



How e-HR has Changed Roles at NOKIA

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This thesis is dedicated to my parents, my wife Susi, and my two little boys, Bjorn and Bernhard. Without you all, I am nothing.

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Thanks All!

Statement of Authentication

I am submitting this thesis, confident in the fact that the material presented, to the best of my knowledge and belief, is original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

Sydney, 31 July 2006,



Franciscus Tandean

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Abstract

Human Resources (HR) today has been focusing on offering more value-added services to organisations through role transformation, efficiency, and the redefining of its roles, processes, and practices. With the advancement of Internet technology, HR is able to offer improved efficiency through e-HR and focuses on transforming its role to become a business partner.

A successful e-HR implementation will strategically change all the components and the way HR is organised and administered. This implementation must support the realisation of the organisation's HR strategy, and, most importantly, how HR will strategically position itself within the organisation. Often, in many cases, this is not being realised nor understood fully.

This research examines e-HR implementation and discusses its relationship with HR transformation strategy. To achieve this objective, a literature review was conducted and survey results of Nokia's e-HR implementation were analysed. The findings of this research from the case study analyses will be concluded at the end of this thesis as a contribution to both academics and HR practitioners.

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1 Introduction

This chapter discusses the background, scope, and structure of the research. It begins with the background of e-HR implementation, followed by the scope, objectives, and research questions and hypotheses. The last section will outline how the thesis is structured and includes a brief description of subsequent chapters.

1.1 Background

In the past decade, the Human Resources (HR) role in many organisations has been undergoing a major transformation. The new business realities (Kraut and Korman, 1999a, Schneider, 1999) have forced HR to evolve from the classical transactional focus to a strategic focus (Reddington et al., 2005). Along with this, there is also pressure for HR to start offering more value-added services (Subramaniam, 2002, Teoh, 2002, Toh, 2002) and move towards a strategic partnership role (Ulrich, 1997a, Ulrich, 2005a, Ulrich, 1997b, Ulrich, 2005b, Ulrich, 2001, Ulrich and Beatty, 2005a, Ulrich and Beatty, 2005b, Ulrich and Brockbank, 2005b, Ulrich and Brockbank, 2005a, Ulrich and Brockbank, 2005c, Walker and Perrin, 2001). This means that HR should 'do more with less' and put more effort into building strategic capabilities. This reinvention is known as 'HR Transformation', and involves a paradigm shift of the HR role from administrative to strategic partner (Perrin, 2003, Perrin, 2004, Ulrich, 1997b, Ulrich, 1997a).

Simultaneously, with new technology, many processes were automated and the world became essentially borderless. One technological breakthrough is the internet, which enables people to communicate, transact, and be connected online (Jindel, 1999, Kosiur, 1997, Merrick, 1999, Merkow, 1999). Internet technology has increased efficiency and revolutionised the way people work (Montgomery Research, 1999c, Montgomery Research, 1999d, Montgomery Research, 1999a, Montgomery Research, 1999e, Montgomery Research, 1999g, Montgomery Research, 1999b, Montgomery Research, 1999h, Montgomery Research, 1999f), and presents unique challenges to everyone in organisations.

HR is no exception. As a department that is often perceived by many as one of the last to adopt technology to become more efficient, HR has been challenged to adopt technology to benefit from it. One example where HR could benefit from technology is when HR chooses to redefine its role and re-engineer its processes by implementing electronic HR (e-HR). For example, e-HR could use internet technology to strategically change HR practices (Anonymous, 2002d). It is claimed that e-HR is helping HR transform practices and shift paradigms, roles, and responsibilities in the context of process engineering (Ulrich, 1997b). To illustrate how e-HR has transformed HR functions and their impact on other organisational members, the following fictitious scenario is presented.

Susan works for company X, is expecting to give birth in about three weeks, and is planning to start maternity leave next week. She logs into the Employee Services website from her desk, selects My Life Event menu, Maternity Leave submenu, and enters the necessary information. Susan's supervisor, Matthew, who is working at the Hamburg office, receives her leave application via SMS, as he prefers. Using his mobile internet access, Matthew reviews Susan's entitlements and indicates approval. The leave system automatically sends notifications to Susan and those she nominated to be informed by email or SMS. At the same time, the system alerts Matthew and HR of the need for a temporary staff replacement during Susan's maternity leave. Since the company has outsourced its recruitment to a partner agency, Matthew releases his approval, which automatically goes to a recruitment agency, sending a pre-approval order to the accounting department. When potential candidates are selected, Matthew will be notified in order to process the next step and finalise the recruitment process. During finalisation, Matthew imports the new staff information from the agency, which automatically defines the duration of the contract and all necessary administrative processes, such as payroll and cost centre charges. Six months later, Susan wishes to commence working from home. She goes to the same website, selects My Life Event menu, Family Detail submenu, and enters her newborn's information. The system updates her benefit entitlements and beneficiaries' information, and recalculates her tax.

This scenario is an example of how e-HR has changed the administration of leave, where HR responsibilities have been shifted to both employees and managers through the use of e-HR. Apart from reducing costs and improving processing time, e-HR does have more strategic focus. For example, the shifting of HR responsibilities and the automation of the

HR administration processes allows HR practitioners the time for more strategic and value-added activities.

A successful e-HR implementation will strategically change the way HR is organised and administered, where responsibilities, accountability, roles, and communication lines and means may all change (Gueutal and Stone, 2005, Lee, 2002, Lego, 2001). The e-HR implementation must support the realisation of the organisation's HR strategy and, most importantly, how HR will strategically position itself within the organisation (Said, 2002). Often, in many cases, this is not being realised nor understood fully by HR, so the costly e-HR implementation will become an investment with no return (Brown, 2002).

This thesis examines a company which claims to have implemented e-HR for strategic purposes. In view of the variety of role changes that are likely to follow implementation of e-HR, the question arises as to whether the implementation has been successful. To examine this issue, we examine a series of internal surveys from a case study company (Nokia) which to some extent its management believes that e-HR has been successful in fulfilling the strategic objectives. This thesis examines a series of annual surveys that directly address management satisfaction with the result of e-HR implementation.

1.2 Objectives, Scope, and Limitations

This thesis examines e-HR implementation from an HR-strategy point of view. The objective of the research is to investigate the correlation between e-HR implementation and HR transformation strategy. While there are many discussions about e-HR implementation from technical perspectives (Olivas-Luján, 2003), this thesis will focus on examining e-HR implementation from the strategy viewpoint, and attempts to answer the following questions:

1. What is the objective of e-HR implementation?
2. What is the correlation between e-HR and HR strategy?
3. What is the best way to measure e-HR success?
4. What are the criteria for successful e-HR implementation?
5. What should organisations do after e-HR implementation?

As a theoretical foundation, this research will adopt Ulrich's (1997b) research for the literature review and data analysis. There will be a case study analysis to measure applications relevant to practitioners. This case study will be presented as part of the research, along with survey data, to be analysed against theory.

Nokia, a global telecommunication giant with headquarters in Helsinki, Finland, has been selected as the case study organisation in this research. Nokia implemented e-HR in 1999 and since then it has been measuring e-HR progress. The documentation and post-implementation survey results from this company will be used for data analysis and measurement. As a case study, the conclusions cannot necessarily be generalised to other organisations or to other experiences of implementation of e-HR. Each organisation will generate a unique experience of its own implementation which may be complementary to other organisations. In addition, there were unavoidable limitations to the case study.

While there is extensive data covering the years of the implementation, it would have been useful to have interviews with some of the key stakeholders to gauge their experience of the implementation, as well as to compare HR practices prior to the implementation. There are also many pitfalls associated with personal interviews, especially in a company where there was a very high turnover of the relevant management during the crisis in 2001. For the purpose of the case study, this situation created difficulties with the interview approach. However, the researcher was involved in Nokia e-HR implementation in 1999–2001, and the experience gained and observations made are additional sources for case study analysis.

Although personal interviews were not suitable because of high staff turnover, Nokia had available a rich series of surveys which directly addressed the issues of interest to the thesis. The surveys covered 6 years. These web-based surveys were conducted annually from 2000-2005. A web based analysis is especially advantageous for the evaluation of the success or otherwise of e-HR implementation because, by its nature, it requires management to assess the e-HR system using the very techniques that e-HR makes available to the management process. Finally, the outcomes of this research will be discussed in the form of recommendations which can be used for both academic and practitioner purposes.

1.3 Thesis Structure

This thesis is divided into six sections. Chapter 1 presents the research background, objectives, scope, and structure of the research. Chapter 2 discusses the literature analysis starting from the introduction of HR roles in organisations, followed by e-HR implementation and beyond. Chapter 3 discusses the methodology of how this research was conducted and outlines the survey questionnaires used for data collection. Chapter 4 introduces Nokia, presents its history, and is followed by a discussion of how its HR strategy relates to e-HR implementation. Follow on, chapter 5 where the data are analysed and discussed. Finally, in Chapter 6, conclusions will be presented with some recommendations for further research.

2 Literature Review

This chapter reviews the e-HR literature, and the discussion will not only be about e-HR as technological implementation, but also will explain how e-HR was derived from HR strategy and the challenge behind it. It is important to have a full understanding of e-HR, as HR interprets e-HR implementation as a vehicle for achieving its objectives.

The chapter begins (2.1) with a discussion about HR roles in organisations where there has been a demand for change in order to keep up with competitors. In this section I will introduce e-HRM framework (Ruël et al., 2004) followed by Ulrich's model (Ulrich, 1997b) which becomes the theoretical foundation of this research. The second section (2.2) discusses e-HR implementation from the beginning phase to the post implementation period. To support the literature, in some cases complementary statistics and examples from the perspective of practitioners will be included. Finally, the last section (2.3) discusses what is beyond e-HR and covers the next steps for HR.

2.1 HR Roles in the Organisation

Historically, the HR role within an organisation was a transaction processor for handling administrative tasks such as salary processing and employee policy. As with all business and environment changes (Christensen, 2006), there are many challenges ahead, such as globalisation, value-chain creation, cost-profitability and growth, capability management, continuous improvement, technology innovations, competence, and intellectual capital and transformation (Ulrich, 1997b). These challenges create implications for every player in a business, including HR. They especially create challenges in an international context (Patel, 2002) because this requires coordination across a variety of legal jurisdictions (Evans et al., 2002). However, internet innovations offer the prospect of minimizing coordination difficulties even though these may be more substantial in an international context. E-HR therefore offers an opportunity to reduce international coordination costs and this is one reason why the study of a multinational corporation such as Nokia is valuable. The implication of these business challenges requires HR to transform its role to be more strategic for business (Ulrich, 1997b).

While there is a growing literature investigating efforts being conducted by HR strategically to evolve, innovate and even revolutionize its management (Flood et al., 1995, Gibson and Kirkman, 1999, Huselid et al., 2005, Leibs, 2002), the objectives of all appear to be to show

that each such initiative is directed at organizations moving towards efficiency and utilizing technology as an enabler. Furthermore, the complexity of globalization (Stonehouse et al., 2004, Fulkerson and Tucker, 1999, Hickey, 1999) has created further challenges for HR on how organizations can manage the workforce and at the same time comply with their international needs and requirements, such as diversity (Kenton and Yarnall, 2005), government regulations (Noer, 1999), and employees' expectations (Kraut and Korman, 1999b, Noer, 1999). As a result of these efforts, HR has indeed evolved significantly (Gibson and Kirkman, 1999, Patterson, 2001). Table 2.1 shows the differences between strategic HR roles and traditional HR.

Table 2.1 HR roles comparison (Green, 2002)

Role of the HR professional	Transactional Approach	Strategic Approach
Areas of interest	Recruiting, training, pay, work relations	Strategy and culture of the organisation and policy
View of the organisation	Micro	Macro
Client	Employees	Managers and the organisation as a whole
Status in the organisation	Rather weak	Rather strong
Educational requirements	Specialist in HR management	General HR education with management experience or general manager with HR experience
Time range for activities	Short range	Medium- to long-term range
Business based on	Transactions	Change/transformations

In Table 2.1, Green (2002) referred to traditional HR management as transactional HR where it does more day-to-day administration, or what Christensen (2006) called 'tactical HR'. Similarly, Fletcher (2005) has described this HR transition from a value contribution perspective, shown in Figure 2.1. The long-term objective for HR evolution is to create greater strategic value, and each evolutionary step will aim to increase efficiency and control, which will enable HR to contribute more value creation.

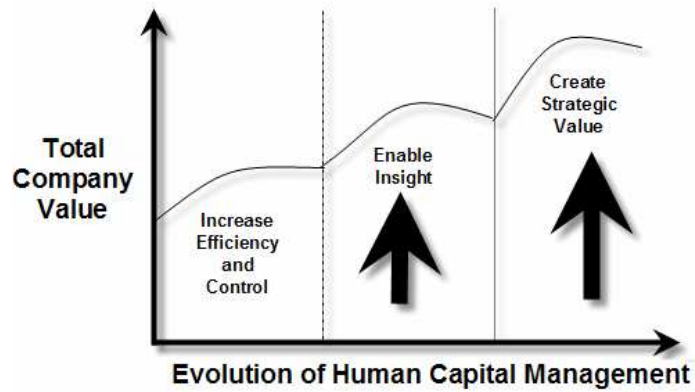


Figure 2.1 HR Evolution towards Human Capital (Fletcher, 2005)

The HR transition from transactional to strategic will be achieved by changing the focus, behaviour, and, more importantly, competencies. There are many steps to achieve this outcome. One of the first is for HR practitioners to relieve themselves of some administrative tasks and responsibilities to engage in more value-added and strategic activities (Management, 2002, Nokia, 2001-2003, Reddington et al., 2005, Ulrich, 1997b, Ulrich and Brockbank, 2005b, Walker and Perrin, 2001). By doing this, HR can focus on aligning its strategic direction with business (Stonehouse et al., 2004). This transition has been discussed in the strategic HR management literature especially when it is linked into the international context to find the best-fit strategy (Stonehouse et al., 2004).

Ruel et al. (2004) present an e-HR framework and relates this to HR strategy. The framework suggests e-HR strategic approaches, goals, types and outcomes. The following diagram shows how the framework relates each component one to another:

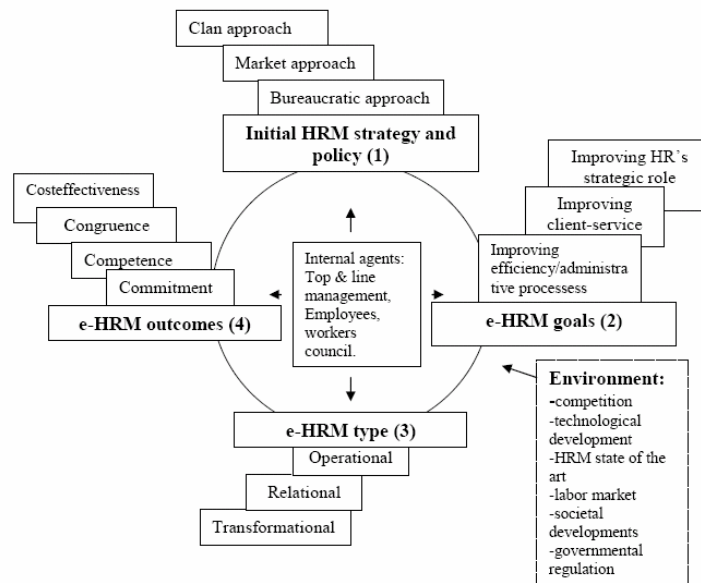


Figure 2.2 The e-HRM model (Ruël et al., 2004)

As Figure 2.2 shows above, e-HR implementation follows after the strategy formulation is derived into goals where e-HR will affect HR areas, such as operational, relational and transformational. This is in line with Ulrich's discussion of the future of HR (Ulrich, 1997b) which equates the future role of the HR practitioner to that of a business partner, as illustrated in Figure 2.2.

$$\text{Business Partner} = \text{Strategic Partner} + \text{Administrative Expert} + \text{Employee Champion} + \text{Change Agent}$$

Figure 2.3 HR roles in the future (Ulrich, 1997)

Figure 2.2 shows Ulrich's definition where HR needs to fulfil four different functions in order to become a successful strategic business partner (Ulrich, 1997b). They are as follows:

- Strategic partner, supporting business in executing strategy to meet customer demands;
- Administrative expert, offering efficiency of HR related-processes and functions;
- Employee champion, maximising employee commitment and competence;
- Change agent, enabling organisational and cultural transformation.

These four roles work in different dimensions, as suggested in the framework shown in Figure 2.3 (Ulrich, 1997b). The two axes represent focus and activities. The four quadrants are the roles where HR needs to work, which require different skills and

capabilities. Each quadrant has different outcomes and deliverables, as well as different activities. Ulrich (1997b) suggests that as a business partner, HR should have the capability of managing the four quadrants and each quadrant requires different skills and competencies (Hunter et al., 2006, Ulrich, 1997b, Ulrich and Beatty, 2005a, Ulrich and Brockbank, 2005b)

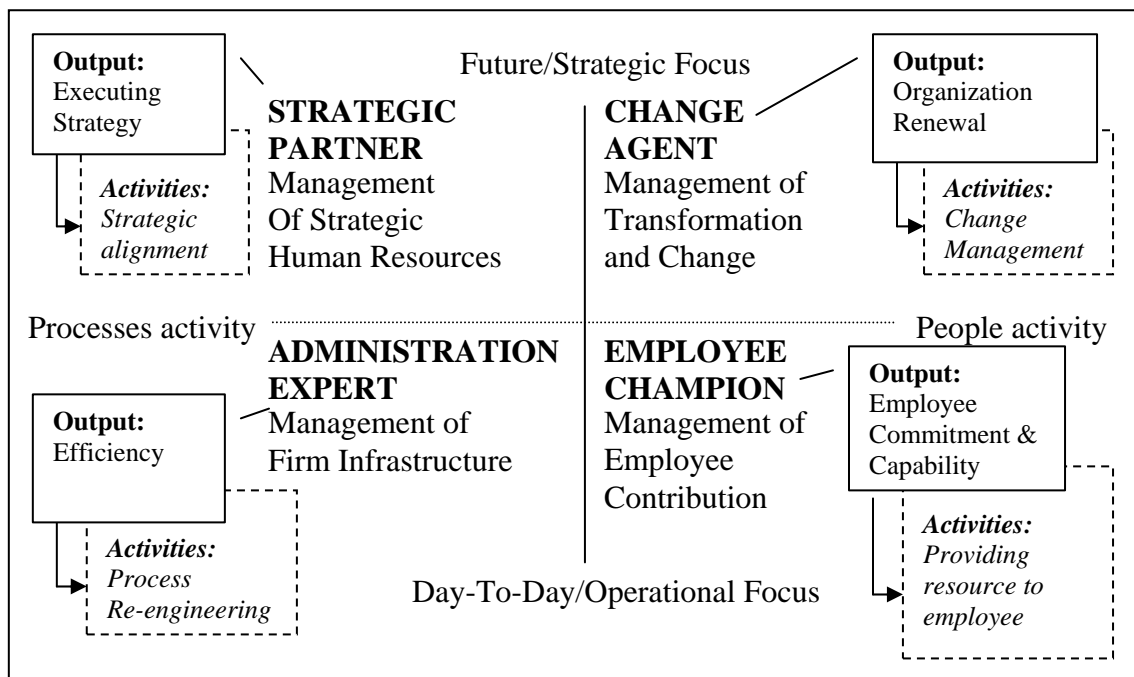


Figure 2.4. Ulrich's Matrix (Ulrich, 1997b)

Hunter et al. (2006:15) derived the following matrix to outline what HR requires in order to become a business partner:

- Credibility to engage in business;
- Management acceptance of HR's understanding of business to influence key decisions;
- Ability to become a change agent and network;
- Enough support, both technical and administrative, to deliver results.

