders were interviewed in order to resolve this uncertainty. The relative importance of HR software was not perceived as very high: it is uncertain of this was due to the reluctance to digitalize, which influenced the results in a certain manner, or because they were not interested in HR software. However, in some cases the stakeholders could see the added value of an HR module and that their workload would be minimalized.

After the theoretical exploration of e-HRM components, the comparative analysis and the interviews approximately fifty components remain. Due to the small amount of interviews (four), there are no hard conclusions. A tendency could be stated, however. This is the beginning of the definitive development of the HR module. For some components it can be stated that they will most likely be used and add value, some components require further research and some will most likely not be used.

The comparative analysis served to collect components that could be used and the amount of gathered components is most likely to be sufficient. Still, further research is required; in particular conducting more interviews will gain more certainty about the exact components of the e-HRM module. The interview framework in Appendix 5 (p. 67) could still be useful for this.

The theoretical framework could also be expanded. The focus was mostly on HR best practices and employee self-service, but a different perspective would probably gain new insights in how to develop an HR module. For example, no attention was paid to the process of building a program or a part of a program. Theory on this topic could provide a new framework to work with and a new point to start from.

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7 Appendix

7.1 Appendix 1: Introduction e-HRM packages

In the third chapter (Methodology, p. 21) a list of companies that deliver e-HRM solutions was composed. All companies are Dutch or offer Dutch packages, except for Natural HR and TribeHR. A brief description of each of these companies can be found below.

AFAS

AFAS delivers multiple information systems for companies, but for this research only two packages are relevant: HRM and Payroll. The HRM package used mostly ESS and MSS (Management Self Service) (AFAS HRM website, March 2013), whereas Payroll is mainly on salary administration (AFAS Payroll website, March 2013). The program is an online application, meaning that it can be used from work, home or wherever the employer/employees is.

ADP

ADP offers Perman PM, also an online HR solution for 'complete integration of personnel management and payroll' (ADP Perman PM website, March 2013). Although this program does not completely represent the type of e-HRM solution that this report is researching, some elements can definitely be used.

CTB Personele Systemen

CTB distributes Cobra, a program that can be delivered with several packages. For this research, Cobra Personeel (Personnel) was researched. Online access for this application goes through Cobra ESS/MSS (Cobra ESS/MSS website, March 2013).

eMerus

eMerus delivers HR2day for HR solutions, which is a program that is completely based 'in the cloud'. This is consistent with the e-HRM view that is used in this report. It only delivers one package (HR2day), but different elements can be added to this. Salary administration, for example, is not included automatically but is added if wished (eMerus website, March 2013).

Natural HR

Natural HR is also a cloud-based application, with free access in contrast to the other tested programs (except for TribeHR). Next to the free access, they also offer in-depth-information about their application through their blog (Natural HR website, March 2013).

NorthGate Arinso

NGA is one of the biggest companies that is taken into account in this research, with big clients such as Sodexo, Total and Panasonic. They offer multiple packages, but for this research only HR Outsourcing and HR Consulting are thought to be relevant. In contrast to most of the other programs, NGA does not offer a cloud-based application nor is there a focus on ESS and MSS (NorthGate Arinso HR Consulting and HR Outsourcing website, March 2013). However, because the company's programs are so widely used it was thought that the company should at least be taken into account.

People Inc.

People Inc. is an international company that translated their HR program to Dutch. It has a focus on ESS, time registration/planning and automating processes in the HR department. Some parts of the program are accessible online, such as declarations, however most of the program is not web based (People Inc. HRM Oplossingen website, March 2013).

Raet

Raet offers HRM and Payroll solutions, whereas the HRM solution is the most useful option of these two. Although the program is not web based, they do offer an online portal through which parts of the program can be accessed. In their e-HRM solutions, Raet offers HR self service, online reports, recruitment and selection, an absence manager, employee development, training management, management information, a benefit planner and strategic personnel planning (Raet e-HRM & Payroll Oplossingen website, March 2013).

