

Implementation of Human Resource Information System

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ABSTRACT

Human Resource Information Systems (HRIS), HR Technology or also called HR modules, shape an intersection in between human resource management (HRM) and information technology. The HRIS today can be widely used as an organization wide decision support system. The wave of globalization, the move from traditional to flexible and nontraditional organization structure and increase in number of knowledge workers will consolidate the HRIS. It merges HRM as a discipline and in particular its basic HR activities and processes with the information Technology field, whereas the planning and programming of data processing systems evolved into standardized routines and packages of enterprise resource planning (ERP) software. A human resource information system (HRIS) is the system used to acquire, store, manipulate, analyze, retrieve, and distribute pertinent information regarding an Organization's human. HRIS supports the strategic, tactical and operational use of the human resource of an organization. To take an illustration, manpower planning and labor force tracking are many a times, considered as strategic decisions of staffing. The labor cost analysis, budgeting and turnover analysis are tactical by nature; and recruiting, workforce planning and scheduling are the operational decisions of staffing area.

Keywords: *Introduction of HRIS, Scope of HRIS, Objectives of HRIS, need of HRIS, advantages of HRIS, functions of HRIS, applications of computers in HRIS*

INTRODUCTION

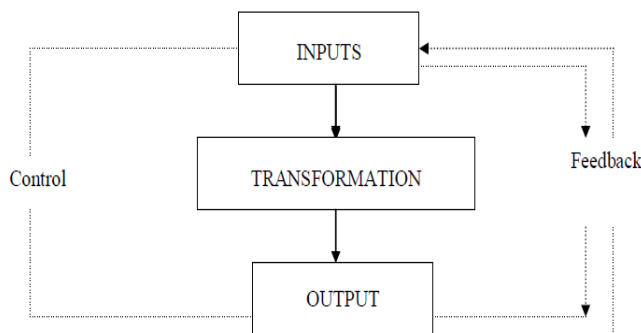
Human Resource Information Systems (HRIS) is an effort towards speedy, effective and professionally handling of information on resources for efficient management of Human Resource function. HRIS is a computerized system used to acquire, store, analyze and distribute information regarding an organization's human services and to provide services in the form of information to the clients or users of the system.

It is a device, designed to fulfill the manpower information, needs of the organization. HRIS helps managers in decision-making in respect of promotion, wage fixing, recruitment, training and development. The inputs of HRIS include the

information relating to employees, their abilities, qualifications, potentialities, creative instincts, age, pay scales, various jobs in the organization, their required skill and qualifications to do them, the number of employees and executives manning various positions, organizational objectives, policies and procedures etc. This information is loaded into the system. This data is processed into the most useful information required by the managers , service or government organization but also for the entire city, district, state or country. In order to eliminate human resource problem of any kind, HRIS comes to the rescue and provides the services of hiring human resources, maintaining the complete record of human resources. It can

at any moment show the supply of human resources available.

Thus HRIS is a system that enables storing of information of Human Resource in every aspect such as Personal, Academic, Qualification, Family, Medical, Career and Performance Evaluation, Training & Development & Wage and Salary of individuals. Unlike manual systems the HRIS enables availability of all such information in a single screen. Reports on various parameters can be generated with ease. Moreover reliability of such records is assured.



Inputs: The input of HRIS includes information related to employees such as education, age, experience, training, present status, present salary, whether promoted or not, organization's policy past and present, procedures past and present and other necessary detailed information relating to the human resources in the organization. The computerized human resource information system in all respect superior to manual system, which is time consuming and not so cost effective. The most important benefit of the system is that the information is available immediately as and when required.

Transformation: The information fed to the computer can be transformed into more meaningful and necessary information that is

exactly required by the organization. This is the conversion stage of computerized HRIS. The information transformed into meaningful calculation is very useful to the managers and organization as well. This works as a decision support system, which aids in making appropriate decisions.