In addition, they also defined key elements of an HR business partner (Hunter et al., 2006):

- Proactive in acting and adding business value;
- Commercial contributor to strategic business formulation and execution;

- Recognised as a leader of a cross-functional team with a people dimension;
- Being analytical and an effective user of management information;
- Being a champion of the whole HR services;
- Anticipating changes and risks, implementing best practice, and seeking improvements;
- Well networked with business and externals;
- Results orientated.

As a strategic partner, HR is required to sense customer demand, reading the signs of what is expected from the market, then translate it into its strategic execution. For example, in the case of the Marriott Hotel in Hong Kong given by Ulrich (1997b), HR strategically offered a five-day working agreement to attract potential employees, based on the competitive employment situation.

I will now relate Ulrich's (1997b) matrix with e-HR. In the Administration Expert quadrant, efficiency is the key output. It can be achieved through process re-engineering and the creation of shared services (Fletcher, 2005, Mowe, 2002, Nokia, 2001-2003, NokiaWISE, 2000b, Olivás-Luján, 2003, Ulrich, 1997b, Ulrich and Brockbank, 2005b). Hunter et al. (2006) proposes that the Shared Service Centre should be put into practice, including features such as the introduction of an HR Centre of Excellence (CofE). A CofE offers the combination of standardisation of HR processes, centralisation, and technological enablement into an HR shared information service (Hunter et al., 2006). Christensen (2006) also proposes a similar change in what he calls the HR Administrative Service Centre.

The implementation of HR shared services involves the choice of utilising the technology and outsourcing (Hunter et al., 2006, IOMA, 2004, Jorgensen, 2002, Jossi, 2001, Karakanian, 2000, Kehoe et al., 2005, Watson_Wyatt, 2002). On the technological side, e-HR is one of the latest options which is popular with many companies currently (Reddington et al., 2005, Ulrich and Beatty, 2005b, Ulrich and Brockbank, 2005b, Walker and Perrin, 2001).

2.2 e-HR Implementation

The concept of e-HR began when the benefits of internet technology were being promoted in the late 1990s. During this period, there were new buzzwords like Business-to-Business (B2B), Business-to-Government (B2G), and Business-to-Employee (B2E) (Calvo, 2002). E-HR was introduced under the B2E category. The definition of e-HR is always linked to internet technology and the Human Resource Information System (HRIS). For example, Hopkins and Markham (2003) defined e-HR as 'the strategic application of web-based technologies to HR related systems, that along with other organisational changes will lead to more broadly-based access to HR information and wider opportunities for managing that information'. There are many synonyms used by people in referring to term e-HR such as virtual HR(M), HR intranet, web-based HR, computer-based human resource management systems (CHRIS) and HR portals (Ruël et al., 2004). The scope of contextual definition is also various depending on how it was defined by respective community (or organization) and even sometimes by the way it has utilized the technology. E-HR itself, from the technological viewpoint, is an advancement of HRIS through web technology. E-HR has become the popular choice for most organisations as a tool for achieving HR strategic objectives (Anonymous, 2000, Anonymous, 2001c, Anonymous, 2002b, Anonymous, 2002a). Whether or not e-HR implementation serves the purpose depends on how it is planned and executed.

Challenges to e-HR implementation

To be successful in e-HR implementation, an organisation should understand both the impetus behind the decision to use e-HR and the potential benefits to the organisation (Reddington et al., 2005, IOMA, 2001, IOMA, 2002b, IOMA, 2002a, IOMA, 2004, Patterson, 2001). One of the surveys conducted by the Cedar Group¹ (Cedar, 2001, Cedar, 2002, Cedar, 2003) and summarised in Figure 2.4, highlights the primary barriers to successful e-HR implementation survey (Cedar, 2003).

¹ Cedar Group is a global technology consulting company with 20 years of experience in providing strategy and implementation of system solutions for commercial, public sector and higher education organizations.

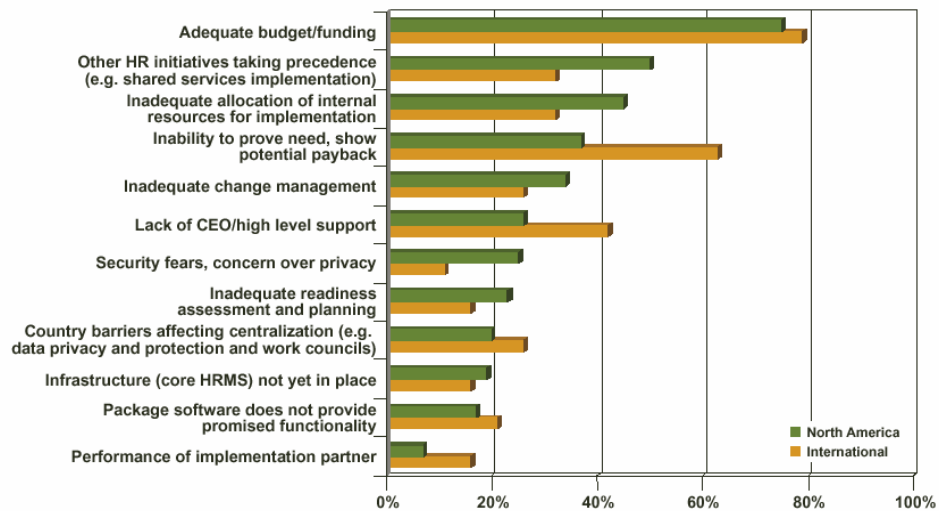


Figure 2.5 Primary barriers to successful e-HR implementation (Cedar, 2003)

The survey summary shows that adequate budget/funding is the greatest barrier for implementing e-HR. This is normally caused by the next two barriers: HR inability to prove the benefits of e-HR investment, which in turn causes lack of management support (Cedar, 2003, Walker and Perrin, 2001). This latter barrier can be prevented through a good proposal during the planning phase (Lego, 2001, Nieto, 2001).

The characteristics of a good proposal include a clear definition of the scope and objectives, business impact analysis, cost benefits, implementation, and, most importantly, ability to answer typical executive and investor-related questions (Becker et al., 2001, Kalakota and Whinston, 1997, Kheng, 2002, Lego, 2001, Van-Wyk, 2002, Wahab, 2002). To support the proposal, a business case simulation for e-HR should be included. In short, the most important aspect in making an e-HR proposal is to approach it from business perspectives and to prepare it from the strategic level perspective (Ho, 2002, Jossi, 2001, Kheng, 2002, Lego, 2001, Nokia, 2001-2003, Walker and Perrin, 2001).

In the e-HR survey conducted by Watson Wyatt (2002), there are various drivers mentioned in business proposals. Figure 2.5 shows that there are five main reasons for implementing e-HR. Amongst these, the most important is to recognise the business benefits (Watson_Wyatt, 2002), for example the e-HR implementation in Avaya (Cooper, 2002), Oracle UK (Kearney, 2002), and Nokia (Van-Wyk, 2002).

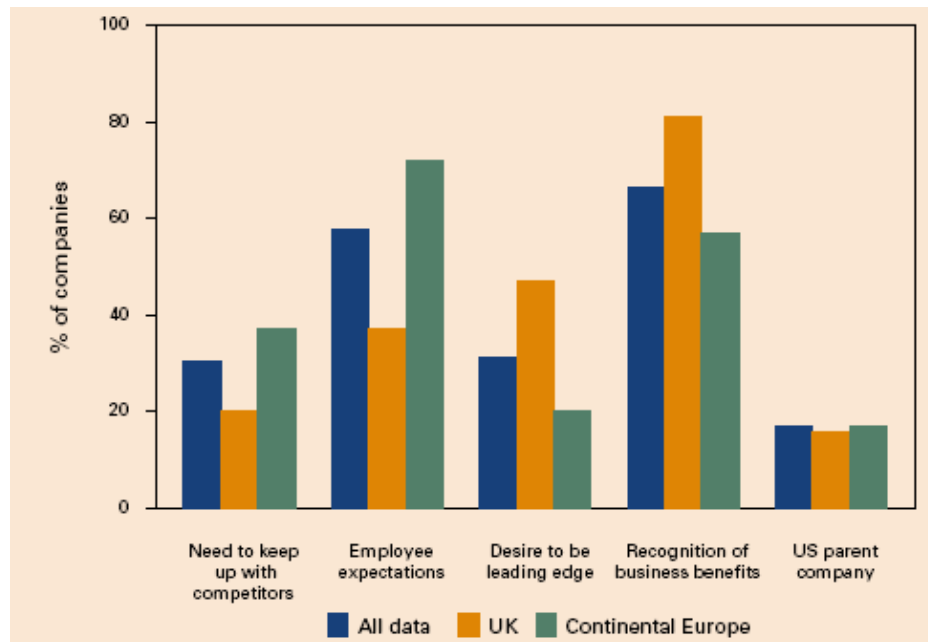


Figure 2.6 Main drivers of e-HR implementation (Watson_Wyatt, 2002)

From the same survey, Watson Wyatt (2002) outlined the breakdown of the business benefits (Figure 2.7).

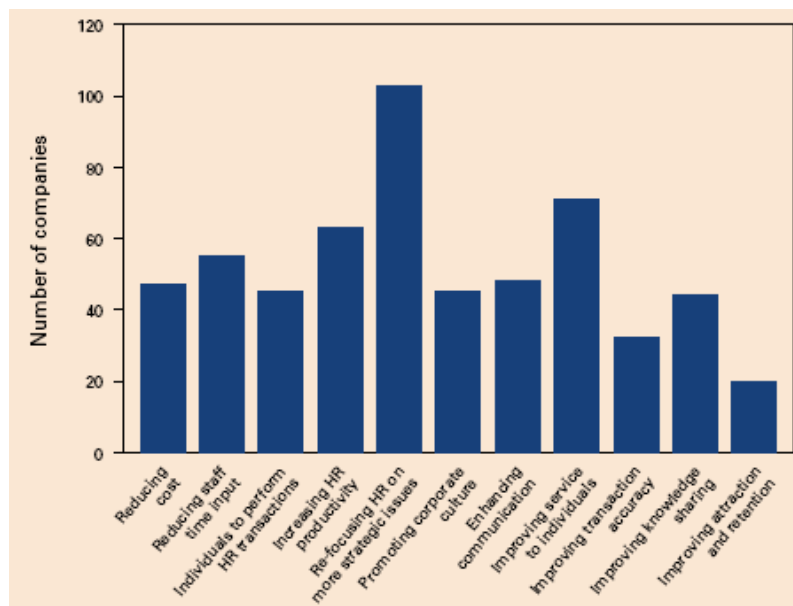


Figure 2.7 e-HR Benefits (Watson_Wyatt, 2002)

Forms of e-HR

The discussion of the literature so far has related to e-HR and HR transformation strategy. How does an organisation put this into practice? The answer varies (Anonymous, 2001a, Anonymous, 2001b, Anonymous, 2002c). I will consider taking what Avaya and Nokia do as example. In Avaya, the HR strategy on e-HR implementation is outlined in Figure 2.7.

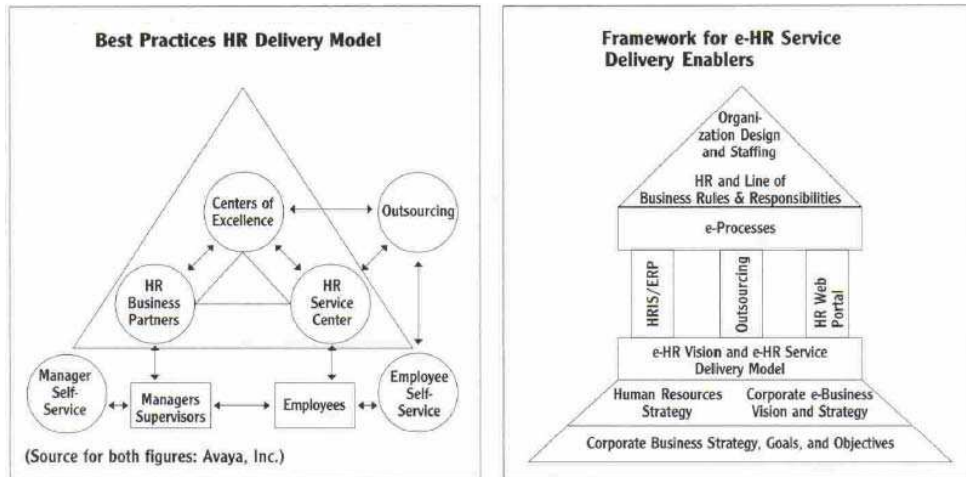


Figure 2.8 Avaya's HR strategy (Cooper, 2002)

As can be seen, Avaya's strategy is to release HR from administrative work as well as to enable HR service delivery through the creation of HR Shared Services which they call the HR Service Centre. Underneath this, e-HR is the foundation of the technology. This restructuring involves task and responsibility shifting from HR to employees, both line managers and staff. The role of e-HR here is to enable HR to achieve role transformation to become a business partner. A similar approach was planned by Nokia HR in their strategy, as shown in Figure 2.8.

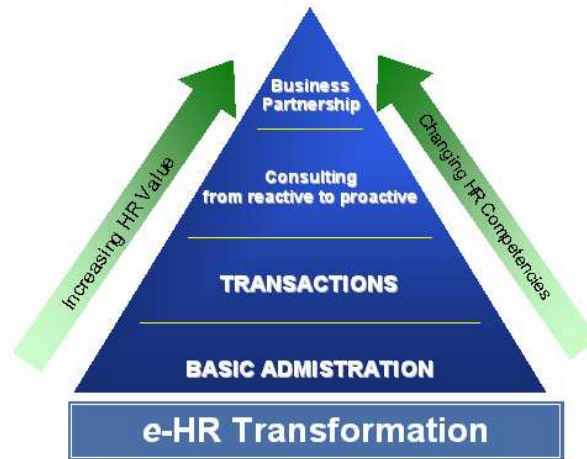


Figure 2.9 Nokia e-HR Transformation (Nokia, 2001-2003)

This figure shows that e-HR in Nokia is the foundation of HR information infrastructure to enable basic administration with all other transactions above it. The benefit of e-HR is to enable HR to start changing the competencies and increase its value to business, with the ultimate aim of HR being a strategic business partner (Management, 2002, Mowe, 2002, Nokia, 2001-2003, Ulrich, 1997b, Ulrich and Beatty, 2005a, Ulrich and Beatty, 2005b, Ulrich and Brockbank, 2005b). I will discuss Nokia e-HR in more detail in Chapter 4.

As part of its strategy, HR needs to define the proportion of roles and responsibilities in each quadrant (Ulrich, 1997b). Figure 2.9 illustrates an example of role contribution within Ulrich's matrix.

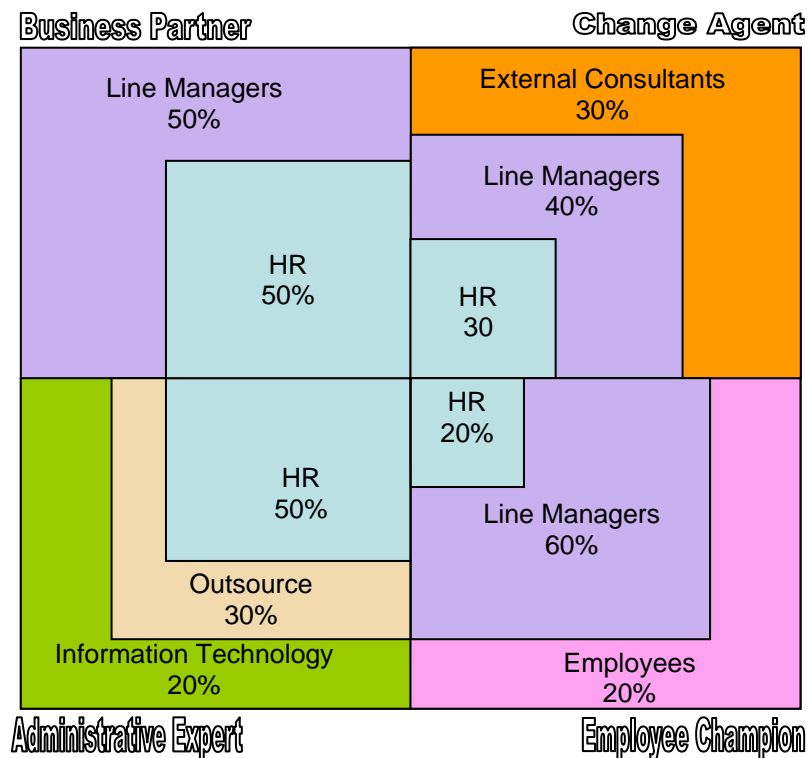


Figure 2.10 Shared Responsibilities in Ulrich's Matrix

As can be seen from the figure, each quadrant shows the role contributions of Line Managers, HR, Information Technology (IT), Outsourcing Partners, and External Consultants. The proportion of the roles and how they are defined vary in each organisation depending on how HR targeted their contribution. For example, in the Business Partner quadrant, line managers and HR have equal contributions. The Change Agent quadrant shows line managers, HR, and external consultants with 40%, 30%, and 30% contributions. In the Administrative Expert quadrant, the contribution of HR, outsourcing, and IT is 50%, 30%, and 20%. This means that some of the activities in this quadrant will be outsourced and based on technology. The choice of relative contributions is subjective; there are companies which choose to outsource while others feel more comfortable having in-house IT solutions in the Administrative Expert quadrant. The same happens in other quadrants.

There is also a need to define skills and competency requirements for each role in each quadrant (Hunter et al., 2006, Ulrich, 1997b). For example, in the Administrative Expert quadrant, HR requires consultative skills with field expertise (such as processes and policy making), while in the Business Partner quadrant strategic thinking and planning skills are required for developing strategy (Cooper, 2002, Hakim, 2002, Henson, 2005, Ho, 2002,

Stone-Romero, 2005). Figure 2.10 shows how Ulrich (1997b) outlines the model of future HR competencies requirements.

