

# A Contingency Perspective on the Implementation of E-Performance Management

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## INTRODUCTION

A lot has been done in the research into information technologies for HR purposes. Beginning in the 1960s, personnel management was an early candidate for office automation in payroll, benefits administration, and employee records holding (Ball, 2001). Typically, this information was stored in flat databases being interrogated via simple searching of key words. Growth in strategically focused HRM produced demands for information and communication developments in human resource information systems (HRIS).

Growth in strategically focused HRM produced demands for information and communication developments in e-HRM. Empirical reports since then have indicated that the use of e-HRM has become more confident although still mainly for administrative purposes, and that e-HRM projects mainly remained technology-driven events, with the focus on the growing sophistication of information technology. As a result, in the first years in this field, e-HRM was subject to high failure rates and, today, the situation is little better (Bondarouk & Ruël, 2007; Keebler & Rhodes, 2002):

*While there have been periods during the last thirty years when human resource information systems have been more successful in the industry eye, there is no reason to think that it has become less serious.* (Bondarouk & Ruël, 2007)

The purpose of this article is to contribute to the discussion on the implementation of e-HRM in organizations by developing a contingency framework of what the organizational conditions are likely to support the process of adoption of one specific e-HRM application, e-performance management.

## BACKGROUND

### Integration of IT and Performance Management

We build a definition of electronic performance management on the concept of e-HRM of Ruël, Bondarouk, and Looise (2004), and understand it as a way of implementing PM-processes in organizations through conscious and directed support of and/or with the full use of Web-technology-based channels.

In accordance to Cardy and Miller (2005), IT can provide support for performance management at two levels. At the *macro level*, IT is used for allocating human resources within the company as part of enterprise resource planning (ERP). It gives the management of a company the overview of the status of each resource. The use of these applications is restricted to management and HR-professionals.

At the *micro level*, technology supports PM in the measurement and development of the performance of individuals and teams in two ways. At the *content side*, quadrant 3, companies use IT to generate data for performance measurement, usually of routine jobs (jobs with simple tasks in which little personal judgment and low discretion is needed). Cardy and Miller (2005) call this form 'computerized performance management,' and is estimated that 40 million workers are monitored with this process (Stone, Stone-Romero, & Lukaszewski, 2006). At the *process side*, quadrant 4, IT aids in the delivery of performance feedback and appraisal and development possibilities. Regularly, it is used for jobs with personal judgment, high discretion, and open-ended tasks. When supported with Web-technology, the information about PM is accessible to others within a company as well (Cardy & Miller, 2005). Employees can track their own progress over a series of evaluations

and are able to select and attend trainings themselves. Managers receive help to compose appraisals and are therefore better able to focus on the content of the evaluation rather than on the forms, resulting in better and more frequent employee evaluations (Cardy & Miller, 2005).

### **Types of Electronic Performance Management**

The operational e-PM type supports the formal or the procedural/administrative process between managers, employees, and organizations. For example, operational e-PM supports the writing of performance plans and offers online PM forms, which employees and managers fill out after the performance planning and appraisal. This results in a digital, historical document which is stored in the online PM dossier of the employee. Technology does no more than supporting the administrative process of PM.

Relational e-PM supports the informal, relational/day-to-day (communicative) processes between managers and employees. One could use the e-PM system for providing feedback between employees or between a manager and a subordinate. Relational e-PM supports and changes the complete process of PM, with the full use of Web-technology for the administrative and communication process.

Transformational e-PM facilitates a strategic approach to PM, meaning that the HR practitioner can concentrate on developing an organization's unique human component, while the employees remain fully engaged in their work. E-PM systems are often part of an ERP package, which permits organizations to explore the enterprise data and analyze performance and competencies of individuals, groups of workers, departments, and project teams. Personnel planning and organizational change programs might be based on this information. Technically speaking, the information exchange between e-PM and management information systems is two-way and e-PM is integrated within other information systems.

### **CHOICE OF THE E-PM IMPLEMENTATION STRATEGY**

At the centre of our article, attention is given to the technology implementation process. Given the numer-

ous works on IT implementation, we should clarify our understanding of it—on which aspects of IT implementation do we concentrate. The term implementation is given a variety of meanings in the literature, and in many studies implementation is seen rather as an implicitly clear word (Bondarouk, 2004).

We limit our view by looking at the implementation of e-PM from the “moment” when the technology is introduced to the targeted users; we do not look at the processes that occur before the introduction such as the design, prototyping, or preparation phases. Regarding the final stage of the IT implementation process, various authors emphasize the human behavior towards an introduced IT as the crucial indicator of the implementation success. For example, as indicators of the IT implementation success, researchers consider its acceptance by the users (Venkatesh, 2000); its appropriation (Orlikowski & Barley, 2001); satisfaction with the system (Schuring & Spil, 2002).