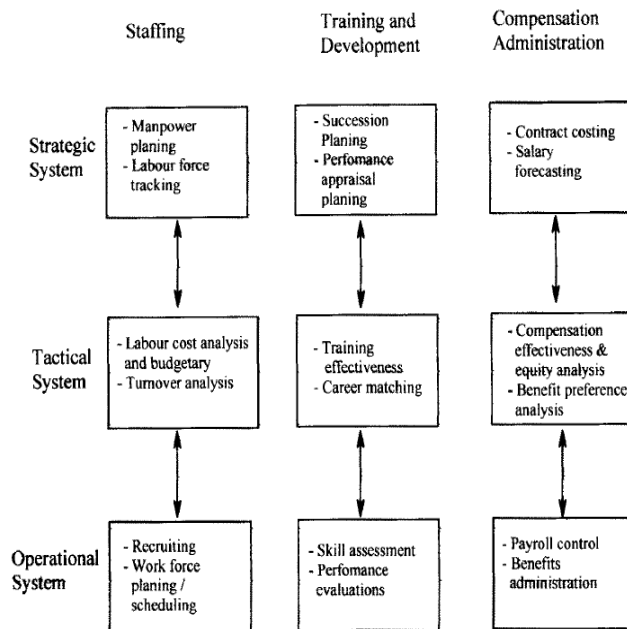
Output: Output refers to the printouts of the transformed material from the computer printer like salary statement, report on performance of an employee, budget estimates, etc. All these can be had in the form of printouts, terminal screens etc. A well knit HRIS acts as a worthy decision support organism of a very high quality. The high quality output must be accurate, relevant, consistent, readable and comprehensive.

Feedback and Control: Whether the output obtained is relevant and useful or not must be known. The method of ensuring it is known as feedback. Feedback establishes control over the system.

Why HRIS ?

Entire management activity cycle revolves around human resource. The human factor enjoys the position of centrality amongst all the factors of production. The information resource, rightly used by and for this dynamic factor of production can enhance his efficiency and effectiveness. People through HRIS can help business to improve its operations, promote innovations, increase profitability and productivity and maximize satisfaction of its employees. It helps in developing and maintaining the integrated work culture and environment. HRIS supports the strategic, tactical and operational use of the human resource of an organization. To take an illustration, manpower planning and labour force tracking are many a times, considered as

strategic decisions of staffing. The labour cost analysis, budgeting and turnover analysis are tactical by nature; and recruiting, workforce planning and scheduling are the operational decisions of staffing area.



No organization works without information. Therefore, every organization has some sort of information system, no matter in what form and shape. This system may be fragmented in departmental or sectional segments. More often, these sub - systems are non-integrated and inefficient.

When these piece-meals of information are made coherent and coordinated, they can bring wonderful results. Same is the case with the information management of HRD department. This unification effort will provide one place for data input and one source for data output and reporting. It will result into enormous savings of time, efforts, energy and money.

The Scope of HRIS:

- **Job analysis and design system information:** Since individuals are employed for various jobs, it is essential to computerize various job related information and offer redesigning.
- **Appraisal sub - system information:** It contains information about performance rating of employees which serves as input for transfer, promotion, increment, succession planning and career planning etc.
- **Training & Development sub - system information:** It provides information for designing course material, training schedule, training module, training methods, and appraisal of training programs etc.
- **HR planning system information:** It includes information that could assist human resource mobilization, career planning, succession planning and inputs for skill development.
- **Personnel administration system information:** It is intended to keep personal records of each employee as regards leaves, transfer, promotion, increments etc.

Need of HRIS:

- Efficiently storing each employee information and data for reference-personal data management, pay roll accounting, benefits management and planning.
- Enabling informed decision making in day-to-day personnel issues, planning, budgeting, implementing and monitoring Human Resource function.
- Providing data / returns to government and other public
- Facilitating decision making in areas like promotion, transfer, nomination, settling employee's provident funds, retirement,

gratuity, LTC, and earned leave compensation.

- Cutting costs.

Advantages of HRIS:

- It gives accurate information.
- It does fast processing of information
- It works as a valuable tool to strategic planning and its implementation
- It acts as a decision support system
- It is time efficient
- It establishes strong management control
- It is not very expensive

Objectives of HRIS: The basic objective of HRIS is to help and support the human resource management department to function as an efficient and responsible area for managing the human resource of the organization providing perfect, timely, accurate and dependable information for decision making, policy framing and analysis. The other secondary, though principal objectives of HRIS can be summarized as under.