Raet's main focus is on public companies, but they also have a small fraction of private companies.

rexx Systems

rexx is a program with no web-based functionalities of any kind. The program consists of different parts and therefore can be modularly applied. The program includes modules such as e-recruiting, talent management, performance management, personnel administration, personnel surveys, personnel portals etc. (rexx HR Software website, March 2013). Although not implicitly stated, the focus on personnel surveys and personal portal do imply that the program is also focused on e-HRM and is not a regular HRIS.

TOPdesk

To include TOPdesk in this research was an idea from Infogroen, and although it is not a very well known program, it still can be useful. One of their biggest clients is Flora Holland and their familiarity with the greening sector can indeed be useful in this research. TOPdesk uses the application as a Shared Service Centre (SSC), providing ICT, HR, financial and facilitative services (TOPdesk SSC website, March 2013). They provide companies with the choice to use the program as a service (web based) or through a permanent license (TOPdesk SaaS website, March 2013).

Tribe HR

Although TribeHR is an American company and the choice has been made to mainly focus on European, and in particular Dutch companies to minimize cultural differences, TribeHR distinguishes itself by providing what they call a 'social approach'. Their main focus is on recruiting, core HRIS and talent management (Tribe HR Solutions website, March 2013). It is an online application and the social part also includes employee empowerment, consistent to an e-HRM view.

Visma

Visma is another suggestion from Infogroen. Visma offers multiple software packages aimed at the different departments of a company. For HR specifically they deliver a Talent & Salaris (Talent & Salary administration) package. It is also distributed as Software as a Service (SaaS), just like most of the companies in this comparison. Some of the features include manager self-service, digital pay slips, options for telecommuting and insights in the workflow (Visma Talent & Salaris features website, March 2013).

7.2 Appendix 2: HR software packages

Company	Package	Website (Feb 11, 2013)	Information type	Quality	Comments (websites visited on March 23, 2013)
AFAS	HRM, Payroll	http://www.afas.nl/product/hrm-hrm	Brochure	Good	Brochure on request: http://www.afas.nl/aanmaken-formulier-prs/brochure-download-hrm-payroll?redirectLocation=%2finformatiepagina%2fhrm-brochure
ADP	Perman PM	http://www.adp.nl/solutions/products/kleine-ondernemingen.aspx	Brochure	Limited/ Medium	Brochure: http://www.adp.nl/solutions/products/~media/NL/pdf/brochures/620406-adp-mkb.ashx
CTB Personeel Systemen	Cobra Personeel (HRM)	http://www.ctbpersoneelsystemen.nl	Brochure + online demo	Very limited	Brochure: http://www.ctbpersoneelsystemen.nl/fileadmin/user_upload/CTB_PS/Brochures/Leaflet_xHRM_Cobra_HRM.pdf Online demo: http://www.ctbpersoneelsystemen.nl/cobra-xhrm/cobra-voor-iedereen/cobra-hrm/demo-cobra-hrm/
eMerus	HR2day	http://www.emerus.nl	Brochure + online demo	Good	Received a virtual demo by Richard Hoogendijk on March 8, 2013 (1 hour) Brochure and demo on request: http://www.emerus.nl/index.php?option=com_content&view=article&id=1853&Itemid=99
Natural HR		http://naturalhr.com	Regular acces	Good	Online demo (registration needed): http://www.naturalhr.com/signup
Northgate Arinso	HR Outsourcing, HR Consulting	http://www.ngahr.com	Brochure	Limited	Brochures: http://www.ngahr.com/hr-outsourcing and http://www.ngahr.com/hr-consulting