Having accepted that human interactions with the technology do play the important role in its successful implementation, we view that implementation is complete when users contentedly work with an IT, having acquired the necessary skills to master the program, fully understand the IT, and are ready to enact the discussed rules and norms. This means that although a technology may still require changes after some time in use, the implementation is complete because employees feel comfortable working with it, are fearless of any technological modifications, and appreciate performing their job tasks through the system. This means that we are looking at the *stable use* of e-PM technology, by users, rather than looking for the stabilization of technology. Our main indicator of successful e-PM implementation will be skillful and task-consistent operating with the technology by the targeted employees. We define the implementation of e-PM as its *adoption during the transition period between the technical installation and its skillful and task-consistent use by HR-professionals, line managers, and employees*.

Following Venkatesh (2000), we suggest that people tend to use (or not) an e-PM application to the extent that they believe it will help them perform their PM better (perceived usefulness). Further, even if people believe that a given application is useful, they may believe that the technology is too hard to work with and that the performance benefits of usage are outweighed by the efforts required using the application (ease-of-use).

Incorporation of these ideas has resulted in notions that the use of e-HRM by the targeted employees is highly determined by the level of usefulness of the HR information technology and easiness of its use (Ruta, 2005; Stone et al., 2006; Voermans & Van Veldhoven, 2005). A recent example is the study into the implementation of an HR employee portal in the Italian subsidiary of Hewlett-Packard (Ruta, 2005). The research has demonstrated that the usage of IT increased when user acceptance principles were integrated with change management principles when the IT user acceptance model focused on “what” predicted intentions to use the HR portal, while change management theory focused on “how” intentions to use the HR portal could be influenced. It was shown that by analyzing the context (at both industry and company levels), change agents managed to adopt the most appropriate actions to support the HR portal implementation.

**Proposition 1.** *As organizations introduce electronic applications for performance management, stable use of e-PM will rely on its usefulness and easiness of use.*

The influence of managerial commitment and support on the success of technology implementations may be shown by prior research. According to Lewis, Agarwal, and Sambamurthy (2003), management’s attitudes are likely to influence the perceptions and attitudes of employees with respect to a technology. They note three reasons for this influence. Firstly, individuals may use information from management to understand how they should form their beliefs about a technology. Secondly, management may confirm the legitimacy of an individual’s beliefs and actions and thirdly, regulate beliefs of individuals with respect to the technology. In addition, the research of Lewis et al. (2003) into adoption and use of Internet technology by knowledge workers in a public university in the U.S. found perceived management support for the use of a technology to be significantly influencing an individual’s belief about the usefulness of the technology. Management commitment and support for a technology shapes an employee’s beliefs that the technology is useful for work activities and that the technology use in important work activities is valued and rewarded by management.

The top-management involvement and support of e-PM therefore may positively influence the success of e-PM implementations. Management may need to focus

careful attention on showing commitment to e-PM by communicating their positive attitudes toward e-PM and openly providing resources to the e-PM system. Unless employees perceive management as strongly behind the use of e-PM, users are unlikely to develop positive beliefs about the usefulness and ease of use of that technology and in return accept and use e-PM.

**Proposition 2.** *As organizations introduce electronic applications for performance management, its usefulness and easiness of use will be influenced by the top management support and commitment.*

We expect that there will be a direct relationship between the usefulness and easiness of the technological properties of e-PM, as reinforced by users’ participation and top-management commitment, with the success of the e-PM implementation. Lepak, Hui, Chung, and Harden (2005) considered the importance of strategic orientation of a company for the decision whether to internalize or externalize the HR activities.

## **Strategic Choices**

In organizational research, the contingency concept is often referred to as congruence, match, agreement, or fit between distinct constructs (Oh & Pinsonneault, 2007). In certain contexts, the notion of fit is extended to reflect, for example, a person-organization fit (Van Vianen, 2000), or person-job fit (Brown, 2000).

In the IT research, the contingency concept is viewed as the strategic alignment of IT and its effects on organizational performance. A number of studies indicate that IT alignment is positively associated with general performance measures like perceived firm performance (Kearns & Lederer, 2001), and financial performance (Oh & Pinsonneault, 2007). The strategic alignment of IT is understood as the extent to which the goals and priorities of the IS strategy are aligned with the business strategy and firm’s priorities (Oh & Pinsonneault, 2007). As Chan (2002) notices, the strategic alignment of IT includes: IT development strategy, envisioning of the role of IT in organization, and managerial decisions and actions (e.g., centralization vs. decentralization).