- Identification of HR information need for every functional area of the organization.
- Creation of a comprehensive data base to fulfill these needs.
- To make the desired information available in the right form to the right person and at the right time.
- To develop complete functional specification for the HRIS.
- Designing necessary transaction processing and updated information.
- To use the most efficient method of processing data.

- To identify retrieved and reporting needs of information.
- Developing pertinent supporting documentation.
- To provide necessary security and secrecy for important and confidential information.
- To keep the information up-to-date.

Functions of HRIS:

Human resource information system is expected to perform following functions.

(a) Data collection functions

(b) Data management functions

- **Data collection functions:** Who should collect what data and in what form and how often? The nature and the form of data will vary from organization to organization depending upon its attitude and objectives. The manner of data collection will depend upon the purpose for which data is required. After collection of data, irrelevant data should be filtered and appropriate and useful data should be properly classified and tabulated so that it can be used easily when needed.
- **Data management functions:** A good data management system involves following sub functions.
 - (a) Processing operations, viz., classifying, analyzing, summarizing and editing the data.
 - (b) Storage of data, viz., indexing, coding and filing of information.
 - (c) Retrieval of data whenever required.
 - (d) Evaluation of data, i.e. judging the usefulness of information in terms of its relevance and accuracy.

(e) Dissemination of data, i.e., providing the required data in the right form at the right time.

DESIGNING THE HRIS:

HR information system is the linking mechanism which connects all decision making centres in an organization. The development of an HRIS should be a well thought-out process. HRIS should consist of the following steps.

1. Planning of system:

Planning of HRIS requires the identification of objectives of the system. This, further requires a clear formulation of objectives of the organization, spelling out of the activities required to be carried out, work relationships, work patterns and their sequence; and above all, defining physical boundaries of the system. Thus, this step involves the description in generalised terms of the course of action and the limitations within which the system has to be designed.

2. Organising flow of information:

The system designer should study what is the prevailing flow of information and compare it with what should be the flow of information. He should also study how this gap could be removed. This study should be based on following premises.

- The critical deficiency under which most managers operate is the lack of relevant information.
- The manager needs the information he wants for decision making.
- If a manager has the information he needs, the decision making will improve.
- Better communication between managers will improve organizational performance.
- A manager does not have to understand how his information system works, only how to

use it. It should be noted that an information system cannot work exclusively in isolation of other organizational subsystems.

Otherwise, it would lead to certain deficiencies. Therefore, the HRIS should be imbedded in overall management control system. The system designer has to take the decision in respect of the number of files to be maintained, the equipment to be used for processing of data such as manual, electronic or automatic processing etc., the personnel to be employed for this purpose and storing the information required on an exceptional basis. Above all, a cost-benefit analysis of the system is essential.

3. Implementation of HRIS:

This phase deals with the fitting-in of HRIS into the organization structure. The various alternatives available in this context are:

The old information flow may be allowed to continue as it is, and new system may be installed to meet the requirement of the new operation.

- The old system may be scrapped completely and supplemented by the new one, and
- Phasing the installation of the new system and scrapping the old one.

It is important to appoint and train personnel for operating the HRIS. The procedures for actual installation of the equipment to be used and development of the support facilities are yet another major decision areas. Obtaining the printed formats and reports is the next task. The most difficult part of this phase is amalgamation of the information system and the organization structure. Since this stage is so crucial, we have taken 'implementation' in greater depth on subsequent pages.

4. Feedback:

The regular feedback regarding actual functioning of the HRIS is a must for the designers. This is to fill up the gap between its planning and implementation. The changes in the environment also need to be incorporated. If the HRIS is not corrected for these deviations, it will lead to malfunctioning. Hence, the system should be continuously reviewed in the light of changes in the environment both within the organization and outside it.

APPLICATION OF COMPUTERS IN HRIS:

The use of computers in HRIS can be as follows:

(i) Job description:

Produce printouts that describe jobs according to user specifications and information input into the system. As a minimum job description includes job title, purpose, duties and responsibilities, the computer programme should allow the authorized users to update and reform job descriptions.

(ii) HR planning:

It forecasts demand for key jobs as well as employee turnover and patterns of inter organizational mobility. It can be used to project future employee and competency needs for staffing and developing activities.