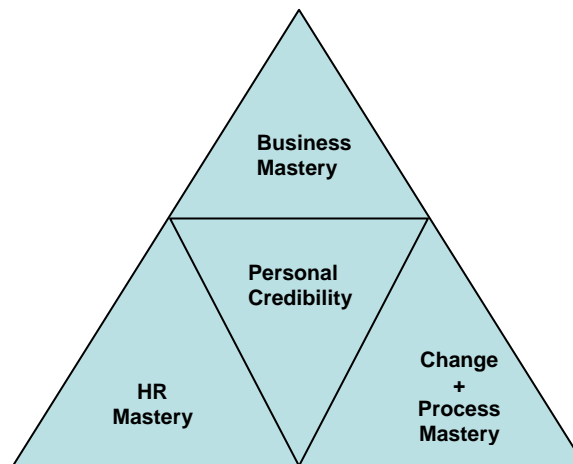


Figure 2.11 Future HR Competencies (Ulrich, 1997b)

The diagram above shows the three main competencies required of an HR practitioner in the future. These are: firstly, the ability to understand business needs and formulate strategy based on Business Mastery competence; secondly, the knowledge of the HR specialisation which can help HR act professionally to give advice and guidance, such as knowledge of the payroll process; thirdly, the ability to lead change and to manage the change process, which will enable HR to undertake change management and process re-engineering. All of these competencies should be integrated to enhance the credibility of HR.

Aside from deciding role contribution and competencies, HR would need to define the scope of changes, including the scope of e-HR implementation. Scoping is very challenging. Ulrich (1997:88–100) suggests two approaches needed in defining the scope: process re-engineering and re-thinking HR value creation. For an organisation which has HRIS in place, the starting point could be from the existing system (Hunter et al., 2006).

During scope and requirement analysis, HR should be able to employ both macro- and micro-analysis. This involves deciding whether to develop in-house solutions, to buy off-the-shelf solutions, to outsource, or a combination of these options (Lego, 2001, Lim, 2002, Meisinger, 2003). There is no specific rule about how to define the scope of implementation. The decision to in- and outsource is subjective and depends on how HR

will look at the importance level, budget, and priority (Anonymous, 2002a, Behr, 2003, Cho, 2002, Reddington et al., 2005, Walker and Perrin, 2001).

If HR decides to outsource some parts of its processes, options include partnerships (Lawler III et al., 2004, Reddington et al., 2005) or subcontracting (Cedar, 2003, Cho, 2002), which can involve some processing (such as payroll administration) or include all applications. However, HR needs to ensure that it has parameters for the outsourcing partner, such as a service level agreement, technology competence requirements, exit strategy, transition period, change management, and, most importantly, a solid contract (Lawler III et al., 2004).

The other part of the scope is to define which functions will be included, such as recruitment and selection (Kehoe et al., 2005, Stone et al., 2005), a performance management system (Banks and May, 1999, Cardy and Miller, 2005), a reward system (Dulebohn and Marler, 2005, Spencer, 2000), and training and development (Medhat, 2004). Then the combination of processes and whether to develop in-house or outsource could be outlined, as in Table 2.2.

Table 2.2 Example of e-HR scope decisions

Feature	In-house Development	Outsourcing	Strategy
Recruitment and Selection	No	Yes	Partnerships with global recruitment agency.
Performance Management System	Yes	No	To customise off-the-shelf system (SAP)
Rewards System	Yes	Yes	Scope 1 for in-house stock options and bonus performance programs; Scope 2 for outsourcing partner for payroll processing.
Training Development	No	Yes	Liaise with global training administrator and focus per modular- based agreement.

As can be seen above, the decision to scope and whether or not to outsource or develop in-house could be a subjective decision depending on the organisation's situation.

When we are talking about implementing e-HR, we are talking about change management. Ulrich (1997b) mentioned the importance of acknowledging the challenges involved in e-HR implementation and, most importantly, the main objective in line with HR objectives to transform its role. In this case HR should undertake change management and exercise its competence to act as a change agent to ensure that the process and system changes are supported by all organisational members.

Furthermore, HR should identify the best way to approach e-HR implementation for its organisation. This involves questioning which areas require standardising, streamlining, and customisation (Kong, 2002, Pass, 2002, Trapp, 2001, Wilky and Christie, 2000). The critical task for HR is to identify the best approach and to then analyse the possible impact, requiring that HR practitioners work with numerous functional teams to redefine processes and design scenarios, roles, and responsibilities.

Listed below are some recognised challenges that HR could encounter.

- Standardisation vs. Flexibility

The extent to which an organisation needs to limit the scope of standardisation has become a challenge. If the e-HR implementation is global, country and site implementation will normally involve various cultural challenges, requiring strategies based on geographic and demographic considerations. HR would be required to account for local factors, adopting a flexible attitude to possible constraints and government regulations.

- Communication Challenge

A critical factor concerns the management of communication, capabilities, resource commitments, and co-operation in the process of implementation. In this case, HR should strategically consider the impact on all members of the organisation and, most importantly, consider how to transform the existing paradigm (Teoh, 2002) to make role shifting happen more smoothly.

- Training and Competence Development

In the context of changes to processes and policies, the role of each position in the organisation will also be altered, requiring that HR assesses the existing job, skill-sets inventory, and requirements, in order to identify gaps. HR would be responsible for instigating employee training programs which would eliminate any gaps that were found. All implications such as the recruitment process, personnel administration, coaching, counselling, de-staffing, and benefit administration will shift the centralised administration concept to the distribution and self-service concept, meaning employees can access information and make enquiries from any location at any time (Spencer Jr. Ph.D, 1995).

Change Management

Change management is very critical in executing e-HR implementation. The use of various change management strategies and tactics can lead to the targeted outcome. Appendix A presents a summary of research literature on change management and adoption of innovation, which does not discuss e-HR implementation directly, but which could be useful for deciding e-HR implementation strategies. These concepts can be adopted for e-HR implementation, with the following cautions:

- E-HR not only implements technology but also implements an organisation-wide HR strategy, which will affect processes, tools, culture, and, most importantly, will change existing HR practices. For this it requires very thorough and detailed planning to execute deployment.
- Resistance can be expected from various levels of organisational members and possibly external parties (such as governments and business partners) (Baez and Abolafia, 2001, Cho, 2002, Deeks, 2000). For preparation to manage this, HR should consider several tactical plans for dealing with resistance.

The successful execution of implementation should be supported by top level management. The critical task for the HR change management team is to identify the best approach (Friesen, 2003, Hayes, 1999) and to analyse the possible impacts (Huselid et al., 2005,

Kaplan and Norton, 2002), which requires it to work with numerous cross-functional teams to redefine processes, design scenarios, roles, and responsibilities, and to insert them into their implementation plans (Cardy and Miller, 2005). Moreover, the ability to view from strategic and operational benefits perspectives will definitely contribute in managing change during e-HR implementation (Hopkins and Markham, 2003).

2.3 Beyond e-HR

Once e-HR is implemented, HR is challenged by the ‘What’s next?’ question. One issue is that there is a need to measure success and determine ongoing actions for the next strategic movements. For example, a survey needs to be conducted in ensuring the quality of implementation and to determine if the e-HR implementation objective is achieved. The survey will analyse many aspects, such as the quality of the tools, services, and processes, and impact on jobs and organisational culture. The typical measurement of this area can be done through surveys, statistics, polling, and interviews (Kraut and Saari, 1999). In Chapter 4, where I present the case study, I will show how Nokia measures its e-HR implementation through surveys.

Ideally, HR practitioners should measure if e-HR has helped them achieve role transformation. The measurement is made by perceiving how administrative processes are becoming more efficient and if they are now ready to take the next challenge, such as being an advisor of administrative processes. Moreover, HR should look at its current position in the organisation, and if there is a need to do capability building in strategy-making areas. This is an ongoing process where HR should keep benchmarking and measuring if it is up to date and, most importantly, if it is being integrated with management.

From the maintenance point of view, HR should also consider how to manage e-HR user support as well as its continuous improvement to meet the expectations from e-HR users, including management. There is a need to conduct a technology review, an audit on existing processes, and to benchmark against other organisations. In addition, competency should also be surveyed in order to identify if there is any development needed.

Further ahead, the HR transformation journey will continue. Ulrich and Beatty (2005a) discuss the HR transformation from strategic partner to strategic player. They identified six roles of HR as a player in an organisation. They are coach, architect, designer, facilitator,

leader, and conscience, where in the future HR should be capable of undertaking those roles (Ulrich, 2001, Ulrich and Beatty, 2005a, Ulrich and Brockbank, 2005a, Ulrich and Brockbank, 2005c).

2.4 Conclusion

This review can conclude with six observations or points of synthesis about e-HR and its relation to organizations and change.

1. The HR role in organizations has evolved over the years from having an administrative focus to a strategic focus. The main reason for this evolution has been because business and environment changes (Christensen, 2006) have created challenges that organizations need to adapt to. Hence, in sync with business pressures and organizational needs, HR should re-position itself and offer more value added services.
2. The diverse literatures discussed in this chapter has recorded various efforts being done by HR in order to achieve an effective transformation, from small to large scale, from local to international contexts. These create variations in models and forms, and consequently a uniqueness of individual organizational strategic implementation. Underlining of all these variations is that the objective of doing all these efforts is to achieve optimization of HR and its value added to fit into business needs.
3. When linking e-HR with HR strategy, there are some frameworks suggested (Ruël et al., 2004, Ulrich, 1997b). Each of these has a different approach, however they both aim in the same direction, which is, searching for efficiency through the utilization of technology by implementing e-HR. Moreover, these writers agree that e-HR should not be the main focus as such, but rather just a tool for increasing HR efficiency so HR could develop a more strategic role.
4. The review of the literature has made clear that there are substantial challenges in the implementation of e-HR. Survey and studies have shown that getting management support is very critical. This can be achieved by explaining e-HR as the driver of implementation, along with elaboration of costs and benefits which need to be assessed carefully by management.

5. Along with the variations of effort in searching the best fit of HR strategy for business, the form of e-HR implementation also vary from one organization to another. The model presented in this literature shown that two organizations (Nokia and Avaya) from the same industry have two different e-HR models. However, both companies shared a similar objective, that is, to transform the HR role to become a strategic business partner.

6. Apart from the need for management to carefully assess the costs and benefits of e-HR implementation, the literature reviewed here has highlighted the fact that different perspectives need to be taken into account in advance of e-HR implementation. For example, there are competencies needed by HR and organizational components. They are various in terms of the level of needs and requirements, depending on the scope and tactical approach adopted by organization. The role of change management is important in this case.

Furthermore management needs to have a plan for the future, beyond e-HR. This suggests that e-HR implementation is not the end of HR strategic journey but rather a beginning.

3 Methodology

This chapter discusses the data collection methodology and data used in this research. As mentioned earlier, Nokia began to implement e-HR in 1999 and has conducted a yearly survey since then. While there is extensive data covering the years of the implementation, it would have been useful to have interviews with some of the key stakeholders to gauge their experience of the implementation, as well as to compare HR practices prior to the implementation. However, there are many pitfalls associated with personal interviews, especially in a company where there was a very high turnover of the relevant management during the crisis in 2001. For the purpose of the case study, this situation created difficulties with the interview approach. Therefore, because of this high staff turnover, the research methodology did not include interviews.

On the other hand, Nokia had available a rich series of surveys which directly addressed the issues of interest. The survey covered 6 years. It was a web-based survey which was conducted between 2000 and 2005. These surveys required management to assess the e-HR system using the very techniques that e-HR implementation involves. This chapter includes the details of the survey questionnaires and defines the survey limitations.

Section 3.1 is a discussion of web-based survey literature in relation to survey methodology being used in this research.

Section 3.2 covers typical data, classification of research data collected, and methodology. It elaborates on data grouping (categories) and explains the survey questions asked within categories.

Finally, Section 3.3 discusses the survey timetable, the participants, demographics of the survey questionnaire, and the limitations of the survey.

3.1 Web-Based Survey Literature

As mentioned earlier, Nokia is a case study organisation whose HR annual satisfaction survey data are used for this research. These data were obtained through a web survey conducted by Nokia HR to analyse the satisfaction of line management.

Even though this research uses, rather than focuses on, web-based surveys, it is important to have a basic understanding of survey methodology, especially of web-based surveys since the research utilises secondary survey data collected by Nokia HR through web surveys.

There is recent but growing literature on web survey methodology, as this is becoming popular due to its efficiency and practicality. The purpose of reviewing web-based survey literature in this context is to promote the awareness of the benefits, limitations, challenges, and obstacles in web surveys, to produce better analysis and to avoid survey error traps.

The meaning of 'web survey' in this research is a survey that is conducted within the Nokia intranet, while web-based survey literature has a broader scope which might include the utilisation of intranet, internet, and/or any kind of web tools that serve the survey purpose. Appendix B outlines the web survey literature selected in relation to the methodology that Nokia used in conducting its HR Satisfaction Survey.

Discussion of the web-based survey started in the late 1990s when it was introduced, and when it started to be accepted as survey methodology (Baron and Siepmann, 1999). There are authors who focus on the survey technique in asking questions, and conduct experiments in order to come up with conclusions based on their hypotheses (Christian et al., 2002, Christian et al., 2004, Christian et al., 2006, Crawford et al., 2005, DePaolo and Sherwood, 2006, Dillman and Redline, 1999, Dillman et al., 2002, ESOMAR, 2005, Jolene D et al., 2004, Smyth et al.). Others discuss challenges, dependencies, and other factors that contribute to web survey. For example, Alvarez and Van Beselaere (2003) discuss the fundamental issues of using web-based surveys and (Biffignandi and Toninelli, 2005) consider the inference in web surveys, including how to deal with obstacles.

Some authors focus on the implementation of web-survey definition, technical aspects, and its challenges (Baron and Siepmann, 1999, Christian, 2003, Crawford et al., 2005, Gunn,

2006, Redline et al., 2003, Solomon, 2001). Examples include the importance of visual presentation during the survey (Christian, 2003), the use of scalar formats (Christian et al., 2002), the techniques of creating web-survey questionnaires (Baron and Siepmann, 1999, Dillman, 2002), and use of symbolics in web surveys (Dillman and Cleo, 2002).

Some of the literature discusses the technical side of web surveys (DePaolo and Sherwood, 2006, Dillman et al., 2006, Dillman et al., 2002) and compares web surveys with other methodologies (Christian et al., 2006, Dillman, 2002); there are other areas in relation to web survey methodology which are not discussed here.

There are some situations where the web survey methodology is particularly useful and others where it is less so. On balance, the literature concludes that web-based surveys are more suitable for topics associated with the use of the internet. The literature therefore contains substantial insights into the usefulness of, and difficulties with a web based survey. In the case of the use of this method for assessment of implementation of a web-based managerial initiative, it is clear that the benefits outweigh the costs.

3.2 Data Collection

Since 2000 Nokia HR has conducted a yearly survey called the HR Business Satisfaction Survey (BSS). The survey's objective is to measure HR performance on HR service delivery. This initiative is actually part of the follow-up action to measure e-HR's implementation success rate. The areas of services to be measured (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005) are shown in Table 3.1.

Table 3.1 HR BSS survey focus

HR Process	Examples
Attraction and Retention	Recruitment process including internal and external job market.
Compensation and Benefits	Compensation such as salary, benefit, stock options, shares, bonus, inpatriate and expatriate packaging and employee benefits.
Learning and Development	Training management, career planning support development and other educational events.
Investing in People	Performance planning, settings, career development, short and long term performance planning and appraisals.
Business Partnering and Change	Acting as HR change agent and partnering in strategic planning and execution.
HR Information	Provides on time, accessible and reliable information service to the business.
Nokia Way	Together with management setting an environment that reflect Nokia culture and way of working.
HR Delivery	Deliver HR services in many ways.

As can be seen in Table 3.1, the survey is divided according to HR processes which have correlations with e-HR and HR services, and these are described below.

- **Attraction and Retention**

HR has provided a self-service facility for the whole cycle of these processes, starting from resource planning, job design and profiling, skills, and competency planning. It has also liaised with global recruitment partners and external parties (for instance, recruitment agencies) in order to provide an on-time, reliable service. The main role of HR in this process is to provide advice and consultancy, while e-HR is the tool that will enable line managers to undertake administrative roles. The questions asked in the survey are:

- Does HR understand your recruitment needs and support you well in recruiting people with needed competencies and skills?
- Does HR offer value-added tools and processes to support retention of your skilled/key people?
- Is HR able to act as a partner in guiding people towards new internal, as opposed to external, career opportunities?
- Does HR facilitate resource planning in a value-adding and professional way?

- **Compensation and Benefits**

As part of its new role, HR has actively undertaken to ensure that Nokia provides fair compensation and remuneration packages to employees. For example, benchmarking, salary surveys, rewards, communication, and even compensation planning are conducted regularly. Administratively, HR also provides online tools to line managers and employees, such as Compensation Planning Review (CPR), stock options programs, online remuneration, and taxation services. The questions below regard compensation and benefits.

- Does HR provide you with good advice regarding Nokia pay practices which enable you to select the most appropriate and competitive remuneration for your people?
- Does HR support you in clearly communicating Nokia's rewards and benefits programs to your people?

- **Learning and Development**

In this area, HR provides valuable services, such as advising competence requirements, recommending training and development solutions, partnerships with training providers, and online libraries. E-HR helps HR to enable online learning administration, libraries, and tools. The questions within the survey are as follows:

- Does HR provide support and tools for the planning of competence development of your people?
- Does HR recommend training and learning solutions that meet the competence development needs of your people?
- Are the Nokia Learning Centre programs and solutions meeting the learning and development objectives of your team?

- **Investing in People**

In Nokia, the performance management system is called Investing in People (IIP), and involves objectives setting, performance and development planning, a coaching–counselling process, and is followed up by performance appraisal and bonuses. Since

e-HR has been implemented, the responsibilities have been shifted to both employees and their line managers in ensuring that it is timely and according to process. HR provides an online tool called 'IIP Tool' which links to other HR subsystems. The role of HR staff has become one of an advisor in this process. The survey looks at two areas:

- Does HR support you in implementing the IIP processes to a high quality?
- Does The IIP Tool enable you to complete the IIP processes on time and to a high quality?

- **Business Partnering and Change**

One of the important measurements needed for HR is to get feedback that its role as a business partner and change agent after e-HR implementation has been recognised. This is done by asking the following questions:

- Does HR effectively consult with you on how to lead and manage your organisation through change?
- Does HR effectively consult with Business Managers on HR topics?
- Does HR make a valuable contribution to the success of your unit through proactive consulting?
- Does HR understand your business?

- **HR Information**

The basic rule of implementing a system is to provide reliable information in a timely and accurate manner. This is also measured by HR by asking the following questions:

- Does HR provide you with adequate and accurate information that helps you manage your people better?
- Is Information about people-related topics easily available to you?

- **Nokia Way**

Nokia Way refers to a culture and a way of working in the organisation. It has four core values as its foundation:

1. Customer satisfaction, to meet existing, emerging, and future customer needs at a high quality for products and services.
2. Respect of individuality, internally and externally, including environment and communities.
3. Achievement, with an aim for every individual to achieve his or her best performance. The organisation will also celebrate and recognise individual achievement.
4. Renewal to ensure continuous improvements for higher quality and success. Learning is one important aspect that contributes to this, including learning from mistakes and taking risks.

These values become four cornerstones for Nokia people to conduct their daily work and operations. In this case, the HR role is to ensure that everybody is aware of these values and maintains them in daily practice.

To measure these values, HR needs to identify its performance level in such areas by asking the following questions:

- Does HR support you well in promoting the Nokia values?
- Does HR effectively support employee well-being and work-life balance in the organisation?
- Does HR effectively support employee diversity and an inclusive work environment?