The research of Oh and Pinsonneault (2007) has shown that focus should be made on the strategic alignment as an on-going process rather than an end-result:

...A sustainable “perfect” alignment may be an illusionary concept, given the speed and magnitude of change in business and technology environments (*ibid*, p. 259).

It means that a strategic IT alignment is a situated process, enacted by different players involved in IT development and implementation processes. On the other hand, even small changes in organizational goals might lead to changes in the IT-alignment and thus, in the IT implementation process.

As noted, the manner of IT implementation is likely to be influenced by the strategic orientation of the firm. We take the well-known categorization of cost-effective and differentiation strategies.

Cost-effective organizations tend to have rigid structures, operate in stable environments, and focus on those HR activities that foster increased productivity and efficiency, place importance on standardizing and coordinating behavior (Lepak et al., 2005). The primary focus of these measures is to increase productivity that is output cost per person, resulting in either reduction of the number of employees, and/or wage levels. Cost reduction can be also pursued through active use of part-time workers, sub-contractors, work simplification and measurement procedures, increased automation, and job assignment flexibility (Schuler & Jackson, 1987). Such firms are shown to view the electronic HRM processes as means to increase the efficiency and therefore are likely to give priorities to the administrative electronic performance management. (Lepak et al., 2005; Ruël et al., 2004).

Given these characteristics, implementations of information technologies for the HRM processes, and particularly for electronic performance management, within these companies are likely to be oriented towards cost efficiency, and are expected to have a well-defined plan. The implementation trajectories probable will have a top-down approach, with limited employees’ participation. At the same time, these firms might make emphasis on the easiness of use of the electronic tools for performance management, while the usefulness of the tools is to be considered as well-embedded in the technology by the designers. Based on the research of Oh and Pinsonneault (2007) we assume that the alignment of electronic performance management with cost reduction strategy is likely to generate immediate and tangible results.

**Proposition 3.** *Cost-effective organizations will practice administrative electronic performance management, where the implementation process will rely on the increase of the easiness of use and symbolic employee’s participation in the implementation process.*

Innovative organizations operate in a different way, instead of striving for efficiency, they focus more on creating changes (Lepak et al., 2005). The primary focus of these organizations for managing people is selecting highly skilled employees, using minimal control, giving employees more discretion, making great investments in human resources, and appraising performance for its long-run implications. Innovative firms tend to pursue employees profile that include a high degree of creative behavior, a longer-term focus, a high level of interdependent, cooperative behavior, moderate concerns for quality and quantity, but equal concern for process and results, high degree of risk taking, high flexibility to change, and high firm involvement. As a result, the HRM function in such firms facilitates immediate exchange of information and responsiveness throughout the organization (Lepak et al., 2005).

Given these objectives, it seems logical that firms would tend to pursue relational e-HRM and e-performance management. They need to ensure the importance of flexibility of performance management, its creativity, and growth of communications rather than its administration. At the same time, usefulness of e-performance management is expected to develop over time as embodied by all the key-players in the performance management process. In the extreme, it may require firms to constantly recreate short term job relevance issues that become outdated by the introduction of the changes in the performance management activities.

**Proposition 4.** *Innovative organizations will practice relational electronic performance management, where the implementation process will rely on the increase of the usefulness of the e-tools and active employee’s participation in the implementation process.*

## **FUTURE TRENDS**

In this article, we have outlined the contingency framework regarding the implementation process of electronic performance management. Building on

existing theories of IT implementations, we have distinguished four important success factors—easiness of use, usefulness, user participation, and top management commitment—for the implementation of electronic performance management. We have disputed that the strategic orientation of the firm and the type of electronic performance management influences the choices for the implementation trajectories. Several implications seem to be logical from this article.

While the basic four factors are widely acknowledged as crucial, they are not the only to influence the IT implementation. Psychological, technical, and cultural aspects do play important roles in the process of getting used to the technology. Research is needed to better understand the extent to which relying on other IT-success factors impacts the quality of the stable use of e-performance management by the targeted employees.

In addition, the influence of characteristics of the performance management should be studied in more detail in order to incorporate in e-tools implementation. Congruence between traditional and electronic performance management is another field of inquiry. The extent to which performance management is likely to be used online, and integrated into existing PM-related systems may bring extra insights in the implementation trajectories.

In conclusion, careful management of the implementation process, oriented towards strategic choices and types of performance management have, we believe, a great potential to maximally deploy benefits promised from e-performance management.