(iii) Staffing:

It refers to recruitment, selection and placement functions and can include the following modules.

- Applicant tracking: - It tracks key information on job applicants and other relevant selection process information.
- Job posting: - It provides a listing of open jobs within the organization. The listing typically identifies title of the job, job location, primary responsibilities and job requirements.

- Job requirements analysis: - This is the analysis of job duties and responsibilities to identify competencies that predict effective job performance.
- Job - person matching: - This is comparisons of competency assessments of candidates with competency requirements.

(iv) Succession planning:

It reports information on the availability of competent candidates for key positions. It will help in identifying candidates for each key position and the development needs of candidates where they fall short of the requirements for a target job.

(v) Training and development record:-

This will help track recommended training for skill levels, training site availability, course schedules, enrollments, attendance, and completion of course, trainer and trainee evaluation, results etc. It includes the following:

- Career planning: - Career planning helps employees in understanding job options and compares their competencies with the competency requirements of these jobs.
- Development needs analysis: - This type of analysis helps identify employees and employee groups that will best benefit from training and development.
- Development advisor: - It provides feedback to employees by identifying gaps between an employee's competencies and job competency requirements of his current job.

(vi) Performance Appraisal:

Through performance appraisal, managers know about the standing of employees performance-wise, and direct them to achieve organizational objectives and develop their Individual competencies. It can also help devise performance appraisal forms based on goals,

standards and competencies required for a job and record appraisal rating for employees on goals accomplishment and competency assessment. This all is done through following.

- Performance assessment: - Through regular assessment of employees' performance the data about their competency can be kept up to date.
- Goals accomplishment: - Goals set beforehand, serve as mile stones. They help in examining employees performances.
- Reward management: - It is through performance appraisal, that compensation management can be turned scientific and judicious. Reasonability of payment of perks and perquisites is justified and internal and external pay equity is satisfactorily.

ITES IN HUMAN RESOURCE MANAGEMENT:

The people working in IT Enabled Services have a great amount of stress when compared to other people and their nature of jobs. Nowadays the company's work on target basis so to reach the target the employees have to strive hard therefore for the strain in their jobs the HR department have to think about coping their stress by giving some Recognition Hike in the pay Fringe benefits Fun programs & some recreational activities. IT FOR HR MANAGERS: It is essential for a Human Resource Manager to have some knowledge on information technology because everything nowadays is becoming computerized and especially when it comes to human resource information systems the HR manager has to be aware about the system well at least for the sake of minor things like payroll, compensation, etc. So information technology plays a vital role for any department & especially HR Department in any organization.

Database Concepts and its Application in HRIS:

Information Technology is the application of computers and techniques to store retrieve and manipulate data often within an organization. To facilitate the functioning of HR and make it more proactive, IT and HR have been merged to form HRIS. In short, one can describe HRIS as an online solution for the entry, tracking of data, information that a human resource management group requires for realizing its strategic objectives and aligning its functions with the organizational vision.

To get a clear idea of HRIS and its applications in management systems, one should get a clear idea of data, information and knowledge. For any organization, effective data management is their primary concern and it's the lifeblood. Data presents the facts and figures in an unstructured form. Information on the other hand, is the interpretation of data which is always directed towards the fulfillment of a goal.

In the words of **Davenport & Prusak (2000)**, for the data to become an information, it should be contextualized, categorized, calculated and condensed. Information, thus offers a bigger picture by adding meaning to the data which is made available. Knowledge, addresses the how related aspects, other than what and why.

Information with a meaning is knowledge (**Whitehill, 1997**). Knowledge, details the procedures for using the data and information for making crucial decisions and dealing with business. In the context of HR, knowledge, data and information play a vital role in implementing important strategies for management of human resources by referring to the facts and figures related with the human resources and demographic profiles.

DBMS (Database Management System) was introduced in and around 1960-1970 by IBM. It is useful for creating and managing databases. The programmers and users can create, retrieve, update and manage data systematically, promotes data sharing from top to bottom level of the management, improves data security, better data integration and improves productivity of the organization.