- **HR Delivery**

HR delivery refers to how HR delivers its services and information. This can be by e-HR tools, such as web-based portals and services, email, phone, and face-to-face activities. After e-HR implementation, HR focuses on coaching, counselling, and partnering services. The four questions below cover focus areas.

- Does HR in your unit deliver its services in a timely, efficient, and effective manner?
- Do HR's web-based tools help your work as a manager?
- Does HR act proactively in coaching and partnering with you to address ongoing people issues in your team?
- Is HR easily accessible to you?

In relation to this research, these questionnaires provide information which can be utilized to evaluate if the Nokia e-HR implementation has achieved its objectives. This can be done because the questionnaires monitor yearly progress on each of the categories of HR service areas through line management satisfaction. The next stage of the research process is to link the six years of data into a trend series in order to evaluate the effectiveness of e-HR implementation in Nokia.

Survey scalars, implementation, and communication processes in Nokia

The above questionnaires were conducted and compared yearly to monitor the progress and direction of e-HR. They used a multiple-choice question set, where the respondents were asked to give their opinion on both satisfaction with and importance of the topics on a scale of 1 to 5. The value 1 represents the lowest level of satisfaction, and 5 represents very satisfied. The total of 25 questions (except in 2000–2001 when there were 54 questions) was classified into eight categories of HR processes and services as shown in Appendix C. At the end of the survey, the respondents were also asked to give their rating in the form of a numerical percentage on overall satisfaction and to provide free-text responses about HR services.

The questionnaires were conducted each year in the form of an anonymous web survey within the Nokia intranet, run by a third-party company. The participants in the survey were at Nokia managerial level as defined by their job grades, and include job grade 9 and above. This survey initiative is actually part of the follow-up action to measure HR success since e-HR implementation. For HR, this survey is an important measurement tool for business satisfaction and helps to define action plans for improving its service quality. After reviewing the survey and formulating action plans, the results and proposed action plans are communicated by the HR Corporate Communication Service department.

This research utilises the Nokia HR survey results from 2000 to 2005. It also utilises information available from HR contacts and data retrieval from the Nokia intranet.

How data are collected from Nokia

As mentioned earlier, the researcher was involved in Nokia e-HR implementation in 1999. The social network built during the implementation period benefit the researcher during the process.

The data were collected for this research mostly through internal email with relevant parties. At the beginning of the research, an email was sent to the Nokia e-HR Vice President to obtain permission to conduct the research. Normally, after each email was sent, a phone call was made to ensure that the email was interpreted correctly.

Some unclear information involved visits to the HR desk to obtain authorised access to the survey database and was normally followed by some clarification. When it was appropriate and applicable, verification was also achieved by phone or email.

The data collected from Nokia were filtered so that only overall results were used for analysis. The reason is that the breakdown into business groups is not relevant to this research. The data processed for analysis focus on satisfaction and importance levels only. As it is an annual survey, the analysis will be done on yearly results, followed by trend movements from one year to another over the six years. At the end of the analysis, a trend conclusion will be made in order to see the overall satisfaction and importance results for the whole survey period.

3.3 Sample Data and Statistics

As mentioned above, the survey participants are line managers with job grade 9 and above. The surveys cover Nokia line management worldwide, with feedback surveys from up to 5000 respondents from 60 countries. Up until the writing of this thesis, the surveys have been conducted up to and including 2005. Table 3.2 presents the annual Nokia-wide HR Business Satisfaction surveys (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005) in relation to schedule, participation, and respondents.

Table 3.2 Survey participants 2000–2005

Year	Survey Date	Participants	Respondents
2000	End of year 2000	Line managers with job grade 9–12 and managers with job grade 13 and above.	1236
2001	Nov 2001	Managers with job grade 9 and above	996
2002	25 Nov – 13 Dec 2002	Nokia line managers with job grades 10 with subordinates, and all managers with job grade 11 and above.	1647 of 4852 (34%)
2003	17 Nov – 28 Nov 2003	Managers with job grade 9 and above, and all managers with job grade 11 and above.	2175 of 6700 (32%)
2004	Nov 2004	Managers with job grade 9 and above, and all managers with job grade 11 and above.	2245 of 6400 (35%)
2005	5 Dec – 16 Dec 2005	Managers with job grade 9 and above, and all managers with job grade 11 and above.	1828 of 6900 (26%)

Source: Nokia HR Business Satisfaction Survey, various years.

Table 3.2 shows the participation in each year of the survey. As can be seen above, the response rates have varied over time. Partly this is explained by the fact that in some years the survey involved reclassified job grades. It is not documented or mentioned why HR decided to change the respondents from job grade 10 and above in 2002, while the other years included job grade 9 and above.

The survey participants are categorised demographically in Table 3.3 (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005).

Table 3.3 Demographics

Demographic	Detail Selection
Division	Nokia Group, Mobile Phones, Networks, Corporate Functions, Enterprise Solutions, Multimedia, Customer and Market Operations, Strategy, Renewal and Operational Excellence, Technology Platforms.
Country	Country selection to determine home base of respondent
Years with Nokia	0–1 year, 1–2 years, 2–5 years, 5–8 years, more than 8 years

Although basic demographics are used by Nokia HR for the survey, this research will not use demographic information since the research measures Nokia as a whole organisation. Hence, it is unnecessary to break down the demographics in detail.

Finally, the survey was started in 2000, and prior to this there were no similar data available, which makes it difficult to compare conditions prior to that time. There was also a plan to conduct interviews with key people. However, after more detailed analysis and research, it was difficult to find Nokia personnel who had the knowledge of what had happened in the

past, and even HR and line managers who were contacted were not aware of what was happening prior to e-HR implementation. However, the researcher was directly involved in the project during rollout as the Global e-HR Project Manager during e-HR implementation from 1999 to 2003. The observations made during the implementation period were of value to the data analysis.

4 Nokia e-HR

This chapter discusses the transformation of the HR role after the implementation of e-HR at Nokia. The impact of the role transformation has changed the satisfaction of HR services on a variety of levels. Whether satisfaction is higher or lower will be tested from the survey results.

The discussion begins (4.1) by introducing Nokia, explores how it has evolved, then focuses more specifically on the strategic objectives of HR to implement e-HR. Follow on, the next section (4.2) discusses e-HR implementation in Nokia Oyj which detailed the derivation of Ulrich Matrix (Ulrich, 1997) and more specific focus on successful criteria for e-HR implementation in Nokia.

4.1 Introduction to Nokia

Nokia is a leading telecommunications company which has its headquarters in Finland. Nokia has operated for more than 140 years, and there are disparate versions of Nokia's history (ConnectMobiles, 2006, NokialInfo, 2005, Vaknin, 2006). However, the version used in this thesis comes from Nokia's website (Nokia, 2006), and other versions are not included.

In 1865 the engineer Fredrik Idestam started a wood-pulp mill for paper production in southern Finland. This small company, later known as Nokia Ab, started generating electricity in 1902. During that period, there were two other companies established which would become an embryo of Nokia's formation: Finnish Rubber Works, established in 1898, specialising in manufacturing shoes, boots, and overshoes, and industrial hoses and belts; and Finnish Cable Works Ltd, established in 1917 as the result of a merger with Suomen Punomotehdas Oy, a wire and cable manufacturer (Nokia, 2006).

In 1967, Finnish Rubber Works and Finnish Cable Works merged with Nokia Ab (which at the time was a forestry and power-generating company) to form Nokia Corporation (Nokia, 2006). This group had several major products, such as rubber, cables, forestry, electricity generation, and consumer electronics. During and after the two World Wars, Nokia dedicated its effort to developing businesses and focused on the domestic market; however,

it later expanded its market with an international focus and shifted its products towards electronics, digital technology, and telecommunications.

In 1970, Nokia developed digital switches which enable telephony products to communicate with current advanced technology. Along with new Finnish regulations which allowed mobile phone network connections into the public network, Nokia performed well in its mobile network market share (Nokia, 2006). In the 1980s, Nokia expanded rapidly and became the largest manufacturer of televisions and the predominant information technology company in the Nordic market.

After the Finnish recession in the 1990s, Nokia decided to focus on telecommunications and digital technologies as its core business (Nokia, 2006). Currently Nokia intends to maintain its position as a global leader in telecommunication handsets and to compete with its competitors (such as Ericsson, Motorola, Siemens, and Samsung) in maintaining its market share in the telecommunication industry.

4.2 e-HR Implementation in Nokia

In the past, Nokia has successfully managed its business transformation from one industry to another. Nokia is now focusing on the wireless and digital service market with an aim to lead the market with its innovative products. For this reason, the adoption of new technologies and the search for new ways of doing business are vital in maintaining Nokia's competitive advantage. Cost efficiency will also play an important role in the competition. Therefore, Nokia is committed to searching for the most efficient way of doing business through innovation and continuous improvement. As a result, Nokia is employing many changes in its various organisational areas and levels, such as blending operational functions with technology, revamping its conventional structure, and outsourcing extensively to external partners (NokiaWISE, 2000b). For example, Nokia has developed with its suppliers and partners a sophisticated supply-chain network for its mobile phone production to enable it to implement 'just-in-time' production and an integrated distribution system. The network created involves suppliers, manufacturers, logistic service providers, distributors, and also their after-market service providers. Transformations are happening in all areas, departments, and levels (Van-Wyk, 2002). At the time this thesis is being written, Nokia is a virtual organisation with a combination of network and matrix

organisational structures which enable its people to work in various time zones and locations, and which utilises its advantage as a global company.

Similar to other departments, Nokia HR has to keep up with these transformations. To answer this challenge, Nokia HR has to increase its value-added capability and become a strategic partner for management. In 1998, Nokia HR started its first and foremost HR project with the strategic intention of moving the HR role in the company from being one of administrative support to becoming a strategic partner for Nokia management. HR's very first project was called 'NokiaWISE'. The extent to which this initiative was welcomed by Nokia management was evident as mentioned by Jorma Ollila at the Annual Nokia HR forum: '... the importance of aligning HR practices with business strategies and basic HR products and services must be delivered with quality and operational efficiency' (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a).

This initiative was also in line with HR market trends and adopted Ulrich's (1997b) model as a basic framework which is illustrated in Figure 4.1.

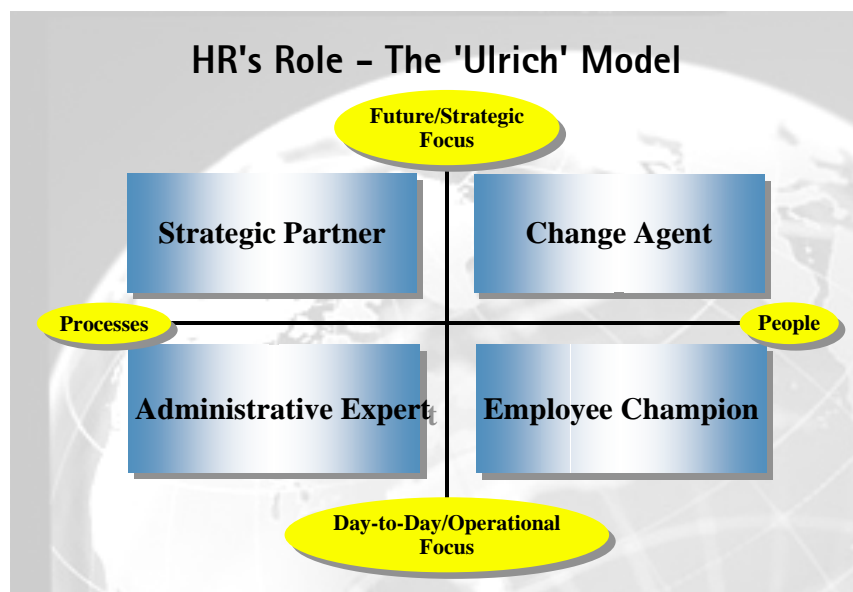


Figure 4.1 Nokia's holistic view (Ulrich, 1997b)

As can be seen from Figure 4.1, Nokia intends to re-focus from day-to-day operational processes to a strategic focus, and this model is interpreted as shown in Figure 4.2.

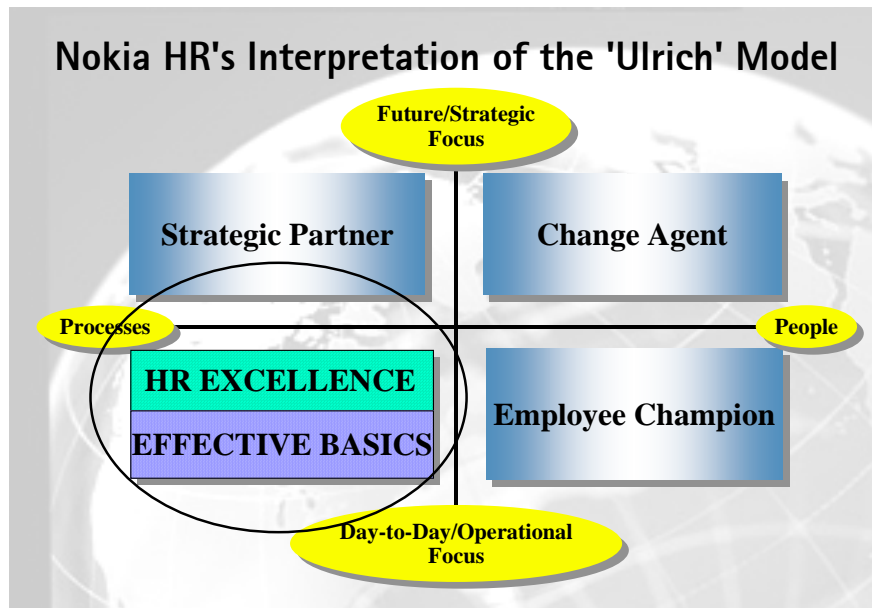


Figure 4.2 Interpretation of the Ulrich Model (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a)

HR realised that the transformation would involve significant changes in various processes and areas, so the initiative of the first phase of the project was to focus on becoming an HR Administrative Expert with two main parts:

1. HR service excellence, which focused on improving HR existing services and offering HR consultative services to management;
2. Enabling effective basics, which would comprise an efficient integrated database system, along with HR process re-engineering and role transformations (Nokia, 2000).

These will help HR form a set of structures and disciplines within Nokia, and they will facilitate the next transformation to a strategic level.

To achieve its strategic objective, Nokia HR decided to streamline and standardise its processes and utilise technology to achieve efficiency. It should be noted that the use of technology itself as a tool is not as important as strategy. Technology is an enabler of aspiration to fulfil its objectives. For example, with internet and wireless capabilities, Nokia HR is able to deliver its services anywhere, at any time, with any product that has a connection into this technology. Nokia realised this when it stated in the project charter: 'It is not just another systems project but it is a fundamental step towards a new mode of

operating that will facilitate changing HR from their current position towards the goal of Business Partner' (NokiaWISE, 2000b).

As implications for this project, the existing administrative processes have been streamlined and standardised through either re-engineering or process automation. Figure 4.3 shows the proposed HR life cycle in Nokia.

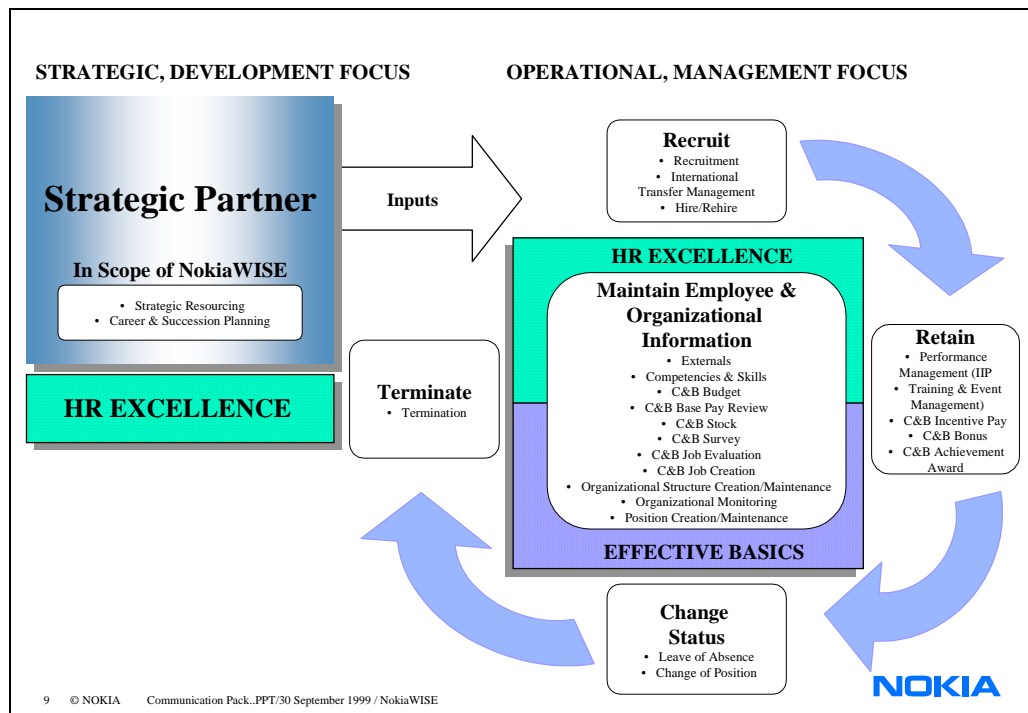


Figure 4.3 Nokia HR life cycle (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a)

During this project, there have been new processes and concepts introduced; for example, the Leading System Concept (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a) is becoming one of the leading applications of other HR subsystems. This Leading System Concept is based on two main functions: payroll and self service. It has become a foundation of other processes and a standardised system for Nokia.

Furthermore, the concept of standardisation has not ignored local country needs such as legal requirements, contractual obligations, and fundamental business needs. Figure 4.4 represents the HR development approach which has adopted the sunflower principle for scoping standardisation.

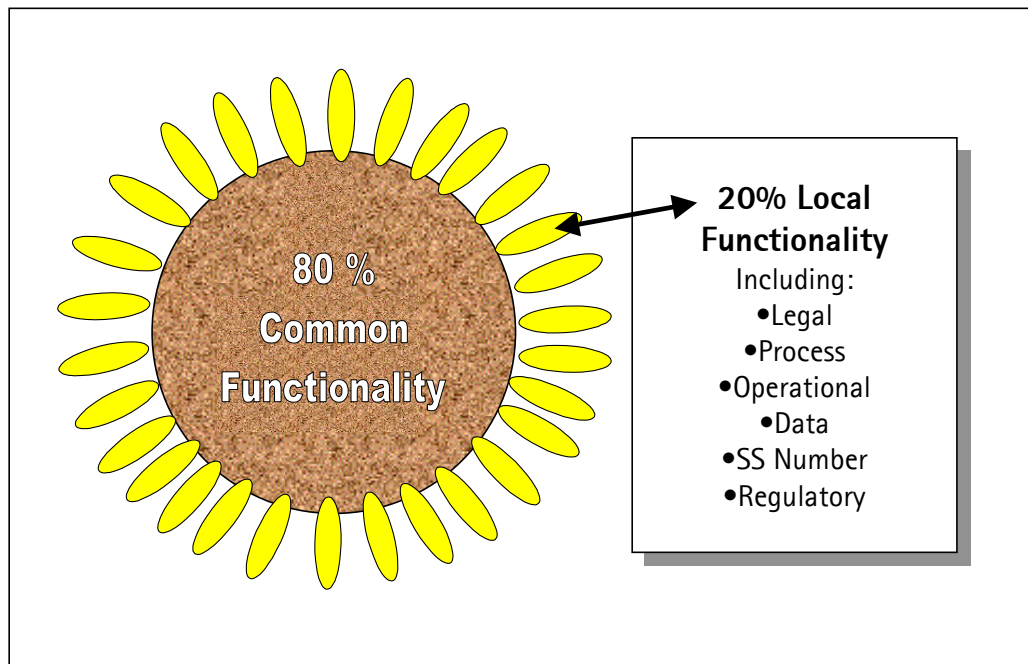


Figure 4.4 Nokia HR Sunflower approach (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a)

In accordance with this re-engineering process during the project, there have been many changes since 2000 in HR policy and organisational structure. These were as follows (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a):

1. Radical policy changes in management and HR areas.
2. Massive HR structural reorganisation which re-classified Nokia's network and matrix structure from line management, project reporting, and HR perspectives.
3. In line with role transformation and altered responsibilities in managing HR information, the new policies included security, privacy acts, and country legal regulations.
4. Radical paradigm and process shifting which utilised technology and moved towards HR market trends.

