

## การจัดการทรัพยากรมนุษย์ในยุคดิจิทัล Human Resources Management in Digital Age

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### บทคัดย่อ

การจัดการด้านทรัพยากรมนุษย์ในอดีตนั้นมักจะเป็นการทำงานด้วยการจัดการกับเอกสารต่าง ๆ และเมื่อใดก็ตามที่การทำงานด้านเอกสารไม่สามารถรองรับกับความต้องการขององค์กรในการเก็บข้อมูลบุคลากรของตนแล้ว แนวทางเลือกที่มีอิทธิพลในยุคปัจจุบันคือการอาศัยศักยภาพทางด้านคอมพิวเตอร์ในการจัดการทรัพยากรมนุษย์ ดังนั้นโปรแกรมการจัดการทรัพยากรมนุษย์จึงได้มีการจัดทำและนำไปใช้ในองค์กรต่าง ๆ

โดยทั่วไปแล้ว การจัดการทรัพยากรมนุษย์ขององค์กรต่าง ๆ มักจะมีความต้องการในการเก็บข้อมูลบุคลากรของตน อาทิเช่น ข้อมูลรายได้กับอัตราภาษีรายบุคคล การตัดสินใจของผู้บริหารต่อการทำงานของพนักงาน หรือ เรื่องอื่นที่เร่ร่อน ในความเป็นจริงแล้วองค์กรเหล่านี้จะมีหน่วยงานหรือส่วนงานที่กำกับดูแลงานด้านบุคลากรของตน แต่ทว่าอาจจะไม่สอดคล้องกับความต้องการในยุคปัจจุบัน ดังนั้นความคิดในการจัดการทรัพยากรมนุษย์ด้วยระบบคอมพิวเตอร์จึงได้ริเริ่มขึ้น ในบทความนี้ได้ทำการนำเสนอความหมายของการจัดการทรัพยากรมนุษย์ด้วยระบบคอมพิวเตอร์ การพิจารณาค่าถามอันจะนำไปสู่การจัดการทรัพยากรมนุษย์ด้วยระบบคอมพิวเตอร์ ผลกระทบของการจัดการทรัพยากรมนุษย์ด้วยระบบคอมพิวเตอร์ต่อการจัดการทรัพยากรมนุษย์ ข้อมูลพนักงานในการจัดการทรัพยากรมนุษย์ด้วยระบบคอมพิวเตอร์ ประสิทธิภาพสูงสุดต่อการปฏิบัติการข้อมูล การใช้ข้อมูลพนักงานรายบุคคล ความต่อเนื่องระหว่างการจัดการทรัพยากรมนุษย์กับการจัดการทรัพยากรมนุษย์ด้วยระบบคอมพิวเตอร์ตามลำดับ

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## **Abstract**

*In the past, the personnel will do their paperwork manually (manual recording practices). However, as paperwork requirements grow, and the organisation needs more and more information about its employees, there is a need to use the computer-based management information system that assesses the data and information of the employees. In this case, the state-of-art system is introduced and implemented to the organisation.*

*All organisations need to keep records about their personnel to comply with taxation requirements, for use in emergencies and as the basis for making decisions about the work, and their personnel performance, for instance. These organisations have a human resources function that handles the personnel's records. The ideal system that is used in managing the personnel is called the Human Resource Information System (HRIS). Therefore, this paper presents the definition of HRIS, key questions to consider, effects of HRIS on Human Resource Management (HRM), employee data on the HRIS, manipulating data for maximum added value, access of personnel information, and the continuing role of HRM in relation to HRIS, respectively.*

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## **1. History Overview**

In the past, the personnel did do their paperwork manually (manual recording practices). However, as paperwork requirements have grown, and the organisation need more and more information about its employees, there is a need to use the computer-based management information system that gets data and information of the employees to be assessed. In this case, the state-of-art system was introduced and implemented to the organisation.