People Inc.	HRM, Time, ESS, Salary	http://www.peopleinc.nl	Brochure + online demo video	Good	Brochure on request: http://www.peopleinc.nl/nl-nl/producten.html Online demo: http://www.peopleinc.nl/nl-nl/home/bekijk-demo.html
Raet	e-HRM, Payroll	http://www.raet.nl/producten/overzicht-hr-en-payroll-oplossingen.aspx	Info + online demo video	Medium	Video: http://www.raet.nl/producten/raet-online.aspx
Rexx Systems		http://ww.rexx-systems.com/hr-software.php	Online screenshots	Medium	
TOPdesk		http://www.topdesk.nl/software	Online info	Very limited	
TribeHR		http://tribehr.com	Free trial + online info	Good	Trial (registration needed): https://app.tribehr.com/signup/
Visma	Talent & Salaris	http://nl.visma.com/HRM/e-HRM-Software/HRM_software_Visma/	Brochure	Medium	Brochure: http://nl.visma.com/Global/NL/Brochure Visma Talent en Salaris dec12 online.pdf

Table 25: Overview of e-HRM companies and their brochures

7.3 Appendix 3: Results of analysis

The components there were missing in the original list of components (see 'e-HRM components' below) are marked red.

	e-HRM components		AFAS	
	Managers	Employees	Managers	Employees
General	<ul style="list-style-type: none"> - View strategy, goals and KPIs - View personnel files - Judge declarations - Electronic roster planning - Calendar management 	<ul style="list-style-type: none"> - News - FAQ - Alter your own details - Declaration forms - Electronic roster planning 	<ul style="list-style-type: none"> - View strategy, goals and KPIs - View personnel files - Judge declarations - Electronic roster planning - Integration with Office - Workflow/communication channel - Reminders/to do lists - Reports and analyses - Utilization review - Photo book 	<ul style="list-style-type: none"> - News - Declaration forms - Electronic roster planning - Receive tasks
Selective recruitment and selection	<ul style="list-style-type: none"> - Overview job vacancies - Competency profiles - Registration of candidates - Schedule job interviews - Review job applicants - Automatic registration of new employees - Contract information on all employees (+ CLA) 	<ul style="list-style-type: none"> - CLA - Contract information 	<ul style="list-style-type: none"> - Automatic registration of new employees - Registration of candidates - CLA (+ updated automatically) 	<ul style="list-style-type: none"> - CLA
Compensation and performance-related pay	<ul style="list-style-type: none"> - Registration of (overtime) hours - Online pay slip - Receiving dates salary - Non-financial compensation possibilities 	<ul style="list-style-type: none"> - Registration of (overtime) hours - Online pay slip - Receiving dates salary 	<ul style="list-style-type: none"> - Registration of (overtime) hours - Online pay slip - Annual statement - Payroll tax returns - Salary reports - Overview of salary costs per period/year - Salary scales 	<ul style="list-style-type: none"> - Registration of (overtime) hours - Online pay slip - Annual statement - Payroll tax returns

Appraisal and performance management	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Regulate employee/supervisor meetings for periodic review - Online results periodic review - Visibly publish strategy, goals and KPIs 	<ul style="list-style-type: none"> - Time-off/leave requests - Employee/supervisor meetings for periodic review - Online results periodic review - Evaluation criteria 	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Absence registration - Report actions taken against absence - Competence management 	<ul style="list-style-type: none"> - Time-off/leave requests - Report absence through program - View your own absence-track
Training and development	<ul style="list-style-type: none"> - Course enrolment - Overview of completed courses - Platform for knowledge and skills sharing 	<ul style="list-style-type: none"> - Course enrolment - Overview of completed courses - Platform for knowledge and skills sharing - Online access to documents and protocols 		<ul style="list-style-type: none"> - Course enrolment
Employee involvement	<ul style="list-style-type: none"> - Surveys/polls online - Employee/supervisor meetings for company improvements - Platform for knowledge/skills sharing 	<ul style="list-style-type: none"> - Surveys/polls online - Employee/supervisor meetings for company improvements - Forum - Platform for knowledge/skills sharing 		