One noticeable structural change that has occurred in Nokia is the recognition of multiple organisational views or perspectives (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a). Among these are HR organisational, line management, and project management perspectives (matrix reporting). In this way, Nokia recognised its need for a sophisticated organisation structure, such as a network structure that showed a complexity of line, HR, and matrix reporting in multinational companies (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a). Another change due to role redefinition affected both HR and line

management. This occurred with the shifting to line managers of HR administrative tasks which have become standard tasks and responsibilities for line management. HR itself shifted its roles even further by becoming consultants and advisors to line managers. Figure 4.5 illustrates generic role classifications by HR.

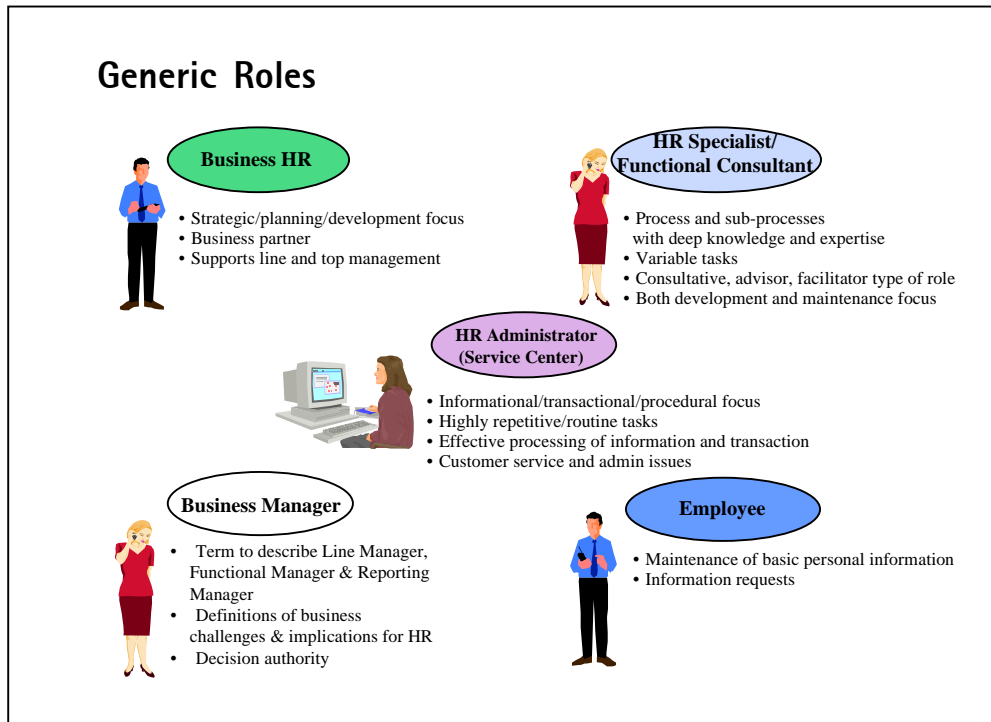


Figure 4.5 Generic role classifications (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a)

In order to ensure that managers had followed HR guidelines and standards in a timely manner, there is a need in Nokia to have integrated HR tools which can be accessed at any time online and which are always up to date. e-HR is the answer (NokiaWISE, 2000b, NokiaWISE, 2000c, NokiaWISE, 2000a). E-HR delivers the majority of needs such as role redefinition, process innovation, and data integration.

Finally, to measure its success, HR uses criteria shown in Table 4.1 to measure if the strategy is aligned to business needs.

Table 4.1 e-HR success criteria (NokiaWISE, 2000b)

Strategic Intent	Criteria
Basic HR products and services	<ul style="list-style-type: none"> •70% of management reports on the web •Quality of service and efficiency •100% of new employees complete induction •90% of new supervisors participate in Nokia's development program •100% employees had an IIP discussion and development plan •80% of basic employee data maintained by employees •80% salary reviews performed using the web •International transfers are handled in an equitable, efficient, and professional manner •HR communications targeted at employees and managers are available online on the web
Employer of choice	<ul style="list-style-type: none"> •Max 6 weeks to fill 90% open positions •Flexible work solutions •Innovative cafeteria C&B offering is in place •High motivation •High degree of internal rotations •95% of job openings posted on intranet •Minimal attrition (between 3% and 7%) •The Nokia Way is thriving
Required business competencies in place in a timely manner	<ul style="list-style-type: none"> •70% of learning provided by learning centre •90% external hiring originates from the web
Champions of change management	<ul style="list-style-type: none"> •HR excel at facilitating change
An inclusive environment leveraging from diversity	<ul style="list-style-type: none"> •Diversity in JG 12+ to reflect employee population •Recruitment statistics on diversity from 6 major countries
Additional HR measures	<ul style="list-style-type: none"> •Quality of hire •HR costs •HR ratios by function

The detailed measurement of the above criteria are various tools; however in order to achieve synergy with reality, HR is collecting feedback using the HR Business Satisfaction Survey. This survey is critical for HR as it is a direct medium to collect feedback and suggestions for HR. Details of the survey results will be discussed in the next section.

5 Data Analysis

As mentioned earlier, Nokia HR has conducted an HR Business Satisfaction Survey (BSS) each year since 2000. A survey annually would not give optimum benefit if it was not done in series and was not compared and analysed to see trend movements. This section will highlight the individual results and compare annual survey results. It will summarise results, highlight satisfaction and importance ratings, suggest areas of improvement, and, finally, discuss trends over the period 2000–2005.

The surveys assess management satisfaction across a range of relevant criteria. After presentation of the basic results in this chapter, these results will be linked and discussed in the concluding chapter.

- **HR BSS results 2000**

The first survey was conducted near the end of 2000. The results of this survey were not provided to participants. Nokia HR at that time had just finished implementing e-HR and tried to find the best way to measure it. There were 1236 respondents to this survey from line managers with job grade 9–12 and managers with job grade 13 and above. The results of the survey are shown in Table 5.1.

Table 5.1 Nokia HR BSS 2000 survey results (Nokia, 2000)

BSS Year 2000 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.11	N/A	N/A	4.00	N/A	N/A
2. Compensation & Benefits	3.05	N/A	N/A	4.15	N/A	N/A
3. Learning and Development	3.07	N/A	N/A	3.96	N/A	N/A
4. Investing in People	3.47	N/A	N/A	4.07	N/A	N/A
5. Business Partnering and Change	2.70	N/A	N/A	3.64	N/A	N/A
6. HR Information	3.06	N/A	N/A	3.77	N/A	N/A
7. Nokia Way	3.13	N/A	N/A	3.84	N/A	N/A
8. HR Delivery	3.10	N/A	N/A	3.85	N/A	N/A
Total	3.08	N/A	N/A	3.90	N/A	N/A

The highest satisfaction rate came from the Investing In People (IIP) category with an average of a 3.47 satisfaction rate. It was then followed by Nokia Way (3.13), Recruitment and Resourcing (3.11), Structure and Delivery of HR (3.10), and finally International Transfer Management (3.02). From the importance viewpoint, the respondents thought that Compensation and Benefits (C&B) was the most important category, followed by IIP, then Attraction and Retention. The Business Partnering and Change category showed the least importance and also the lowest satisfaction rate. The deviation between satisfaction and importance is shown in Figure 5.1.

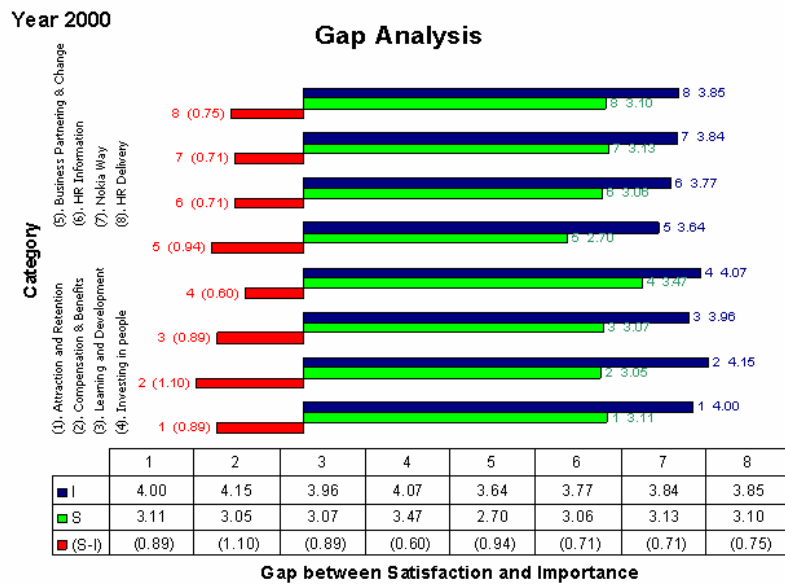


Figure 5.1 Year 2000 Gap Analysis (Nokia, 2000)

As can be seen, the biggest gap is in the Compensation and Benefits category, and the least deviation is in the IIP category. Figure 5.2 suggests the categories which HR should target for immediate improvement.

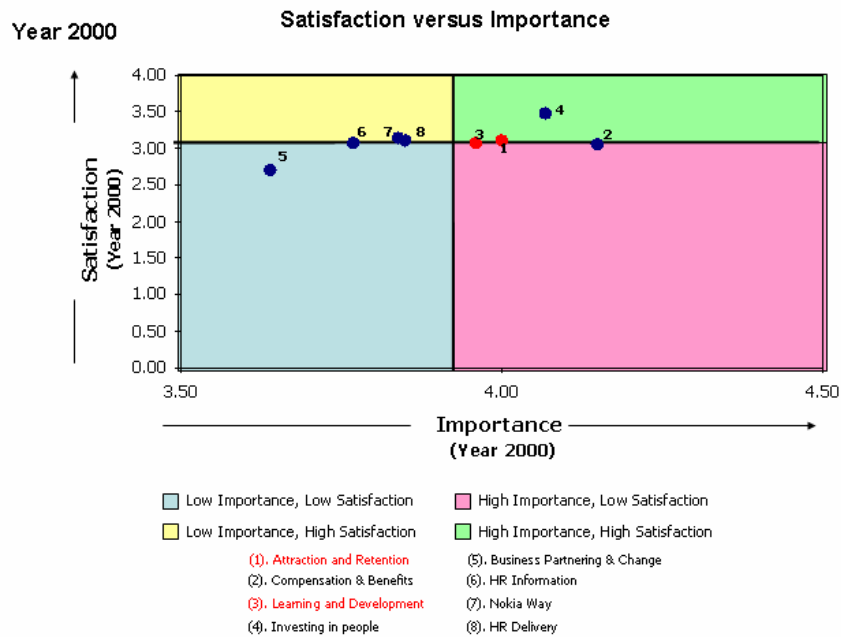


Figure 5.2 HR next focus category (Nokia, 2000)

Figure 5.2 showed that HR should focus on Attraction and Retention and Learning and Development in its next strategy to improve overall satisfaction. The overall satisfaction rate in 2000 is 3.08 and the importance average is 3.90. Compensation and Benefits is located near the satisfaction line; however it is not viewed as important as Attraction and Retention or Learning and Development.

○ **HR BSS results 2001**

This survey was conducted during November 2001. There were 996 participants from managerial level with job grade 9 above. Table 5.2 shows the survey results along with the comparison of trends from the previous year:

Table 5.2 Nokia HR BSS 2001 survey results (Nokia, 2001b)

BSS Year 2001 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.08	3.11	-1%	4.16	4.00	4%
2. Compensation & Benefits	3.26	3.05	7%	4.35	4.15	5%
3. Learning and Development	2.93	3.07	-5%	4.14	3.96	5%
4. Investing in People	3.40	3.47	-2%	4.22	4.07	4%
5. Business Partnering and Change	2.94	2.70	9%	3.97	3.64	9%
6. HR Information	3.26	3.06	7%	4.14	3.77	10%
7. Nokia Way	3.31	3.13	6%	3.98	3.84	4%
8. HR Delivery	3.67	3.10	18%	4.09	3.85	6%
Total	3.23	3.08	5%	4.13	3.90	6%

The highest result was on HR Delivery with an improvement of 18%. Even though IIP results dropped by 2%, it still had the second highest satisfaction rate at 3.40, followed by Nokia Way on 3.31. There was also an improvement in Compensation and Benefits by 7%, from 3.05 to 3.26. On the down side, there was a drop of 5% in satisfaction in Learning and Development, then IIP by 2%, and Attraction and Retention by 1%. On the importance level, Compensation and Benefits became more important at 4.35 (5% higher), followed by IIP at 4.22 (4% higher), Recruitment and Resourcing at 4.16 (4% higher), and Learning and Development at 4.14 (5% higher).

Figure 5.3 represents the deviations between satisfaction and importance.

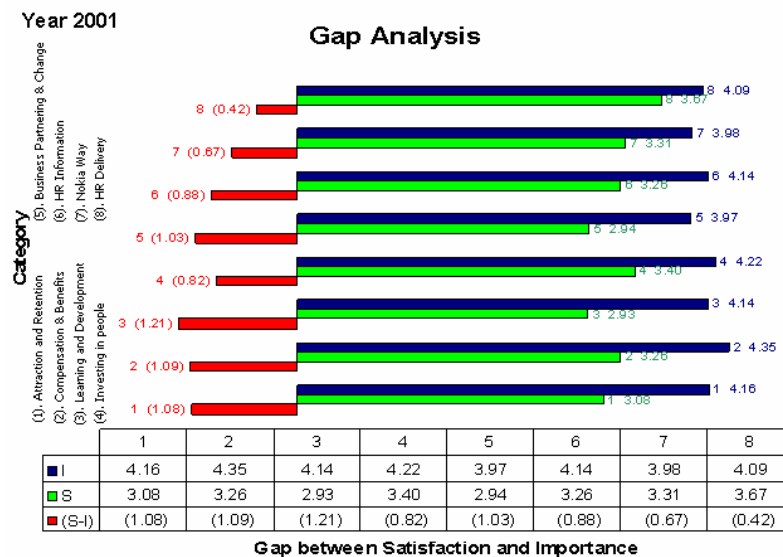


Figure 5.3 Year 2001 Gap Analysis (Nokia, 2001b)

This shows that the highest gap comes from Learning and Development, while the smallest variation comes from HR Delivery. Figure 5.4 shows the recommended areas to focus on.

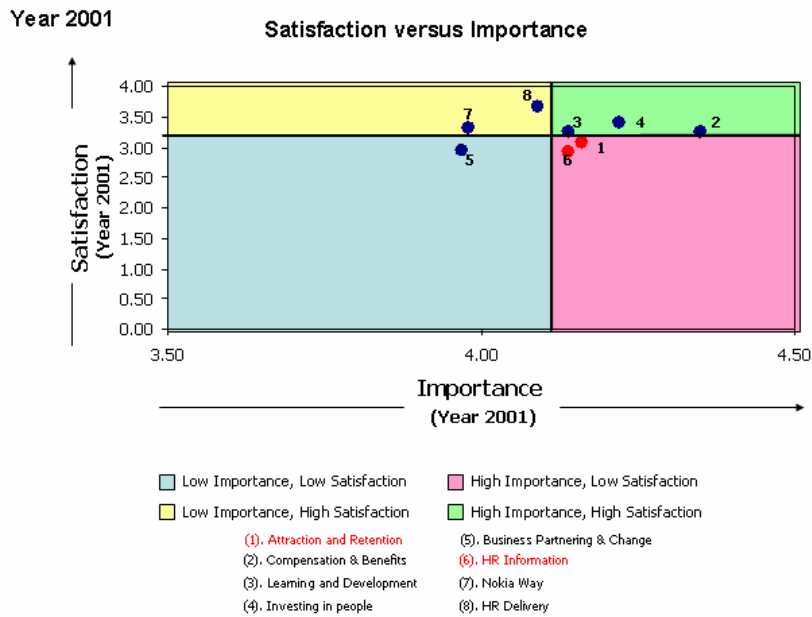


Figure 5.4 HR next focus category (Nokia, 2001b)

Figure 5.4 suggests that HR should focus on two areas for improving overall satisfaction: Attraction and Retention, and HR Information. This will hopefully improve the total satisfaction rate of 2001 that had been increasing by 5% since 2000 to 3.23.

- **HR BSS results 2002**

The survey was conducted from 25 November to 13 December 2002. The invitation was sent to Nokia line managers in job grade 10 with subordinates and to all managers in job grade 11 and above. Altogether the size of the target group was approximately 4852 Nokia-wide with 1647 responses. The questionnaire had been shortened drastically since 2001, from 54 questions in previous years to 25 questions. Table 5.3 shows the survey results.

Table 5.3 Nokia HR BSS 2002 survey results (Nokia, 2002)

BSS Year 2002 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.09	3.08	0%	4.18	4.16	0%
2. Compensation & Benefits	3.47	3.26	6%	4.38	4.35	1%
3. Learning and Development	2.96	2.93	1%	4.12	4.14	0%
4. Investing in People	3.82	3.40	12%	4.32	4.22	2%
5. Business Partnering and Change	3.05	2.94	4%	4.02	4.08	-1%
6. HR Information	3.43	3.26	5%	4.13	3.97	4%
7. Nokia Way	3.21	3.31	-3%	4.02	4.14	-3%
8. HR Delivery	3.52	3.67	-4%	4.19	3.98	5%
Total	3.23	3.23	0%	4.17	4.09	2%

As can be seen from Table 5.3, the IIP category had the highest satisfaction as well as the highest satisfaction improvement (about 12%) since 2001 with a score of 0.42 higher than before. This is followed by HR Delivery (3.52), then Compensation and Benefits (3.47). In contrast, Nokia Way, which represents Nokia's values, had dropped since 2001 by 3%. The least satisfactory area was Learning and Development. Figure 5.5 shows the gap between satisfaction and importance.

