# Lecture Outline

Chapter 1: Evolution of Human Resource Management and Human Resource Information Systems: The Role of Information Technology

# **CHAPTER OBJECTIVES**

After completing this chapter, you should be able to do the following:

* Describe the historical evolution of HRM, including the changing role of the human resources (HR) professional
* Discuss the impact of the development of computer technology on the evolution of HRM and HRIS
* Describe the three types of HR activities
* Explain the purpose and nature of an HRIS as well as the differences between the types of information systems functionality in an HRIS
* Discuss how the information from an HRIS can assist in decision making in organizations
* Discuss how the developments in HRIS have led to HRM becoming a strategic partner in organizations and to the emergence of the field of strategic human resources management (Strategic HRM)
* Be able to define Six Sigma, balanced scorecard, and the contingency perspective and fit model of HRM
* Describe the differences between e-HRM and HRIS
* Understand how HRM and HRIS fit within a comprehensive model of organizational functioning

## INTRODUCTION

* To maintain a competitive advantage in the marketplace, firms need to balance the resources available to the firm to achieve the desired results of profitability and survival.
* The resources that are available to the firm fall into three general categories: **financial, physical, and human**. The management of the human resources is the most critical of the three due to the costs of human capital for the firm.
* The effective management of human resources in a firm to gain a competitive advantage in the marketplace requires **timely and accurate** information on current employees and potential employees in the labor market. The need for timely and accurate information for managerial decision making must be stressed with the students early in the course.
* Finally, as will be seen throughout the book, the evolution of computer technology, meeting this information requirement (timely and accurate) has been greatly enhanced through the creation of HRIS.

## Historical Evolution of HRM and HRIS

* The evolution of HRM and the development of HRIS are important for the student in that the caretaker/record-keeping function prior to World War II still is important in today’s elaborate systems. The advancement of the field of HRIS is tightly intertwined with the developments in the IT/IS field in that as more data and information could be stored and accessed, HR professionals could move away from primarily clerical work to work that was closely related to the strategic objectives of the firm.
* See new Figure 1.1 – Historical Evolution of HRM and HRIS.
* HRM in the pre–World War II period
  + HRM in the pre–World War II period was only focused on keeping employee records (having a “caretaker” role), and there were very few government rules or regulations governing the treatment of people in the workplace.
  + During this period, the prevailing management philosophy was called **scientific management**. The central thrust of scientific management was to maximize employee productivity. It was thought that there was *one best way* to do any work, and this best way was determined through time and motion studies that investigated the most efficient use of human capabilities in the production process. Then, the work could be divided into pieces, and the number of tasks to be completed by a worker during an average workday could be computed.
  + At this point in history, there were very few government influences in employment relations; consequently, employment terms, practices, and conditions were left to the owners of the firm. As a result, abuses such as child labor and unsafe working conditions were common.

## Post–World War II (1945–1960)

* In the post–World War II era, managers realized that employee productivity and motivation had a significant impact on the **profitability** of the firm. The human relations movement after the war emphasized that employees were motivated **not just by money** but also by **social and psychological factors**, such as recognition of work achievements and work norms. There were significant numbers of employment laws enacted in the United States that allowed the **establishment of** **labor unions** and defined their scope in relationship with management.
* Due to the need for the classification of large numbers of individuals in military service during the war, systematic efforts began to classify workers around occupational categories in order to improve recruitment and selection procedures. The central aspect of these classification systems was the *job description*, which listed the tasks, duties, and responsibilities of any individual who held the job in question. These job description classification systems could also be used to design appropriate compensation programs, evaluate individual employee performance, and provide a basis for termination.
* With its changing and expanding role, the typical personnel department started keeping increasing numbers and types of employee records, and computer technology began to emerge as a possible way to store and retrieve employee information. In some cases in the defense industry, **job analysis** and classification data were inputted into computers to better understand, plan, and use employee skills against needs.
* Personnel departments outside the defense industry were not using computers at this time. Computers were being used for billing and inventory control, but there was very little use for them in the personnel function except for payroll. The payroll function was the first to be automated. Large firms began harvesting the benefits of new computer technology to keep track of employee compensation, but this function was usually outsourced to vendors since it was still extremely expensive for a firm to acquire or develop the necessary software for the payroll function.

## Social Issues Era (1963–1980)

* In the “social issues” era, there was an unprecedented increase in the amount of **labor legislation** that governed various parts of the employment relationship, such as prohibition of discriminatory practices, occupational health and safety, retirement benefits, and tax regulation. As a result, the personnel department **was burdened** with the additional responsibility of legislative compliance that **required collection, analysis, and reporting of voluminous data** to statutory authorities. It was about this time that personnel departments were beginning to be called **human resources departments**, and the field of human resource management was born.
* Computer technology was evolving and delivering better productivity at lower costs. These technology developments and increased vendor activity led to the development of a comprehensive **management information system (MIS)**. Another factor was the booming economy in most industrialized countries. As a result, employee trade unions successfully bargained for better employment terms, such as health care and retirement benefits. Consequently, labor costs increased, which put pressure on personnel managers to justify cost increases against productivity improvements. With the increased emphasis on employee participation and empowerment, the role of personnel function transformed from a “protector” rather than a “caretaker” focus, shifting the focus away from maintenance to development of employees. Thus, the breadth and depth of HRM functions expanded, bringing about the need for strategic thinking and better delivery of HR services.