	eMerus		Natural HR	
	<i>Managers</i>	<i>Employees</i>	<i>Managers</i>	<i>Employees</i>
General	<ul style="list-style-type: none"> - View personnel files - Judge declarations - Workflow/communication channel - Reminders/to do lists - Reports and analyses 	<ul style="list-style-type: none"> - Declaration forms - Alter your own details 	<ul style="list-style-type: none"> - News - Receive tasks - Calendar management - Reminders/to do lists - Reports and analysis - Upload templates 	<ul style="list-style-type: none"> - News - Alter your own details - Electronic roster planning - Calendar management - Reminders/to do lists - Receive tasks
Selective recruitment and selection	<ul style="list-style-type: none"> - CLA (automatically updated) 	<ul style="list-style-type: none"> - CLA (automatically updated) 	<ul style="list-style-type: none"> - Automatic registration of new employees - Schedule job interviews - Registration of candidates - Bulk upload employees - Recruitment calendar - Post job openings - Recruitment advertising pages - Add recruitments costs - Make employment offers - Job library 	
Compensation and performance-related pay	<ul style="list-style-type: none"> - Online pay slip - Employment relation (salary, part-time percentage, contract) 	<ul style="list-style-type: none"> - Online pay slip 	<ul style="list-style-type: none"> - View holidays employees - Add timesheets for employees 	<ul style="list-style-type: none"> - View your holidays - View/change personal timesheets
Appraisal and performance management	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Online results periodic review - Absence registration - Absence/leave reports 	<ul style="list-style-type: none"> - Time-off/leave requests - Online results periodic review 	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Regulate employee/supervisor meetings for periodic review - Evaluation criteria - Time-off options (paid/unpaid) - Receive feedback requests - Warnings for employees - Goal library 	<ul style="list-style-type: none"> - Time-off/leave requests - Evaluation criteria - My goals - Request feedback - Receive warnings from manager

Training and development	- Course enrolment - Overview of completed courses - Employment history - Degrees of employees	- Course enrolment - Overview of completed courses - Degrees of employees - Employment history of employees	- Course enrolment - Overview of completed courses	- Course enrolment - Overview of completed courses
			- Forum - Chats	- Forum - Chats

	People Inc.		Tribe HR	
	Managers	Employees	Managers	Employees
General	<ul style="list-style-type: none"> - Electronic roster planning - View strategy, goals and KPIs - Calendar management - Document management - Reminders/to do lists - Reports and analyses - Reports designer - Mass update functions 	<ul style="list-style-type: none"> - Electronic roster planning - Calendar management 	<ul style="list-style-type: none"> - News - Calendar management - Add news sources - Document management - Reminders/to do lists - Reports and analyses 	<ul style="list-style-type: none"> - News
Selective recruitment and selection	<ul style="list-style-type: none"> - Automated recruitment and selection process 	<ul style="list-style-type: none"> - Apply online to new jobs 	<ul style="list-style-type: none"> - Review job applicants - Post job openings - Company positions (and their vacancies) 	<ul style="list-style-type: none"> - Company positions (and their vacancies)
Compensation and performance-related pay	<ul style="list-style-type: none"> - Registration of (overtime) hours - Online pay slip - Salary reports 	<ul style="list-style-type: none"> - Registration of (overtime) hours - Online pay slip - View holidays employees - View your own holidays 	<ul style="list-style-type: none"> - Non-financial compensations ('Share a job well done') 	
Appraisal and performance management	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Absence registration - Absence/leave reports 	<ul style="list-style-type: none"> - Time-off/leave requests 	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Absence registration - Absence/leave reports 	<ul style="list-style-type: none"> - Time-off/leave requests - Report absence through program - Employee benefits
Training and development	<ul style="list-style-type: none"> - Course enrolment - Training management 	<ul style="list-style-type: none"> - Course enrolment 		
Employee involvement	<ul style="list-style-type: none"> - Online help desk 		<ul style="list-style-type: none"> - Company resources 	