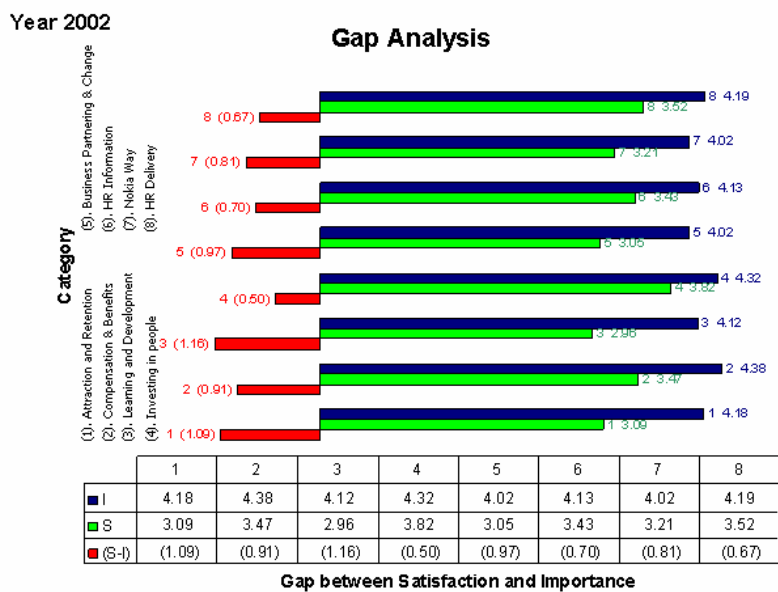


Figure 5.5 Year 2002 Gap Analysis (Nokia, 2002)

As can be seen above, the biggest deviation comes from Learning and Development while the smallest comes from IIP. Figure 5.6 plots the next area to be focused on by HR.

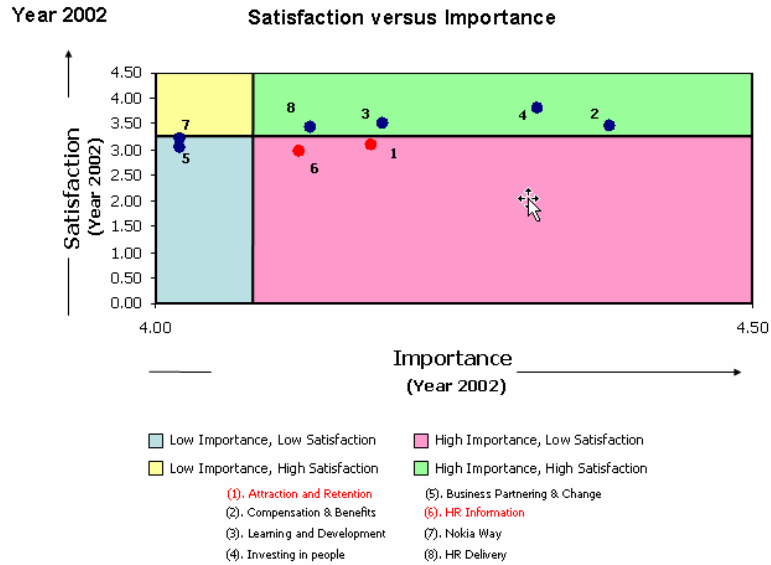


Figure 5.6 HR next focus category (Nokia, 2002)

As can be seen above, the focus should be on Attraction and Retention and HR information. This is similar to the previous year's results.

- **HR BSS results 2003**

The survey was conducted from 17 to 28 November 2003. The invitation was sent to Nokia line managers with job grade 9 and above, and all managers in job grade 11 and above. There were 6700 eligible participants but only 2175 responded. Table 5.4 shows the survey results.

Table 5.4 Nokia HR BSS 2003 survey results (Nokia, 2003)

BSS Year 2003 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.19	3.09	3%	4.14	4.18	-1%
2. Compensation & Benefits	3.49	3.47	1%	4.32	4.38	-1%
3. Learning and Development	3.08	2.96	4%	4.10	4.12	0%
4. Investing in People	3.92	3.82	3%	4.26	4.32	-1%
5. Business Partnering and Change	3.14	3.05	3%	3.95	4.02	-2%
6. HR Information	3.50	3.43	2%	4.09	4.13	-1%
7. Nokia Way	3.16	3.21	-2%	3.93	4.02	-2%
8. HR Delivery	3.63	3.52	3%	4.18	4.19	0%
Total	3.39	3.32	2%	4.12	4.17	-1%

From the results presented in Table 5.4, the IIP category had the highest satisfaction with a 3% improvement since 2002. The most unsatisfactory categories are Learning and Development, and Attraction and Retention. The variation between satisfaction and importance is presented in Figure 5.7.

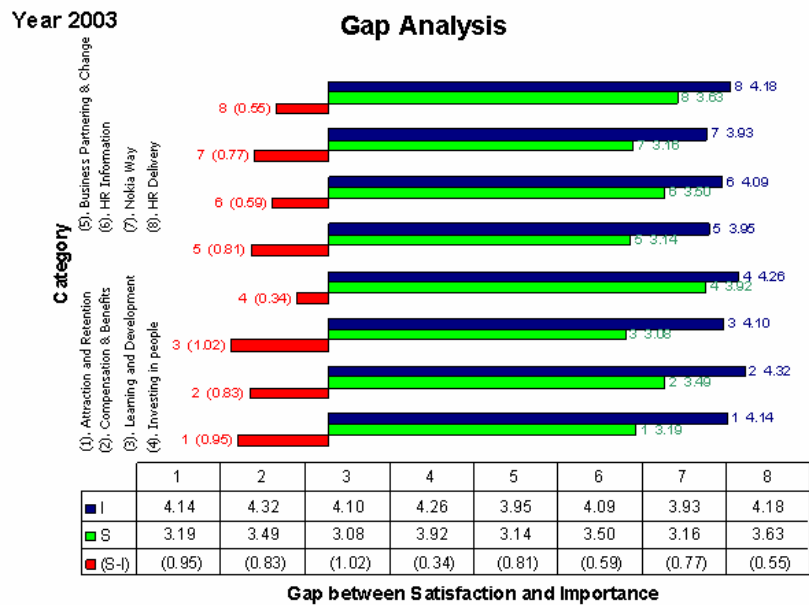


Figure 5.7 Year 2003 Gap Analysis (Nokia, 2003)

This figure shows that Learning and Development has the highest deviation, followed by Attraction and Retention. The focus category for HR to be improved is shown in Figure 5.8.

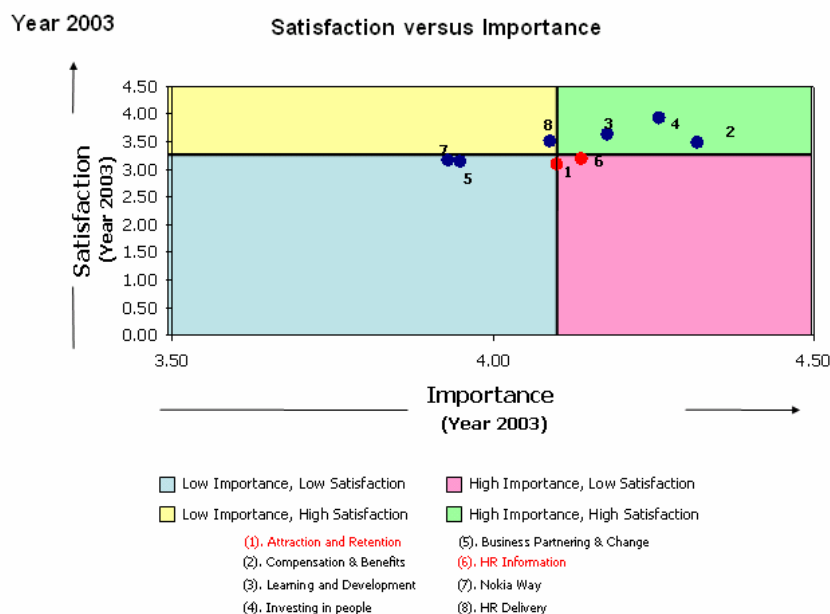


Figure 5.8 HR next focus category (Nokia, 2003)

From the figure, the next categories to be focused on are Attraction and Retention, and HR Information. The satisfaction overall for this year increased by 2% to 3.39.

- **HR BSS results 2004**

The survey was conducted in November 2004. The invitation was sent to Nokia line managers with job grade 9 and above, and all managers in job grade 11 and above. There were 2245 responses out of 6400 eligible participants. Table 5.5 shows the results.

Table 5.5 Nokia HR BSS 2004 survey results (Nokia, 2004)

BSS Year 2004 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.23	3.19	1%	4.10	4.14	-1%
2. Compensation & Benefits	3.51	3.49	1%	4.40	4.32	2%
3. Learning and Development	3.17	3.08	3%	4.15	4.10	1%
4. Investing in People	3.99	3.92	2%	4.30	4.26	1%
5. Business Partnering and Change	3.23	3.14	3%	3.80	3.95	-4%
6. HR Information	3.51	3.50	0%	4.12	4.09	1%
7. Nokia Way	3.30	3.16	4%	3.50	3.93	-11%
8. HR Delivery	3.68	3.63	1%	3.60	4.18	-14%
Total	3.45	3.39	2%	4.00	4.12	-3%

The survey results in the table show that there were improvements in some categories: Business Partnering and Change, Learning and Development, Attraction and Retention, and Nokia Way. IIP had the highest score, followed by HR Delivery, Learning and Development, and HR Information. The gap between satisfaction and importance is shown in Figure 5.9.

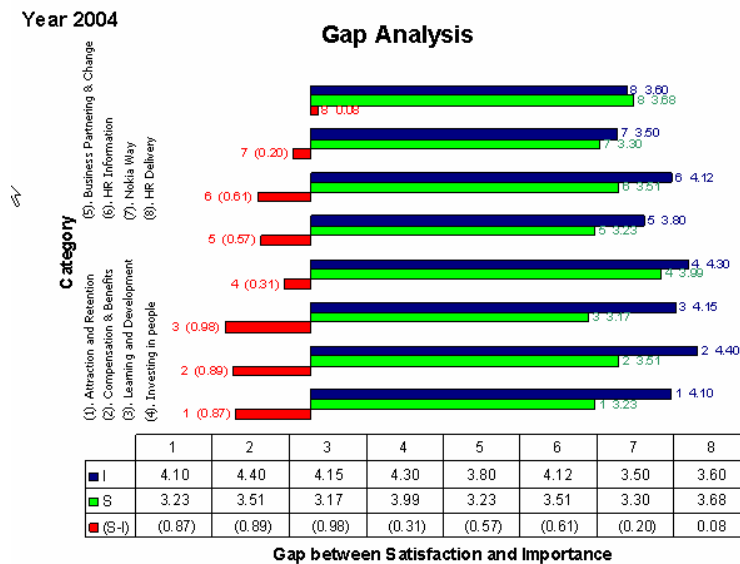


Figure 5.9 Year 2004 Gap Analysis (Nokia, 2004)

Even though Learning and Development showed improvement compared to the previous year, the gap analysis still showed that it would need further attention. However, I will confirm this from the analysis based on Figure 5.10.

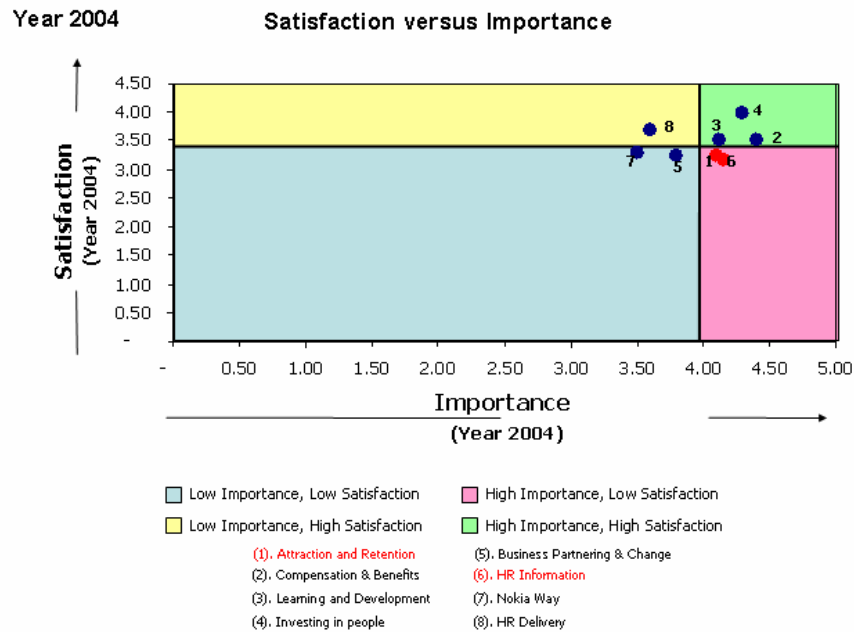


Figure 5.10 HR next focus category (Nokia, 2004)

From Figure 5.10, the two areas to improve are Attraction and Retention, and HR Information, as they still have low satisfaction but high importance.

The overall satisfaction for 2004 has been improved with a total average of satisfaction at 3.45.

- **HR BSS results 2005**

Like the 2004 survey, the 2005 survey was participated in by Nokia line managers with job grade 9 and above, and all managers in job grade 11 and above. There were about 6900 eligible participants, with 1828 responses. The survey was conducted from 5 to 16 December 2005 with the results shown in Table 5.6.

Table 5.6 Nokia HR BSS 2005 survey results (Nokia, 2005)

BSS Year 2005 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.48	3.23	8%	4.00	4.10	-2%
2. Compensation & Benefits	3.76	3.51	7%	3.80	4.40	-14%
3. Learning and Development	3.35	3.17	6%	3.80	4.15	-8%
4. Investing in People	3.94	3.99	-1%	3.60	4.30	-16%
5. Business Partnering and Change	3.32	3.23	3%	3.50	3.80	-8%
6. HR Information	3.68	3.51	5%	3.50	4.12	-15%
7. Nokia Way	3.53	3.30	7%	3.30	3.50	-6%
8. HR Delivery	3.83	3.68	4%	3.20	3.60	-11%
Total	3.61	3.45	5%	3.60	4.00	-10%

From Table 5.6, IIP satisfaction has dropped by 1% even though it is still the highest. The second highest is HR Delivery with a score of 3.83, showing a 4% improvement since 2004. Attraction and Retention has become the most important category, followed by Learning and Development. Figure 5.11 presents gaps between satisfaction and importance.

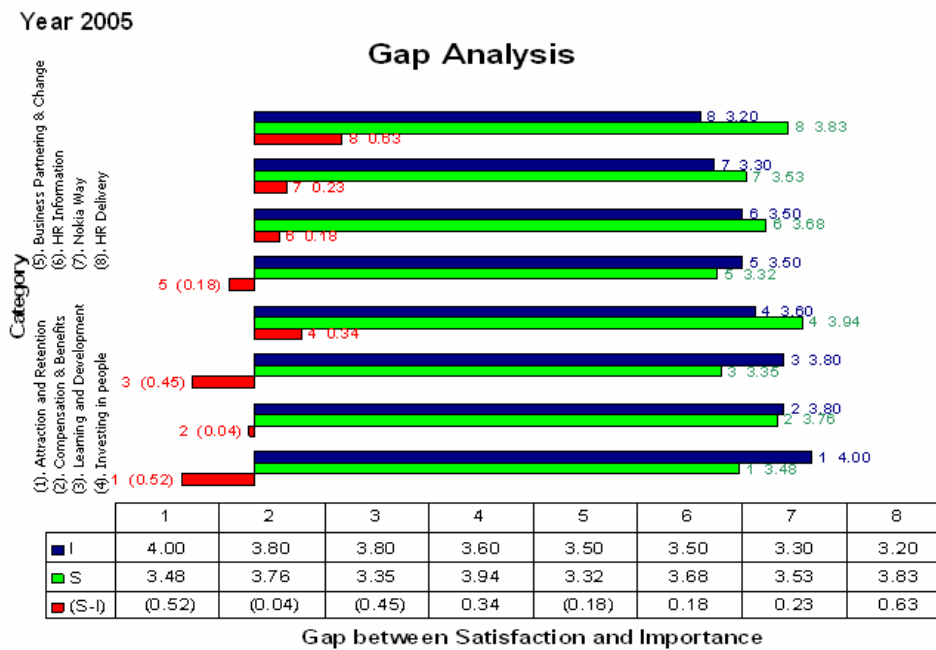


Figure 5.11 Year 2005 Gap Analysis (Nokia, 2005)

The above figure shows that the biggest gap is in Attraction and Retention followed by Learning and Development, then Business Partnering and Change. The rest of the categories have satisfaction higher than importance.

As previously we would need to see which areas that HR needed to focus on next as shown by Figure 5.12.

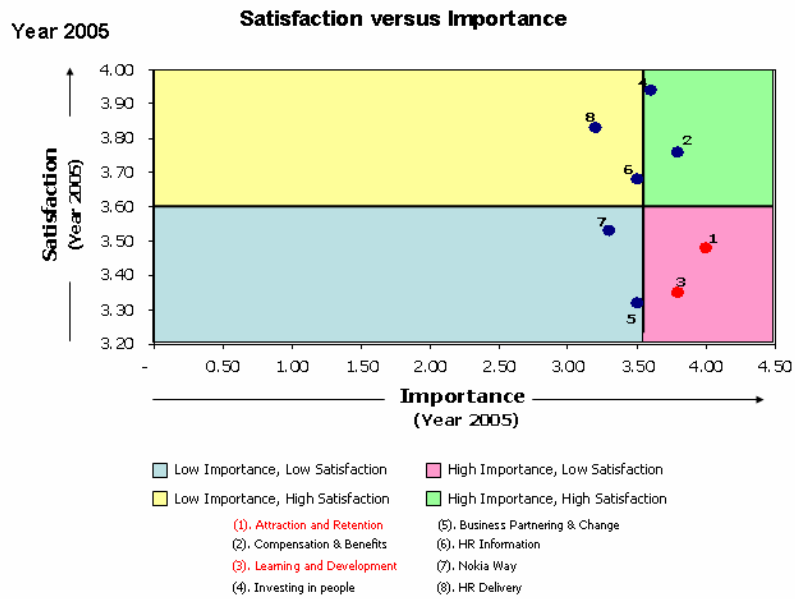


Figure 5.12 HR next focus category (Nokia, 2005)

The next focus categories are Learning and Development, and Attraction and Retention. Improvements in these categories would help to increase the overall satisfaction score which in 2005 was 3.61.

While tables and figures shown above have been utilized by Nokia HR management, there are further data summaries that would be useful to management and which offer additional perspectives on e-HR, as outlined in the next section.

Trends 2000–2005

The previous section discusses survey results year by year; this section analyses the satisfaction and importance trends from 2000 to 2005. Table 5.7 summarises the satisfaction and importance levels from the whole survey.