Several popular databases which are currently being used are based on the relational database model. A relational database management system (**RDBMS**) is based on the relational model as invented by E. F. Codd, of IBM's San Jose Research Laboratory. Oracle, IBM's DB2 and SQL Server of Microsoft are some of the leading RDBMS products. RDBMS has proven to be one of the most popular relational databases which is being used by the organization's in the present scenario because of its benefits which it offers and it addressed the limitations of old DBMS structures.

In the present scenario, organizations adopt an integrated approach for creating synergies and achieving a competitive advantage in the industry. Information sharing and dissemination across various levels of hierarchy and functional areas play an important role in management functioning and decision making. RDBMS encourages effective coordination and alignment in the functioning of various departments, which was referred to as **ERP (Enterprise Resource Planning) as stated by Martin, Brown, Hoffin and Perkins, 1999.**

DATA sharing is required in different functional areas as well as across different levels of management specially the Human Resource Department. The levels of management can be primarily subdivided into 3 broad categories and they are Top level, Middle level and Lower level (Operative or the Supervisory or First Line Managers). There are three types of data sharing:

Sharing between Functional Units

RDBMS facilitates integration of various business applications as a result of which each functional department can have an access to pool of data apart from accessing their own departmental data. **ERP modules** essentially are the integrated applications used commonly by large organizations for meeting their business objectives by aligning the departmental functions.

Sharing data between Different Levels of Users

Data sharing is done by the users of different levels, which can be broadly classified as operations, middle management and executive. These levels correspond to the three different types of automated business systems that have evolved during the past three decades.

- **Electronic Data Processing (EDP):** EDP was first applied to the lower operational levels of the organization to automate the paperwork. It laid its focus on efficient transaction processing, had its focus on data, storage, processing and flows at the operational level and summarized reports for the management.
- **Management Information System (MIS):** The MIS approach elevated the focus on information systems activities with additional emphasis on integration and planning of the information systems function.
- **Decision Support System:** DSS focuses on top managers and key decision makers, the major emphasis is on quick response, adaptability, flexibility and is decision focused. Data mining, data analytics and business intelligence are examples of information taken from DSS, which depends heavily on data warehouses. Data

warehouses are aggregated data gathered from various databases available with the business.

Sharing data between Different Locations

A company which operates in various locations, needs to share and manage data across diverse geographical area. Sharing these data is a real big problem.

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THE REASONS FOR POSSIBLE FAILURE OF HRIS :

Any systems newly adopted have reasons to backfire. These reasons, to some extent, may vary in their nature and degree, from organization to organization. reasons for the systems failure may be denoted as follows.

- Ambiguity about the systems goal.
- Failure in identifying problems in proper perspective.
 - Poor infrastructure and inappropriate hardware and / or software.
 - Existence or evidence of high resistance by the staff for the system.
 - Lack of motivation and organizational support.
 - Enthusiastic or misleading planning and design.

CONCLUSION:

The applications of computers in human resources management has extended into areas imagined merely 2 decades back. With just a few keystrokes, or clicks on a mouse, organizations can instantly connect to sources of information that used to take weeks or months to access. Computers facilitate the storing and retrieving of employee records, policy information, and correspondence creating a show able paper trail. The vast majority of firms have made at least some of IT to transform their HR functions. In fact, within US corporations alone, IT now represents the single largest capital expenditure, accounting for almost one-third of all capital investment. Generally, traditional HRM functions are common to all organizations. They consist of tracking data regarding personal histories, family details, skills, capabilities, experiences, pay, benefits and grievances. Performance of these functions is increasingly complex, that must be performed at the lowest possible cost and also at a fast rate, which pose increased challenges for HR professionals. Organizations have started to automate these functions by introducing HRIS technology. A Human Resources Information System is a system that lets you keep track of all your employees and information about them. It is usually done in a database or, more often, in a series of interrelated databases. Hence, development of client-server HRIS enables HR executives to assume responsibility and ownership of their systems. The current pressures and issues affecting library and information services in all sectors are well known and have been documented in numerous articles and reports over the past decade. Human resources information systems have evolved since the 1980s from relatively simple computer applications to virtual treasuries of sophisticated human resources information and processes. HRIS also is the name of the human resources discipline for HRIS specialists and other human resources professionals involved in

the technology for employment and personnel matters.

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