	Raet		rexx Systems	
	Managers	Employees	Managers	Employees
General	<ul style="list-style-type: none"> - View strategy, goals and KPIs - Judge declarations - View personnel files - Reminders/to do lists 	<ul style="list-style-type: none"> - Declaration forms 	<ul style="list-style-type: none"> - View strategy, goals and KPIs - Judge declarations - Workflow/communication channels - Reminders/to do lists - Integration with Office - Reports and analyses - Data warehouse - Contact directory - Document management - Organization management/structure - Assignment of managers/employees 	<ul style="list-style-type: none"> - Alter your own details - Declaration forms
Selective recruitment and selection			<ul style="list-style-type: none"> - Automated recruitment and selection process - e-recruiting/Post job openings - Job centre - Employee branding - Outsourcing 	
Compensation and performance-related pay	<ul style="list-style-type: none"> - Online pay slip - Annual statements 	<ul style="list-style-type: none"> - Online pay slip - Annual statements 	<ul style="list-style-type: none"> - Online pay slip - Registration of (overtime) hours - Benefits 	<ul style="list-style-type: none"> - Online pay slip - Registration of (overtime) hours
Appraisal and performance management	<ul style="list-style-type: none"> - (Review) time-off/leave requests 	<ul style="list-style-type: none"> - Time-off/leave requests 	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Regulate supervisor/employee meetings for periodic review - Absence registration - Absence/leave reports - Competence management 	<ul style="list-style-type: none"> - Time-off/leave requests - Supervisor/employee meetings for periodic review

Training and development	<ul style="list-style-type: none"> - Course enrolment - Overview of completed courses 	<ul style="list-style-type: none"> - Course enrolment - Overview of completed courses 	<ul style="list-style-type: none"> - Course enrolment - Overview of completed courses - Skills management - Performance management - Seminar management 	<ul style="list-style-type: none"> - Course enrolment - Overview of completed courses
Employee involvement			<ul style="list-style-type: none"> - Surveys/polls online 	<ul style="list-style-type: none"> - Surveys/polls online

Visma		
	<i>Managers</i>	<i>Employees</i>
General	<ul style="list-style-type: none"> - View strategy, goals and KPIs - Electronic roster planning - Workflow/communication channel - Reminders/to do lists - Automatically send e-mails - Change rights/responsibilities of employees - Document management 	<ul style="list-style-type: none"> - Alter your own details
Selective recruitment and selection		
Compensation and performance-related pay	<ul style="list-style-type: none"> - Online pay slip - Annual statement 	<ul style="list-style-type: none"> - Online pay slip - Annual statement
Appraisal and performance management	<ul style="list-style-type: none"> - (Review) time-off/leave requests - Absence registration - Absence/leave reports - Competence management 	<ul style="list-style-type: none"> - Time-off/leave requests - Competence management
Training and development	<ul style="list-style-type: none"> - Course enrolment 	<ul style="list-style-type: none"> - Course enrolment
Employee involvement		

7.4 Appendix 4: Comparative analysis list

Best practice	e- HRM	AFAS	e- Merus	Natur al HR	Peopl e Inc.	Tribe HR	Tota l	Perce ntage	Raet	rexx	Visma	Tota l	Perce ntage	Gran d total	Perce ntage
	General														
Alter your own details	x		x	x			3	50%		x	x	2	67%	5	56%
Assign management/employers							0	0%		x		1	33%	1	11%
Automatically send e-mails							0	0%			x	1	33%	1	11%
Calendar management	x			x	x	x	4	67%				0	0%	4	44%
Change rights/responsibilities of employees							0	0%			x	1	33%	1	11%
Contact directory							0	0%		x		1	33%	1	11%
Data warehouse							0	0%		x		1	33%	1	11%
Declaration forms	x	x	x				3	50%	x	x		2	67%	5	56%
Document management					x	x	2	33%		x	x	2	67%	4	44%
Electronic roster planning	x	x		x	x		4	67%			x	1	33%	5	56%
FAQ	x						1	17%				0	0%	1	11%
Integration with Office		x					1	17%		x		1	33%	2	22%
Judge declarations	x	x	x				3	50%	x	x		2	67%	5	56%
Mass update functions					x		1	17%				0	0%	1	11%
News	x	x		x		x	4	67%				0	0%	4	44%
News sources						x	1	17%				0	0%	1	11%
Organization management/structure							0	0%		x		1	33%	1	11%
Photo book		x					1	17%				0	0%	1	11%
Receive tasks		x		x			2	33%				0	0%	2	22%
Reminders/to do lists		x	x	x	x	x	5	83%	x	x	x	3	100%	8	89%
Reports and analyses		x	x	x	x	x	5	83%		x		1	33%	6	67%
Reports designer					x		1	17%				0	0%	1	11%
Upload templates				x			1	17%				0	0%	1	11%
Utilization review		x					1	17%				0	0%	1	11%
View personnel files	x	x	x				3	50%	x			1	33%	4	44%
View strategy, goals and KPIs	x	x			x		3	50%	x	x	x	3	100%	6	67%
Workflow/communication channel		x	x				2	33%		x	x	2	67%	4	44%