Table 5.7 Nokia HR BSS Satisfaction and Importance levels 2000–2005 (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005)

Category	Year 2000		Year 2001		Year 2002		Year 2003		Year 2004		Year 2005	
	S	I	S	I	S	I	S	I	S	I	S	I
1. Attraction and retention	3.11	4.00	3.08	4.16	3.09	4.18	3.19	4.14	3.23	4.10	3.48	4.00
2. Compensation & Benefits	3.05	4.15	3.26	4.35	3.47	4.38	3.49	4.32	3.51	4.40	3.76	3.80
3. Learning and Development	3.07	3.96	2.93	4.14	2.96	4.12	3.08	4.10	3.17	4.15	3.35	3.80
4. Investing in People	3.47	4.07	3.40	4.22	3.82	4.32	3.92	4.26	3.99	4.30	3.94	3.60
5. Business Partnering and Change	2.70	3.64	2.94	3.97	3.05	4.02	3.14	3.95	3.23	3.80	3.32	3.50
6. HR Information	3.06	3.77	3.26	4.14	3.43	4.13	3.50	4.09	3.51	4.12	3.68	3.50
7. Nokia Way	3.13	3.84	3.31	3.98	3.21	4.02	3.16	3.93	3.30	3.50	3.53	3.30
8. HR Delivery	3.10	3.85	3.67	4.09	3.52	4.19	3.63	4.18	3.68	3.60	3.83	3.20
Total	3.08	3.90	3.23	4.13	3.23	4.17	3.39	4.12	3.45	4.00	3.61	3.60

The column 'S' represents the average satisfaction level for each category per year while column 'I' shows the importance level. The averages of the overall trends of all categories by satisfaction and importance are shown in the last row (Total). Figure 5.13 shows satisfaction level by category.

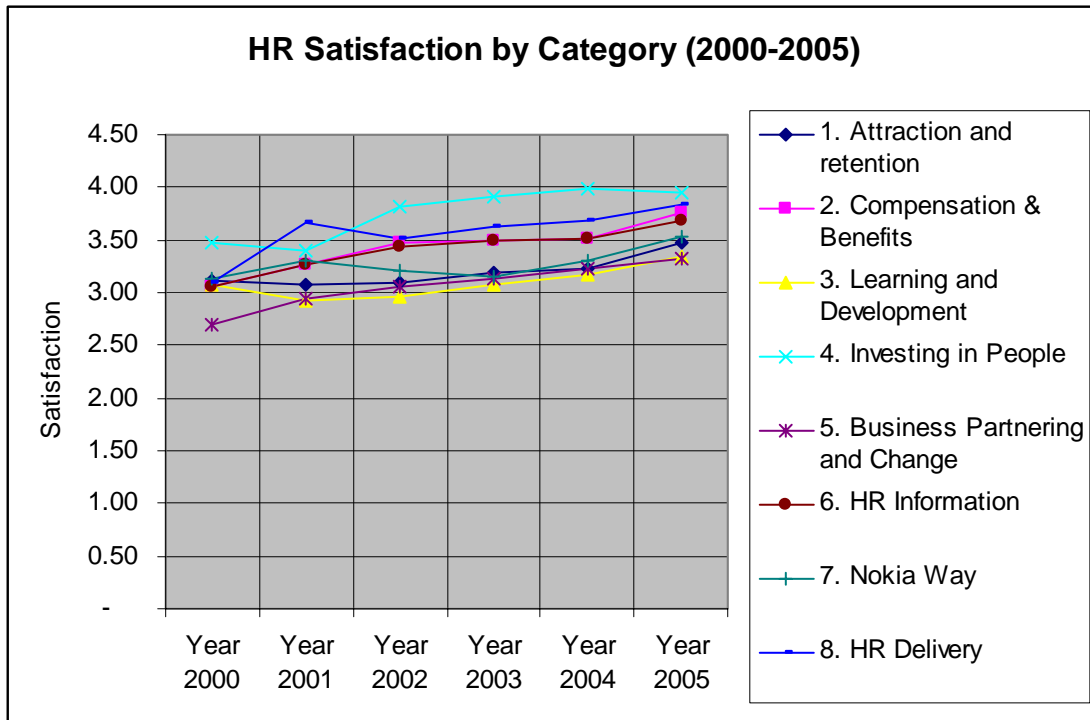


Figure 5.13 HR Satisfaction by category for 2000–2005 (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005)

The overall trend of satisfaction with HR services is improving, even though some years show fluctuations. However, at the end of the six-year period, all categories had improved. The overall average satisfaction has also improved as shown in Figure 5.14.

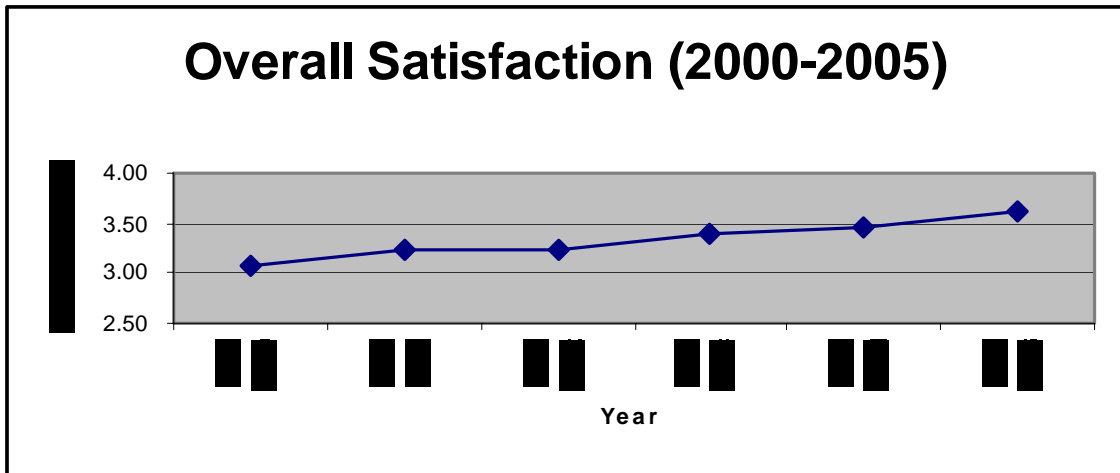


Figure 5.14 Overall Satisfaction (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005)

In summary, HR service quality and products have improved over the six-year period, which can be seen in Figure 5.14, where the overall satisfaction rate has been increasing. There was a flat period between 2001 and 2002, though the reason cannot be found from the survey information.

The next trend to consider is the importance level, which is illustrated in Figure 5.15.

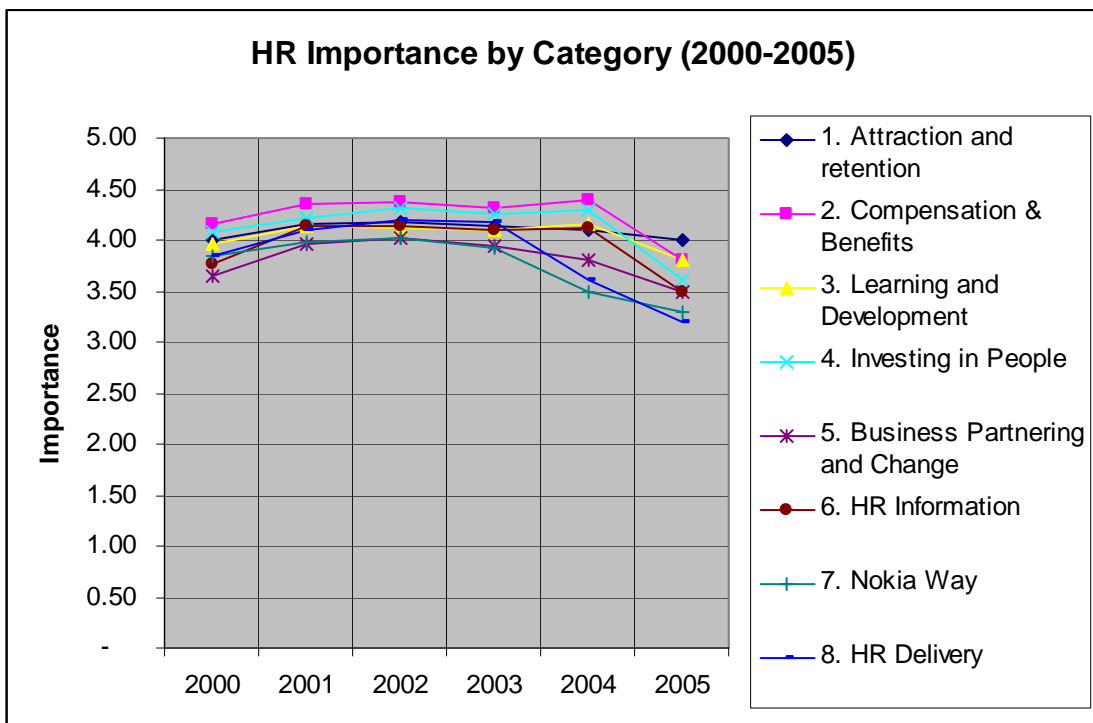


Figure 5.15 HR Importance by Category (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005)

Figure 5.15 shows the importance levels over the six-year period are declining, with the lowest points from Nokia Way and HR Delivery. The overall average importance level shown in Figure 5.16 is lower than at the beginning.

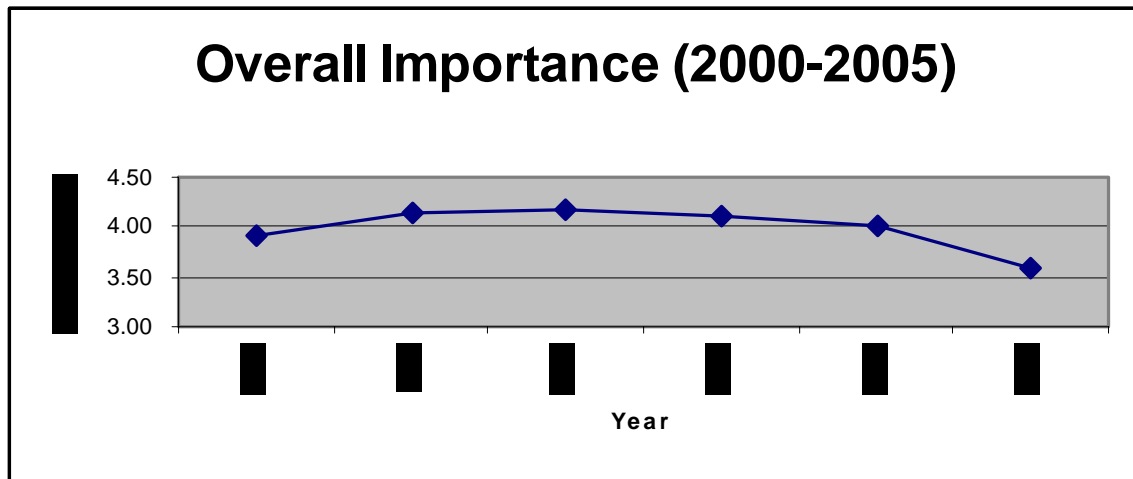


Figure 5.16 Overall Importance (Nokia, 2001a, Nokia, 2002, Nokia, 2003, Nokia, 2004, Nokia, 2005)

In summary, both Figures 5.15 and 5.16 confirmed that the importance levels over the six years of the surveys are going down. There is a slight increase from 2000 to 2001, with no change in 2002, then a slight decrease followed by a sharp decline after 2004.

There is a pronounced contradiction between levels of satisfaction and importance over the six-year period. This section discusses interpretations that come from the survey results: these interpretations are subjective with no evidence or support without further research. The following interpretations come from the survey results discussed previously.

- HR products and services are improving; however, these products and services have become less important than before. What has caused this is unknown and should be investigated further. For example:
 1. Are HR products and services becoming more obsolete and less relevant with business strategy?
 2. Did the business change its strategy and make its requirement on HR products and services irrelevant?
 3. Did HR ask the right questions each year for the business, or should survey questions be adapted each year like they were in 2002?

- Perhaps there are other factors to look at in order to measure those results, for example, whether business and HR strategies were changing during the period, or did situations change the priorities and needs of the business.

Finally, a further interpretation of the trends is that all HR actions related to e-HR implementation have definitely released HR from administrative tasks and responsibilities. This can be shown from the satisfaction level increase. However, whether HR has changed its role to become a business partner at the speed that business expects could not be found from the survey.

6 Conclusion

This research has examined how e-HR has changed roles in Nokia. The following section summarises the main points of the research. The conclusions drawn from the research form recommendations which will be useful for HR academics and practitioners alike.

6.1 Summary

The researcher began this thesis with an introduction to the research where new business realities (Kraut and Korman, 1999a, Schneider, 1999) have led HR to transform its role to become more strategically focused (Reddington et al., 2005). To achieve this, HR could adopt internet technology for shifting its administrative tasks and reorient its role to the strategic area. A scenario of the e-HR process was presented to illustrate a real-life situation, to describe how HR can utilize internet technology to shift its administrative tasks to the line managers and employees. This chapter also introduced the research objectives, scope, and limitations of the thesis research, followed by research questions. The objective of the research was defined, that was, to investigate the correlation between e-HR implementation and HR strategy. The research selected Nokia as the case study organisation to represent a real-world situation. Nokia began to implement e-HR in 1999 and since then it has conducted surveys to track the implementation and more importantly, HR success. These survey results were used by this research and became the source of data for analysis in Chapters 4 and 5. At the end of Chapter 1 the thesis structure was discussed.

In Chapter 2 the researcher reviewed the literature relevant to this research. There are several literatures related to this research. The review covered HR roles in organisations and the various related areas, such as HR challenges in a complex global environment, HR efforts to evolve (Flood et al., 1995, Gibson and Kirkman, 1999, Huselid et al., 2005), and moved to e-HR literatures as focus of the discussion. The literature showed that HR roles in organisations have been evolving from being transactional to having a strategic focus so that HR can offer more value-added contributions to management (Management, 2002, Ulrich, 1997a, Ulrich, 2005b).

The next discussion in this chapter was concerned with Ulrich's (1997b) model which explained HR's role as a business partner in organisations, comprising four roles:

- Strategic partner, supporting business in executing strategy to meet customer demands;
- Administrative experts, offering efficiency of HR-related processes and functions;
- Employee champion, maximising employee commitment and competence;
- Change agent, enabling organisational and cultural transformation.

The researcher then detailed Ulrich's HR matrix (Reddington et al., 2005, Ulrich, 1997b) and discussed the key elements of HR as business partner (Hunter et al., 2006) and the competencies required (Hunter et al., 2006, Ulrich, 1997b, Ulrich and Beatty, 2005a, Ulrich and Brockbank, 2005b).

Following from this the researcher focused on the role of the administrative expert with an introduction of the Shared Service Centre (Fletcher, 2005, Mowe, 2002, Nokia, 2001-2003, NokiaWISE, 2000b, Olivas-Luján, 2003, Ulrich, 1997b, Ulrich and Brockbank, 2005b). The implementation of these HR shared services involves the choice of utilising the technology or outsourcing (Hunter et al., 2006, IOMA, 2004, Jorgensen, 2002, Jossi, 2001, Karakanian, 2000, Kehoe et al., 2005, Watson_Wyatt, 2002). This is the point where e-HR was introduced.

E-HR implementation phase by phase was then discussed. At the beginning, the researcher examined the barriers to e-HR implementation and found that the most challenging area is management support and funding (Cedar, 2003, Walker and Perrin, 2001). Barriers can be overcome by a strong proposal which includes a clear definition of scope and objectives, business impact analysis, cost benefits, implementation, and, most importantly, the ability to answer typical executive and investor-related questions (Becker et al., 2001, Kalakota and Whinston, 1997, Kheng, 2002, Lego, 2001, Van-Wyk, 2002, Wahab, 2002). Including a simulated e-HR business case creates better understanding and support from senior management. The emphasis here is that the proposal should be based on business perspectives which are aimed at the strategic level audience (Christensen, 2006, Ho, 2002, Jossi, 2001, Kheng, 2002, Lego, 2001, Nokia, 2001-2003, Walker and Perrin, 2001). In addition, the researcher discussed e-HR benefits (Watson_Wyatt, 2002), roles, responsibilities, and competencies required for HR (Management, 2002, Mowe, 2002, Nokia, 2001-2003, Ulrich, 1997b, Ulrich and Beatty, 2005a, Ulrich and Beatty, 2005b, Ulrich and Brockbank, 2005b).

In this chapter the researcher also highlighted change management which has a vital role during e-HR implementation. The challenges that will be faced during implementation were also presented.

At the end of Chapter 2 the researcher discussed the next steps for HR after e-HR implementation (Ulrich, 2001, Ulrich, 2005a, Ulrich and Beatty, 2005a, Ulrich and Brockbank, 2005b, Ulrich and Brockbank, 2005c). One of the important tasks is measurement, such as surveys, statistics, polling, and interviews (Kraut and Saari, 1999). Competency development (Kenton and Yarnall, 2005), maintenance, and practitioners envisioning themselves as strategic players are also part of the next step (Ulrich and Beatty, 2005a, Ulrich and Brockbank, 2005b, Ulrich and Brockbank, 2005a).

The survey methodology used for this research was discussed in Chapter 3. It began with how Nokia's annual survey results were collected and explained typical data and classification of the research data. The researcher also examined the questions used in the survey, sample data, and survey categories. In Section 3.2 the discussion was focused on the survey timetable, the participants, and demographic factors of the survey questionnaires. The latter part of this chapter explained the limitations of the survey and reviewed some web-based survey literature for the basis of the methodology.

In Chapter 4, on the data analysis, Nokia e-HR was introduced. It began with an introduction to Nokia, its history to the present time, then focused specifically on the Nokia HR strategic decision to implement e-HR. Then the researcher examined the annual results of Nokia's annual HR Business Satisfaction Survey to determine trends. The trend analysis could become an additional tool for Nokia in order to analyze the direction where it could compare to the objective or for tracking the vision which was defined at the planning stage.

At the end of this chapter, the results showed a contradictory trend between satisfaction and importance levels, which lead to the following interpretations:

- There is a need to investigate further the effect of Nokia e-HR implementation. The contradictory trends of satisfaction and importance levels triggered the following questions:
 1. Are Nokia HR products and services becoming more obsolete and less relevant to business strategy?

2. Did businesses change their strategy and make their requirements for HR products and services irrelevant?
 3. Does HR ask the right questions each year for business, or should the survey questions be adapted each year like they were in 2002?
- There are other factors that have affected business in judging HR performance. These need some attention from HR in order to improve their importance levels.

Finally, from the survey results, the researcher witnessed that e-HR implementation has definitely released Nokia HR from an administrative role and brought it to the next challenge to be faced, that is, becoming a strategic business partner.

6.2 Discussion

Based on the literature discussion and the research analysis, the following conclusions have been drawn to answer the research questions:

1. The objective of e-HR implementation is varied, depending on the contextual views of the organization and the vision drawn by HR before implementation.

Chapter 2 discussed that there are various possible objectives of e-HR implementation, which are shown by a survey result by Watson_Wyatt (2002) through the e-HR drivers and benefits. From the case study, the researcher argues that Nokia HR has derived its e-HR implementation plan from its HR strategy for becoming a business partner (Ulrich, 1997b). This is in line with the concept of shared services (Fletcher, 2005, Mowe, 2002, Nokia, 2001-2003, NokiaWISE, 2000b, Olivas-Luján, 2003, Ulrich, 1997b, Ulrich and Brockbank, 2005b). In other words, Nokia e-HR implementation is part of HR transformation to business partner. This does not mean that Nokia HR did not see other objectives as unimportant, but rather that its main objective is HR role transformation. The case here cannot be generalised to other organisations; however, every organisation should look at this question to understand clearly its objectives before implementing e-HR.