According to Raymond (1998), the status of personnel data was becoming more important due to the development of government laws and regulations through the Equal Employment Opportunity (EEO), Affirmative Action Program (AAP), and Occupational Health and Safety Administration (OHS). Because these organisations have to provide the reports showing that the personnel practices complied with the laws, there is a need to use the computer-based system to provide accurate information effectively and efficiently to the national government with statistics or data that are readable.

## **2. Introduction**

All organisations need to keep records about their personnel, for instance, to comply with taxation requirements, for use in emergencies and as the basis for making decisions about the work and their personnel performance. These organisations have a human resources function that handles the personnel's records. The ideal system that is used in managing the personnel is called the Human Resource Information System (HRIS).

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### **3. Definition of HRIS**

HRIS is the system used to acquire, store, manipulate, analyse, retrieve, and distribute pertinent information regarding an organisation's human resources (Michael et al, 1990, p.29). It is an organisational tool for preparing relevant information for the users and managers to assist in their decision making about human resources of an organisation.

HRIS includes people, format forms, policies and procedures, and data of the organisation. The prospect of the HRIS is to provide an easy access and service from a series of data to a readable and understandable information to the users. The information that is provided may facilitate any users, especially the operational and managerial levels of the organisation to review the personnel's performance, and in any important decision making.

The effective use and benefits of HRIS to the users in obtaining the information are being very accurate, relevant, prompt, and available when needed for making any managerial decisions for the organisation in a short period of time.

It is suggested that the manager ensure that HRIS contributes to the attraction, development and motivation of human resources for the organisation. All managers in the organisation need to make use of their organisation's HRIS so as to provide a powerful competitive edge.

### **4. Key Question to Consider**

Goal-setting requiring activities may be valuable to managers in bringing out the best performance from HRM. Managers can use the following questions for this purpose so that

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he or she will know what the first hand objectives for the human resource management are:

- What is the information about employees to be used for?
- What data about employees should be gathered and kept?
- How can the data be manipulated to add maximum value?
- Who needs access to information about the organisation's employees?
- What is the continuing role of Human Resources Management (HRM) in relation to Human Resources Information System (HRIS)?

#### **5. Effect of HRIS on HRM**

##### **Use of HRIS information in decision making and reporting -**

it is important to note that different users will have a different understanding of what the system is about and of its use to the organisation. HRIS can be compared with a pyramid (Organisational Level of Management, see table 1) which shows that:

- The base consists of the transaction processing level, which related to the processing of basic personnel records.
  - The second level consists of the management information areas where the most likely use is the generation of regular and ad hoc reports.
  - Corporate level of management relates to data that can be used for strategic planning and decision support.
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**Table 1:** HRIS on Organisational Level of Management

<b>Corporate Level of Management</b>	Management information for strategic planning, policy formulation and decision making	<ul style="list-style-type: none"> <li>● Summary reporting</li> <li>● Projections</li> <li>● Manpower planning</li> </ul>
<b>Second Level of Management</b>	Management information for tactical planning and decision making	<ul style="list-style-type: none"> <li>● Summary reports and generation of ad hoc reports</li> </ul>
<b>Third Level of Management</b>	Management information for day to day planning decision making and control	<ul style="list-style-type: none"> <li>● Regular reports and generation of ad hoc reports</li> </ul>
<b>Operational Level of Management</b>	Transaction processing and general inquiry facilities	<ul style="list-style-type: none"> <li>● Basic system process like personnel records</li> </ul>

Information concerning an organisation's employees should be used for decision making in every area of employment. Most HRIS include some combination of the following activities:

- Equal employment opportunity affirmative action
- Health and safety
- Human resource planning
- Payroll (Wages and Salaries)
- Personal Details
- Performance Management
- Recruitment and employment
- Training and development

There are a large number of software that are available and designed specifically to meet the needs of the particular department so as to support the HR function. Some of the software or information systems being used in an organisation that served different purposes in HRIS are discussed below:

**Employee information system:** A set of human resources profile records that contains personal and organisation-related information, such as name, address, sex, year of services, education and training, previous experience, salary rate and other personal information. By using this employee information system the manager is allowed to identify the percentage of employees who will be of retirement age and to know the percentage of young personnel to be recruited fill in the positions vacated by retirements.