Best practice	e- HRM	AFAS	e- Mer us	Natur al HR	People Inc.	Tribe HR	Tota l	Perce ntage				Total	Perc enta ge	Gra nd total	Perce ntage	
	Raet	rexx	Visma													
Compensation and performance-related pay																
Add timesheets for employees				x			1	17%				0	0%	1	11%	
Annual statement		x					1	17%	x		x	2	67%	3	33%	
Benefits							0	0%		x		1	33%	1	11%	
Employment relation (salary, contract, part-time percentage)			x				1	17%				0	0%	1	11%	
Non-financial compensation possibilities	x					x	2	33%				0	0%	2	22%	
Online pay slip	x	x	x		x		4	67%	x	x	x	3	100%	7	78%	
Overview of salary costs per period/year		x					1	17%				0	0%	1	11%	
Payroll tax returns		x					1	17%				0	0%	1	11%	
Receiving dates salary	x						1	17%				0	0%	1	11%	
Registration of (overtime) hours	x	x			x		3	50%		x		1	33%	4	44%	
Salary reports		x			x		2	33%				0	0%	2	22%	
Salary scales		x					1	17%				0	0%	1	11%	
Time registration							0	0%				0	0%	0	0%	
View holidays employees				x	x		2	33%				0	0%	2	22%	
View your own holidays				x	x		2	33%				0	0%	2	22%	
View/change timesheets				x			1	17%				0	0%	1	11%	

Best practice	e-HRM	AFAS	e-Merus	Natural HR	People Inc.	Tribe HR	Total	Percentage	Raet	rexx	Visma	Total	Percentage	Grand total	Percentage
Appraisal and performance management															
Absence registration		x	x		x	x	4	67%		x	x	2	67%	6	67%
Absence/leave reports			x		x	x	3	50%		x	x	2	67%	5	56%
Competence management		x					1	17%		x	x	2	67%	3	33%
Employee benefits						x	1	17%				0	0%	1	11%
Evaluation criteria	x			x			2	33%				0	0%	2	22%
Goal library				x			1	17%				0	0%	1	11%
Online results periodic review	x		x				2	33%				0	0%	2	22%
Regulate employer/supervisor meetings per. rev.	x			x			2	33%		x		1	33%	3	33%
Report actions against absence		x					1	17%				0	0%	1	11%
Report absence through program		x				x	2	33%				0	0%	2	22%
Request feedback				x			1	17%				0	0%	1	11%
Review time-off/leave requests	x	x	x	x	x	x	6	100%	x	x	x	3	100%	9	100%
Time-off options (paid/unpaid)				x			1	17%				0	0%	1	11%
Time-off/leave requests	x	x	x	x	x	x	6	100%	x	x	x	3	100%	9	100%
View your own absence-track		x					1	17%				0	0%	1	11%
Visibly publish company's goals/strategy	x						1	17%				0	0%	1	11%
Warn employees/Receive warnings from manager				x			1	17%				0	0%	1	11%