2. The correlation between e-HR and HR strategy are interrelated and cannot be separated.

In search of the most effective way of being strategic, various attempts were done by HR and e-HR is one of the derived actions which could lead to success of HR strategy. For example, at the beginning of Chapter 4, it was mentioned that Nokia had derived its e-HR implementation from the HR strategic objectives (Section 4.2), where the holistic view of Ulrich's matrix (Ulrich, 1997b) was presented and adapted to Nokia's situation. The utilization of the technology enabling easy interaction and organized data structure which will simplify the administration efforts need to be done by HR. This creates more benefit to HR practitioners, where they could start moving their role into a more strategic focus.

3. The best way to measure e-HR success is through comprehensive planning and progressive monitoring of the results.

Measuring the success of e-HR requires thorough planning in order to achieve optimum results (Kraut and Saari, 1999). The case with Nokia proved that measurement is not only at the satisfaction level but requires exploring a wider area, such as the need to look at the relevancy of HR services to business expectations, or any factor that changes business needs during the period of execution, or if survey measurements need to be restructured. Furthermore, measurements should be made over a period of years as the benefits from changes take time to appear. E-HR offers efficiency through web technology and involves process re-engineering. This, in return, will free HR practitioners from administrative tasks so they can concentrate on strategic activities. However, e-HR does not bring HR into the strategic level by itself. This case study showed that e-HR does bring Nokia HR to a better satisfaction level; however it did not enable Nokia HR to become a strategic partner by itself. It requires further input to become a strategic partner (Ulrich, 1997b, Ulrich, 1997a, Ulrich and Brockbank, 2005b). This has been realised by Nokia at the beginning of its HR planning (see Section 4.2).

4. There are no defined criteria for successful e-HR implementation

Due to uniqueness of the vision and objective, each organization has its own criteria to measure its strategy success. In most contexts where it is related to e-HR

implementation, e-HR is only a tool which helps HR transformation to become a business partner, so the best way to define success is to measure the HR transformation itself. In the case study Nokia HR measured both e-HR and its service level transformation through measurement of satisfaction and importance levels. The results indicate that the satisfaction levels increased while importance levels decreased. This shows that e-HR implementation is somewhat successful; however it is not reflected as important by the business. Furthermore, it reflects that HR strategy has achieved higher quality however is still not fully recognized as strategically important to the business. Perhaps Nokia HR should focus on further investigating its transformation and understanding what business expects from HR strategically.

5. An organisational objective after e-HR implementation is to continue the journey.

E-HR is only the beginning of the HR journey to business partner. There are no definite guidelines on how or what to do next after e-HR; however, there is an objective to be achieved: becoming a business partner. How to achieve this will be varied and subject to each organisation's decision-making strategies. In Nokia's case, the researcher could not retrieve information about HR's direction after the last survey without further research.

Finally, the role of e-HR in the organization is very important as one of the instruments where HR can be utilized in change management and organizational transformation. However, it is not the only tool. HR should not be trapped by focusing too much on implementation but rather to see how HR strategy has been achieved.

6.3 Recommendations

Based on the research results, the following recommendations are suggested.

- E-HR implementation involves not only technology implementation but also paradigm shifting, role transformation, and executing HR strategic actions. E-HR is a part of HR strategy to increase its efficiency and release HR from administrative tasks. Therefore, before implementing e-HR, HR should strategically plan its overall strategy. It is highly recommended to investigate how e-HR will contribute to HR performance overall and present value added to company.

- HR should plan how to measure correctly both e-HR implementation and HR transformation in order to get optimum benefits. Nokia's trend results showed that there were parameters which were not measured and required investigation. It is recommended that in every case, a comprehensive plan is espoused in the objective and vision, to enable comparison to what has been achieved and enacted. In this case, relating the measurement and strategy is very important to achieve optimum results.
- For further research, it is suggested that HR academics and practitioners could investigate what HR should do after e-HR implementation and, further ahead, after HR becomes a strategic business partner.

Finally, it is hoped that this research contributes to HR academics and practitioners alike in understanding e-HR implementation and HR transformation.

APPENDICES

Appendix A: Change Management Literature

Reference	Title	Summary of readings
(Anderson, 2004)	An Analysis of the Diffusion of Technologies Accompanied by a Forecast for Laser Presbyopia Reversal	Discusses innovation, how it evolves and diffuses, patterns and classifications, and concentrates on technology innovation. It specifically focuses on laser eye surgery technology and its medical procedures.
(Burnes, 2003, Burnes, 2004)	Managing Change: A Strategic Approach to Organizational Dynamics	Discusses various change management theories and approaches including examples and case studies.
(Dalglish and Newton, 2002)	The relationships between firm survival and innovation: an introduction to the literature (review)	Introduces the literature studies that have been conducted on innovation diffusion and its short history. Defines the criticisms that currently are discussed about innovation and the importance of innovation to survive.
(Noer, 1999)	Helping Organizations Change: Coping with Downsizing, Reengineering, and Reorganizations	Suggests a prescription for HR practitioners in managing change in an organisation. Covers areas like downsizing, process re-engineering, and organisation re-shuffling.
(Greenwood and Hinings, 1988)	The Dynamics of Strategic Change	Presents fundamental theory of archetypes and its elements. Very thorough concepts of change management.
(Greenwood and Hinings, 1996)	Understanding Radical Organizational Change: Bringing Together The Old and The New Institutionalism	A thorough discussion about neo-institutional theory on change management.
(Olivas-Luján, 2003)	Determinants of the Assimilation of Information Technologies in Human Resource Service Delivery in Canada and the United States of America	A thorough discussion about e-HR from HRMIS to its current implementation. Various research reports were gathered in order to conclude e-HR adoption and its assimilation. It also examines the technology that is offered by the market and its statistics. This thesis recognises e-HR as innovation in both IT and HR areas and states there is an assimilation process in implementation.

Reference	Title	Summary of readings
(Raitanen, 2000)	The Adoption of Innovations. Case Local Mobile Payment	Discusses adoption of wireless technology, i.e. mobile payment. Focuses on the barriers and obstacles that become main concerns of adoption. Selected Nokia wireless technology as a basis of mobile payment in gas station.
(Reddington et al., 2005)	Transforming HR: Creating Value Through People.	Provides guidance for HR transformation including e-HR implementation and change management.
(Rosenberg and Holden, 2000)	Interactions, Technology and Change.	The paper presents five case studies of information technology implementation to illustrate complexity of information technology and organisational relationships.
(Utterback, 1971)	The Process of Technological Innovation within the Firms.	Defines the process of technological innovation, by breaking it down into sub-processes. It includes the discussion of environments and internal characteristics that efficiently support this process within the firm.

Appendix B: Web-Based Survey Literature

Reference	Title	Summary of readings
(Alvarez and VanBeselaere, 2003)	Web-Based Surveys	Examines the fundamental issues about using the internet as a survey tool.
(Baron and Siepman, 1999)	Techniques for creating and using web questionnaires in research and teaching	Discusses technical aspects of web questionnaires and goes into detailed HTML examples and techniques.
(Biffignandi and Toninelli, 2005)	Inference in Web surveys	Discusses the definition of inference in web surveys, obstacles encountered, and how to deal with them.
(Christian et al., 2002)	The Effects of Mode and Format On Answers to Scalar Questions in Telephone and Web Surveys	Highlights the importance of knowing different scalar formats using both telephone and web modes to identify ways of asking scalar questions that present the same stimulus to respondents across telephone and web modes so that scalar questions can be constructed optimally for mixed-mode surveys.
(Christian, 2003)	The Influence of Visual Layout on Scalar Questions in Web Surveys	Discusses how visual presentation affects the answers in web surveys.
(Christian et al., 2004)	Instructing Web and Telephone Respondents to Report Date Answers in a Format Desired by the Surveyor	Examines the usage of visual design and verbal language selection for web and telephone surveys, how results and errors could arise.
(Christian et al., 2006)	Does "Yes or No" on the Telephone Mean the Same as "Check-All-That-Apply" on the Web?	Compares whether the question Yes or No on web-based survey will have the same meaning as an answer to a phone survey.
(Crawford et al., 2005)	Applying Web-Based Survey Design Standards	Attempts to set a design standard for web-based survey as this plays a very important role in the survey.

Reference	Title	Summary of readings
(DePaolo and Sherwood, 2006)	Instructional Uses of Web-Based Survey Software	Shows how technology can help improve the effectiveness and efficiency of multiple communications activities within the academic research environment.
(Dillman and Redline, 1999)	Influence of Auxiliary, Symbolic, Numeric, and Verbal Languages On Navigational Compliance in Self-Administered Questionnaires	Discusses the effect of Auxiliary, Symbolic, Numeric, Verbal Languages and why respondents choose to avoid or answer the survey questions.
(Dillman et al., 2001)	Response Rate and Measurement Differences in Mixed Mode Surveys Using Mail, Telephone, Interactive Voice Response and the Internet	Examines how to improve response rates by changing the data collection mode from one type to another and discusses the consequences of the non-response errors of each mode.
(Dillman et al., 2006)	Principles for Constructing Web Surveys	Suggests criteria and principles for designing web-based surveys.
(Dillman and Bowker, 2006)	The Web Questionnaire Challenges for Survey Methodologists	Discusses the use of web surveys in the context of four traditional sources of survey error—sampling, coverage, measurement, and non-response.
(Dillman, 2002)	Navigating the rapids of change: Some observations on Survey Methodology in the early 21st century.	Discusses the varieties of survey methodology in the 21st century and how to utilise them.
(Dillman and Cleo, 2002)	Influence of Type of Question on skip pattern compliance in self-administered questionnaires.	Describes eight distinguishing structural attributes of the test questions and conducts regression analyses to define their potential influence on respondent errors of commission and omission.

Reference	Title	Summary of readings
(Dillman et al., 2002)	Influence of plain vs. fancy design of response rates for web surveys.	Discusses the effect of visual design to the web survey results.
(Dillman and Christian, 2003)	Survey Mode as a Source of Instability in Responses across Surveys	Examines why the mode changes are increasingly likely to occur in panel studies and the consequences. It also suggests how to reduce the differences and variations.
(Eiler and Fetterman, 2000)	Empowerment and Web Based Evaluation	Brief discussion about empowerment evaluation followed by creating a contextual concept for using web-based survey tools.
(ESOMAR, 2005)	ESOMAR Guideline on Conducting Market and Opinion Research Using the Internet	Provides guidelines for a surveyor to conduct market and opinion research via internet surveys.
(Gunn, 2006)	Web-based Surveys: Changing the Survey Process	Examines different types of web-based surveys, the advantages and challenges of using Web-based surveys, the design of Web-based surveys and the issues of validity, error, and non-response in this type of survey. It also discusses the importance of auxiliary languages (graphic, symbolic and numeric languages) in Web surveys, and concludes with the unique aspects of Web-based surveys.
(Jolene D et al., 2004)	How Visual Grouping Influences Answers to Internet Surveys	This paper highlights how visual grouping and presentation could affect the meaning and answers to internet surveys.
(Kaczmirek, 2005)	Web Surveys. A Brief Guide on Usability and Implementation Issues.	Introduces three general recommendations (be user-friendly, be trustworthy, be explicit) as a guide for conducting and implementing a web survey.
(Pineau and Slotwiner, 2003)	What are the components of "Total Errors" in traditional surveys?	Discusses the errors in traditional and web surveys followed by suggestions on how to minimise them.

Reference	Title	Summary of readings
(Redline et al., 2003)	Making visible the invisible: An experiment with Skip Instructions on Paper Questionnaires.	This paper reports on the results of two different skip instruction designs within survey questionnaires to find whether errors of commission and omission can be reduced.
(Smyth et al.)	Comparing Check-All and Forced-Choice Question Formats in Web Surveys: The Role of Satisficing, Depth of Processing, and Acquiescence in Explaining Differences	The research explores whether the use of forced-choice format within surveys would increase the number of options selected affirmatively in web and paper surveys.
(Solomon, 2001)	Conducting Web-Based Surveys	Discusses conducting internet-based surveys including literature discussion.
(Wauters and HugoKerschot, 2002)	SUMMARY REPORT: Web-based Survey on Electronic Public Services	Presents the results of the second measurement of the web-based Survey on Electronic Public Services by the eEUROPE program which aims to bring benefits of the information society to all Europeans.

Appendix C: Sample of questionnaire used for HR BSS Survey

Category	Questions
Attraction and Retention	Does HR understand your recruitment needs and supports you well in recruiting people with needed competencies and skills?
Attraction and Retention	Does HR offer value-added tools & processes to support retention of your skilled/key people?
Attraction and Retention	Is HR able to act as a partner in guiding people towards new internal, as opposed to external, career opportunities?
Attraction and Retention	Does HR facilitate resource planning in a value-adding and professional way?
Compensation & Benefits	Does HR provide you with good advice regarding Nokia pay practices which enables you to select the most appropriate and competitive remuneration for your people?
Compensation & Benefits	Does HR support you in clearly communicating Nokia's reward and benefits programs to your people?
Learning and Development	Does HR provides support and tools for the planning of competence development of your people?
Learning and Development	Does HR recommend training and learning solutions, that meet the competence development needs of your people?
Learning and Development	Are the Nokia Learning Center programs & solutions meeting the learning and development objectives of your team?
Investing In People	Does HR support you in implementing the IIP processes to a high quality?
Investing In People	Does The IIP tool enable you to complete the IIP processes on time and to a high

	quality?
Business Partnering and Change	Does HR effectively consult with you on how to lead and manage your organization through change?
Business Partnering and Change	Does HR effectively consult with Business Managers on HR topics?
Business Partnering and Change	Does HR make a valuable contribution to the success of your unit through proactive consulting?
Business Partnering and Change	Does HR understand your business?
HR Information	Does HR provide you with adequate and accurate information that helps you manage your people better?
HR Information	Is Information about people related topics easily available to you?
Nokia Way	Does HR support you well in promoting the Nokia values?
Nokia Way	Does HR effectively support employee well-being and work-life balance in the organization?
Nokia Way	Does HR effectively support employee diversity and inclusive work environment?
HR Delivery	Does HR in your unit deliver its services in a timely, efficient and effective manner?
HR Delivery	Do HR's web-based tools help your work as a manager?
HR Delivery	Does HR act proactively in coaching and partnering with you to address on-going people issues in your team?
HR Delivery	Is HR is easily accessible to you?

Appendix D: Nokia HR BSS 2000–2005 Survey Results

Nokia HR BSS 2000 survey results (Nokia, 2000)

BSS Year 2000 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.11	N/A	N/A	4.00	N/A	N/A
2. Compensation & Benefits	3.05	N/A	N/A	4.15	N/A	N/A
3. Learning and Development	3.07	N/A	N/A	3.96	N/A	N/A
4. Investing in People	3.47	N/A	N/A	4.07	N/A	N/A
5. Business Partnering and Change	2.70	N/A	N/A	3.64	N/A	N/A
6. HR Information	3.06	N/A	N/A	3.77	N/A	N/A
7. Nokia Way	3.13	N/A	N/A	3.84	N/A	N/A
8. HR Delivery	3.10	N/A	N/A	3.85	N/A	N/A
Total	3.08	N/A	N/A	3.90	N/A	N/A

Nokia HR BSS 2001 survey results (Nokia, 2001b)

BSS Year 2001 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.08	3.11	-1%	4.16	4.00	4%
2. Compensation & Benefits	3.26	3.05	7%	4.35	4.15	5%
3. Learning and Development	2.93	3.07	-5%	4.14	3.96	5%
4. Investing in People	3.40	3.47	-2%	4.22	4.07	4%
5. Business Partnering and Change	2.94	2.70	9%	3.97	3.64	9%
6. HR Information	3.26	3.06	7%	4.14	3.77	10%
7. Nokia Way	3.31	3.13	6%	3.98	3.84	4%
8. HR Delivery	3.67	3.10	18%	4.09	3.85	6%
Total	3.23	3.08	5%	4.13	3.90	6%

Nokia HR BSS 2002 survey results (Nokia, 2002)

BSS Year 2002 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.09	3.08	0%	4.18	4.16	0%
2. Compensation & Benefits	3.47	3.26	6%	4.38	4.35	1%
3. Learning and Development	2.96	2.93	1%	4.12	4.14	0%
4. Investing in People	3.82	3.40	12%	4.32	4.22	2%
5. Business Partnering and Change	3.05	2.94	4%	4.02	4.08	-1%
6. HR Information	3.43	3.26	5%	4.13	3.97	4%
7. Nokia Way	3.21	3.31	-3%	4.02	4.14	-3%
8. HR Delivery	3.52	3.67	-4%	4.19	3.98	5%
Total	3.23	3.23	0%	4.17	4.09	2%

Nokia HR BSS 2003 survey results (Nokia, 2003)

BSS Year 2003 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.19	3.09	3%	4.14	4.18	-1%
2. Compensation & Benefits	3.49	3.47	1%	4.32	4.38	-1%
3. Learning and Development	3.08	2.96	4%	4.10	4.12	0%
4. Investing in People	3.92	3.82	3%	4.26	4.32	-1%
5. Business Partnering and Change	3.14	3.05	3%	3.95	4.02	-2%
6. HR Information	3.50	3.43	2%	4.09	4.13	-1%
7. Nokia Way	3.16	3.21	-2%	3.93	4.02	-2%
8. HR Delivery	3.63	3.52	3%	4.18	4.19	0%
Total	3.39	3.32	2%	4.12	4.17	-1%

Nokia HR BSS 2004 survey results (Nokia, 2004)

BSS Year 2004 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.23	3.19	1%	4.10	4.14	-1%
2. Compensation & Benefits	3.51	3.49	1%	4.40	4.32	2%
3. Learning and Development	3.17	3.08	3%	4.15	4.10	1%
4. Investing in People	3.99	3.92	2%	4.30	4.26	1%
5. Business Partnering and Change	3.23	3.14	3%	3.80	3.95	-4%
6. HR Information	3.51	3.50	0%	4.12	4.09	1%
7. Nokia Way	3.30	3.16	4%	3.50	3.93	-11%
8. HR Delivery	3.68	3.63	1%	3.60	4.18	-14%
Total	3.45	3.39	2%	4.00	4.12	-3%

Nokia HR BSS 2005 survey results (Nokia, 2005)

BSS Year 2005 Category	Satisfaction average	Previous Year Satisfaction	Satisfaction Improvement %	Importance average	Previous Year Importance	Importance Movement %
1. Attraction and retention	3.48	3.23	8%	4.00	4.10	-2%
2. Compensation & Benefits	3.76	3.51	7%	3.80	4.40	-14%
3. Learning and Development	3.35	3.17	6%	3.80	4.15	-8%
4. Investing in People	3.94	3.99	-1%	3.60	4.30	-16%
5. Business Partnering and Change	3.32	3.23	3%	3.50	3.80	-8%
6. HR Information	3.68	3.51	5%	3.50	4.12	-15%
7. Nokia Way	3.53	3.30	7%	3.30	3.50	-6%
8. HR Delivery	3.83	3.68	4%	3.20	3.60	-11%
Total	3.61	3.45	5%	3.60	4.00	-10%

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