**Performance management information system:** This system includes the performance appraisal data in terms of how the performance is measured and reported. Thus, this can lead to a number of decisions to retain, promote, transfer, or terminate a single employee. Moreover, this system can identify whether the staff has certain specialties or expertise in certain areas. If not, training program can be developed for the staff so as to improve their skills in a particular area.

**Payroll information system:** This is a system that records or is concerned with staff pay rates, wage classifications, accuracy of tax calculations and other deductions and monitoring of compliance with company policies concerning pay and benefits. In addition, the system needs to provide accurate data to the general of the firm.

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The HRIS is a system that helps the users to analyse the data necessary for them to make certain decisions properly. However, the decision making is still handled by people, not by system itself.

There are three steps (see table 2) to generate the manual documentation into a readable and a presentable report for the managers. Managers are using that piece of information or report to assist them in decision making, especially to manage the human resources.

**Table 2:** HRIS's procedure

<b>Step 1: Inputs</b>	The system is a set of activities that allow the users to enter the employee's personal information into the system itself. Of course, the information that is entered to the computer is from the hand written document.
<b>Step 2: Transformations</b>	This input information that we have entered into the computer or the system will change into something more useful to the organisation. It takes less time consuming to produce the outcome. For instance, the payroll information system may transform the hours worked into a calculation of salary pay or other tax calculations.
<b>Step 3: Outputs</b>	The output for the employee in terms of the payroll system that we have used and entered the information may produce the paycheck to the employee. At this stage, the output must be available in a timely manner, accurate, and readable.

**Source:** Adapted from Michael L.G. 1991.



## **6. Employee Data on HRIS**

To collect and maintain the essential data on employees is a big task. To get into more complex things like analysing absenteeism rates and trends require significant thinking, effort, and information.

Consider the following list of information headings that are needed and gathered out of over 100 elements of data from the staff of the organisation to be collected, stored, maintained, sorted, and analysed:

- Personal details e.g. names, birth date, tax file no, and home address.
  - Location of position in the organisation, especially for large organisation.
  - Details of present job (job description and specification) e.g. title of the job.
  - Salary and benefit s details.
  - Education and professional qualifications.
  - Formal training, including attendance at seminars.
  - Skills inventory, including on the job training, personal interests and pre-employment skills.
  - Job history in the organisation, e.g. previous job grades and periods of employment.
  - Performance in the organisation, as assessed and commented upon by all pervious managers.
  - Details of separation from the organisation, including reasons for the separation.
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### **7. Manipulating Data for Maximum Added Value**

If you accept that the primary objective of any HRIS is to obtain and process useful information so that manager can make appropriate decisions about each and every employee, then the maximum added value comes from:

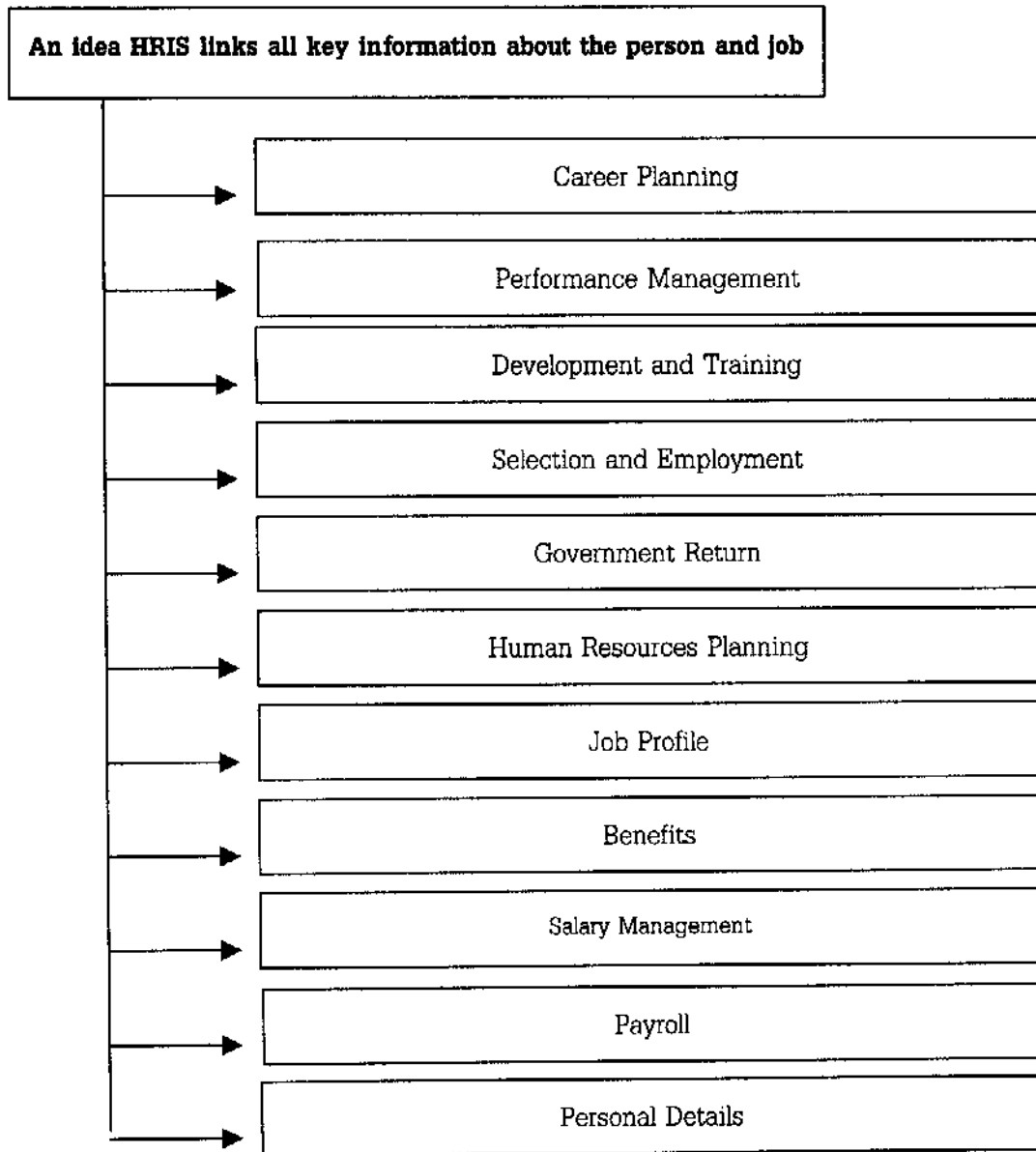
- Providing what the manager want ~ up-to-date information.
- Provide a complete picture of the problem and possible offer alternatives solutions.
- Information must be easy to understand and read.
- The information is better to be consistent in format.

Appropriate decision is based on the manager's knowledge and assessment of the employees, supported by facts and evidence from experience and other sources, including the HRIS. Managers who know their staff well are most likely to make appropriate decisions.

The following diagram (see figure 1) provides an overview of the types of information from HRIS that may assist the manager and link with other human resource systems.

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**Figure 1** System that link with HRIS



There are four typical competitive goals pursued by the organisations in adopting HRIS that is related to other organisation's functions. They are:

- The quality of the outcome (reports)
- The cost of the system
- Delivery of the analysis
- Flexibility to use the system

With the use of HRIS and human resources, practices are examined in relation to the company's success in achieving competitiveness.

### **8. Access of Personnel Information**

HRIS is not an open system in any organisation, therefore, only for those people who need to maintain the data or need to view the information for decision making or reporting purpose should have the access of the personnel information.