Best practice	e-HRM	AFAS	eMerus	Natural HR	People Inc.	Tribe HR	Total	Percentage	Raet	rexx	Visma	Total	Percentage	Grand total	Percentage	
Training and development																
Course enrolment	x	x	x	x	x		5	83%	x	x	x	3	100%	8	89%	
Degrees of employees			x				1	17%				0	0%	1	11%	
Employment history			x				1	17%				0	0%	1	11%	
Online access to documents and protocols	x						1	17%				0	0%	1	11%	
Overview of completed courses	x		x	x			3	50%	x	x		2	67%	5	56%	
Performance management							0	0%		x		1	33%	1	11%	
Platform for knowledge/skills sharing	x						1	17%				0	0%	1	11%	
Seminar management							0	0%		x		1	33%	1	11%	
Skills management							0	0%		x		1	33%	1	11%	
Training management						x	1	17%				0	0%	1	11%	
Employee involvement																
Chats				x			1	17%				0	0%	1	11%	
Employee/supervisor meetings for company improvement	x						1	17%				0	0%	1	11%	
Forum	x			x			2	33%				0	0%	2	22%	
Online help desk						x	1	17%				0	0%	1	11%	
Platform for knowledge/skills sharing	x						1	17%				0	0%	1	11%	
Surveys/polls online	x						1	17%		x		1	33%	2	22%	

7.5 Appendix 5: Interview framework

Company		Date	
Name interviewee		Duration	
Job description interviewee		Additional	

Introduction

- Name, study
- Bachelor thesis
- Structure of the interviews

Bachelor thesis

- Infogroen
- Goal

Reason interview

- Own research: e-HRM components
- Opinions of possible clients

Terms/definitions

- More explanation during the interview
- Important now:
 - *HR*: Human Resources, or *HRM*: Human Resources Management. In Dutch, the HR department is often called P&O (Personeel & Organisatie; Personnel & Organisation)
 - *e-HRM*: An umbrella term covering all possible integration mechanisms and contents between HRM and Information Technologies aiming at creating value within and across organizations for targeted employees and management (Bondarouk & Ruël, 2009).

Questions?

Topics

Six topics: (1) General, (2) Selective recruitment and selection, (3), Compensation and performance-related pay, (4) Appraisal and performance management, (5) Training and development and (6) Employee involvement.

1. General

Assignment of managers to employees	Automatically send e-mails	Change the rights/responsibilities of employees
Contact directory	FAQ	Organisation structure
Photo book	Receive tasks from manager/Assign employees to tasks	Upload templates
Utilization review		

Comments

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1. Selective recruitment and selection

Definition: attracting and recruiting new personnel

Add recruitment costs	Online job application	CLA (automatically updated)
Competence profiles	Registration of candidates	Contract information for managers/employees
Overview of vacant jobs	Review candidates	Outsourcing
Schedule job interviews	Recruitment advertising pages	

Comments

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2. Compensation and performance-related pay

Definition: the administration of salaries and other forms of compensation (such as non-financial compensation)

Add timesheets for employees	Annual statement	Non-financial compensation possibilities
View/change timesheets (employees)	Payroll tax returns	Receiving dates salary
View your own holidays	Time registration	Salary reports
View holidays other employees		Overview of salary costs per year/period

Comments

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3. Appraisal and performance management

Definition: to inform, guide, monitor and evaluate employees to achieve organisational goals.

Competence management	Evaluation criteria periodic review	Company's goals
Report absence (by yourself or manager)	Online results periodic review	Visibly publish vision, mission, goals
Report actions against absence	Schedule periodic reviews	Warn employees/Receive warnings
View your own absence track		

Comments

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4. Training and development

Definition: the opportunity to enrol in courses and/or the sharing of knowledge of skills and knowledge within the company.

View the degrees of employees	View employment history employees	Online access to documents and protocols
Platform for knowledge/skills sharing	Skills management	Training management

Comments

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5. Employee involvement

Definition: involving employees in decisions, creating autonomy and scheduling regular meetings with employees for company improvements.

Chats	Employee/supervisor meetings for company improvements	Forum
Online help desk	Platform for knowledge/skills sharing	Online polls/surveys

Comments

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