## REFERENCES

- Ball, K. S. (2001). The use of human resource information systems: a survey. *Personnel Review*, 30(6), 677-693.
- Bondarouk, T. V. (2004). Using group learning to enhance the implementations of information technologies. Doctoral dissertation, University of Twente, The Netherlands.
- Bondarouk, T., & Ruël, H. J. M. (2007, March). Human resource management via the web: Opportunities and threats. In J. Filipe, J. Cordeiro, B. Encarnacao, & V. Pedrosa (Eds.), *Proceedings of the Third International Conference on WEB Information Systems and Technologies (WEBIST)* (pp. 179-187). Barcelona, Spain.
- Cardy, R. L., & Miller, J. S. (2005). E-HR and performance management: A consideration of positive potential and the dark side. In H.G. Gueutal & D.L. Stone (Eds.), *The brave new world of eHR. Human resources management in the digital age* (pp. 138-166). San Francisco: Jossey-Bass.
- Chan, Y. (2002). Why haven't we mastered alignment? The importance of the informal organization structure. *MIS Quarterly Executive*, 1(2), 97-112.
- Kearns, G. S., & Lederer, A. L. (2001). Strategic IT alignment: A model of competitive advantage. In L. Applegate, R. Galliers, & J. I. DeGross (Eds.), *Proceedings of the 22<sup>nd</sup> International Conference on Information Systems* (pp. 1-22), Barcelona, Spain.
- Keebler, T. J., & Rhodes, D. W. (2002, Summer). E-HR: Becoming the "path of least resistance." *Employment Relations Today*, 57-66.
- Lepak, D. P., Bartol, K. M., & Erhardt, N. L. (2005). A contingency framework for the delivery of the HR practices. *Human Resource Management Review*, 15, 139-159.
- Lepak, D. P., Hui, L., Chung, Y., & Harden, E. (2006). A conceptual review of human resource management systems in strategic human resource management research. *Research in Personnel and Human Resource Management*, 25, 217-271.
- Lewis, W., Agarwal, R., & Sambamurthy, V. (2003). Sources of influence on beliefs about information technology use: An empirical study of knowledge workers. *MIS Quarterly*, 27(94), 657-678.
- Oh, W., & Pinsonneault, A. (2007). On the assessment of the strategic value of information technologies: Conceptual and analytical approaches. *MIS Quarterly*, 31(2), 239-265.
- Orlikowski, W., & Barley, S. R. (2001). Technology and institutions: What can research on information technology and research on organizations learn from each other? *MIS Quarterly*, 25(2), 145-165.
- Ruël, H. J. M., Bondarouk, T. V., & Looise, J. C. (2004). *E-HRM: innovation or irritation. An exploration of web-based human resource management in large companies*. Utrecht: Lemma Publishers.

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

Schuring, R. W., & Spil, T. A. M. (2002). Explaining plateaued diffusion by combining the user-IT-success factors (USIT) and adopter categories: the case of electronic prescription systems for general practitioners. *International Journal of Healthcare Technology and Management, 4*(3), 303-318.

Stone, D. L., Stone-Romero, E. F., & Lukaszewski, K. (2006). Factors affecting the acceptance and effectiveness of electronic human resource systems. *Human Resource Management Review, 16*, 229-244.

Van Vianen, A. E. M. (2000). Person-organization fit: The match between newcomers' and recruiters' preferences for organizational cultures. *Personnel Psychology, 53*, 113-149.

Venkatesh, V. (2000, December). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research, 11*(4), 342-366.

Voerman, M., & van Veldhoven, M. (2004). De attitude van werknemers ten aanzien van E-HRM verklaard. Een empirische studie bij Philips. *Tijdschrift voor HRM*, forthcoming.

## KEY TERMS

**Contingency:** Congruence, match, agreement, or fit between distinct constructs.

**Electronic Performance Management:** A way of implementing PM-processes in organizations through conscious and directed support of and/or with the full use of Web-technology-based channels.

**Implementation of e-PM:** Adoption during the transition period between the technical installation and its skilful and task-consistent use by HR-professionals, line managers, and employees.

**Operational e-PM:** It supports the formal or the procedural/administrative process between managers, employees, and organizations.

**Relational e-PM:** It supports the informal, relational/day-to-day (communicative) processes between managers and employees.

**Strategic Alignment of IT:** The extent to which the goals and priorities of the IS strategy are aligned with the business strategy and firm's priorities.

**Transformational e-PM:** It facilitates a strategic approach to PM, meaning that the HR practitioner can concentrate on developing an organization's unique human component, while the employees remain fully engaged in their work.