According to Michael (1991), the HRIS must meet a number or basic requirements in terms of the access to the personal records of employees in an organisation. They are listed as below:

- It must be an on-line system.
  - Users must property trained to sue HRIS
  - System must include an effective report generator.
  - Confidentiality of data must be safeguarded and the used of the password.
  - Data within the system must be easily accessible. Essential keys fore retrieval are the personal number and employee name.
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- Different managers at different management levels must have certain access of the information.
- Defining clearly and limiting user authorisation, verifying that person is the actual person who is authorised to use the system.

There are a large number of people directly affected by the implementation of HRIS, which is a state-of art system or technology that assists in anyway in human resources management of an organisation. According to Michael et al. (1990), people who involve in the implementation of HRIS are called stakeholders, because they have a stake in assisting the system to run effectively and efficiently.

Different people have different expectations of the outcomes generatined by HRIS. Their needs are different, based on their department and job requirements. In this case, there will be conflict between the system designers and the other groups of stakeholders in terms of needs and expectations. Figure 3 shows the different expectations from different groups of stakeholders in regards to the use of HRIS in the company.

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**Figure 2:** Differing Expectation of Stakeholders

Stakeholders	Expectations
<b>System Designer</b>	Is the system elegant? Was the system challenging to design?
<b>HR Users</b>	Is the system easy to use? Is the system well documented? Does it provide timely information?
<b>Managers</b>	Does the system aid in managing? Does it reduce administrative paperwork? Are reports accurate and timely?
<b>Employees</b>	Will any personal information be kept private? Will the system control me?
<b>System Operations</b>	Is the system easy to operate? Is the system easy to maintain?

Source: Adapted from Michael et al. 1990, p. 189.

Since the different groups of stakeholders have different needs and expectations according to their job requirements, the training program for each of the stakeholders or users has to be different. For instance, some users need to be trained in report generation while others on the actual operation of the system. In other words, different training should be offered to different groups.

### **9. Continuing role of HRM in relation to HRIS**

By using the state-of-art system in an organisation it does not mean that the role of the human resource managers will decrease in importance but there is a shift of emphasis to strategy and decision making (using the information to enhance the quality of business decisions).

Following the information generated and obtained from HRIS will facilitate the human resource managers who involve themselves in the strategic planning process. The system will provide possibly alternatives for the solutions and may predict certain possibility that will occur in the future. Furthermore, the HRIS will integrate the human resource information along with the information from other functions (e.g. Marketing, Finance, IT, Operational etc), will produce a clearer picture of the overall functioning to the operating and managerial levels of the organisation.

HRIS facilitates the human resource managers by providing the needed reports or information in a much easier and less time consuming manner. This will allow the human resource personnel to work closely with others. Moreover, the human resource personnel will move themselves toward the consulting role and the good governance, using their internal consulting skills and knowledge to assist the organisation in analysing the information with the help of HRIS.

The human resources department experiences the changes and restructuring of using HRIS. This is because the relationship of human resources department to other groups will shift to decentralisation in the area of management. The use of HRIS will make information more readily available at all levels of the organisation. However, it

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improves the communication links and user interfaces within the organisation.

However, when the decentralisation occurs, the centralisation focus also occurs and remains in some areas such as the Compensation Management, Payroll, Benefits Administration, and Government Reporting. The reason behind this is the government regulations in this particular area that make it unlikely to comply in decentralisation focus.

When the human resource practices meet the human resource information system (the new technology), there are a new role for human resource management. The purpose of today's human resource management software packages is to present the network of the human resources and to allow the organisation to cope with problems.

## **10. Conclusion**

This paper summarises the overview of elements of the HRM, and to demonstrate the consistency of the overall HRIS. Its also explains how employee data are located on the HRIS, how data can be manipulated for maximum added value, who need to maintain and view the data, what the continuing role of HRM in relation to HRIS is.

Overall, HRM and HRIS require personal discipline, commitment, and sacrifice. Successful implementation depends upon human resource managers' ability to maintain performance and change, which is necessarily when the information system is used in order to meet the goal of good governance.

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