## Cost-Effectiveness Era (1980 to the Early 1990s)

* In the “cost-effectiveness” era, the functional focus shifted from employee administration to employee development and involvement. To improve effectiveness and efficiency in service delivery, through cost reduction and value-added services, the HR departments came under pressure to harness technology that was becoming cheaper and more powerful. There was a growing realization within management that people costs were a very significant part of their budgets. Some companies estimated that personnel costs were as high as 80% of their operating costs. As a result, there was a growing demand on the HRM function to cost justify their employee programs and services.
* Even small and medium firms could afford computer-based HR systems that were run by increasingly user-friendly microcomputers and could be shown to be cost-effective. The prevailing management thinking regarding the use of computers in HR was not that their use would result in a reduction in the number of employees needed in HR departments but that employee activities and time could be shifted from transactional record keeping to more transformational activities that would add value to the organization.
* With the growing importance and recognition of people and people management in contemporary organizations, **strategic human resource management (Strategic HRM)** has become critically important in management thinking and practice. Firms today realize that innovative and creative employees who hold the key to organizational knowledge provide a sustainable competitive advantage because unlike other resources, intellectual capital is difficult to imitate by competitors. One of the keys to effective management of the human talent was the computerization of the HRM function. The increased use of technology and the changed focus of the HRM function as adding value to the organization’s product or service led to the emergence of the HR department as a strategic partner.

## Technological Advancement Era and the Emergence of Strategic HRM (1990 to Present)

* The economic landscape underwent radical changes throughout the 1990s with increasing globalization, technological breakthroughs (particularly **Internet-enabled Web services**), and hypercompetition. Business process reengineering exercises became more common and frequent, resulting in several initiatives, such as the rightsizing of employee numbers, reducing the layers of management, reducing the bureaucracy of organizational structures, creating autonomous work teams, and outsourcing. These changes to both human resources and the systems supporting HR are summarized in Figure 1.1.
* Firms today realize that innovative and creative employees who hold the key to organizational knowledge provide a sustainable competitive advantage because, unlike other resources, intellectual capital is difficult for competitors to imitate. Accordingly, the people management function has become strategic in its importance and outlook and is geared to attract, retain, and engage talent. These developments have led to the creation of the **HR balanced scorecard**, as well as to added emphasis on the return on investment (ROI) of the HR function and its programs.
* The increased use of technology and the changed focus of the HRM function, which shifted to adding value to the organization’s product or service, led to the emergence of the HR department as a strategic partner. With the growing importance and recognition of people and people management in contemporary organizations, **strategic human resource management (Strategic HRM)** has become critically important in management thinking and practice.
* The evolution of strategic HRM: 7 key themes:
  + **HR contingency perspective** and fit: HR strategies are dependent on business strategies (cost reduction, quality improvement, and innovation) and business settings (manufacturing, services, public sector, and not for profit, as well as firm size)
  + Shift in focus from managing people to creating strategic contributions, signifying the resource-based view of the firm and social capital
  + HR system components and structure, focusing on HR system architecture and bundles of high-performance work practices
  + Expanding the scope of HRM beyond the focal organization to include customers, suppliers, and competitors, both locally and internationally
  + Achieving HR implementation and execution by translating the rhetoric into practice
  + Measuring the outcomes of Strategic HRM by various means, such as the HR balanced scorecard approach
  + Research methodological issues that stress the importance of evidence-based management
* Another critical characteristic of Strategic HRM is the adoption and use of **HR metrics**. Most functional departments of an organization have utilized metrics for decades due to the nature of their business transactions. For example, the marketing department has set sales goals, and the effectiveness metric that is used is the percentage of sales relative to the goal. But for HR, the focus on the measurement of the cost effectiveness of programs is relatively recent.
* Kaplan and Norton (1996) first popularized the concept of the *balanced scorecard* that goes beyond traditional financial measures to assess firm performance to include customer, internal process, and learning perspectives.
* The **HR Balanced Scorecard** seeks to achieve the key HR deliverables (workforce mindset, technical knowledge, and workforce behavior) by aligning, integrating, and differentiating the HR systems. In addition, Lawler, Levenson, and Boudreau (2004) emphasize that three types of metrics are important to evaluate the HR function. One is *efficiency metrics* for administrative tasks such as “time to fill” jobs. The second type is *effectiveness metrics* for HR practices such as the cost to fill a job vacancy. The third type is *impact metrics* for HR programs and practices that focus on the overall objective of developing and optimizing workforce capabilities and competencies. For example, an organization could assess the cost per hire, comparing current year cost relative to the costs in previous years or after a major change to recruitment practices. HR metrics combined with IT knowledge and applications has given organizations a significant tool to utilize the human capital in their organizations.

## HR Activities

HR departments engage in three types of activities, as follows:

* **Transactional HR activities** involve day-to-day transactions that have to deal mostly with record keeping—for example, entering payroll information, employee status changes, and the administration of employee benefits – 65% to 75% of the time.
* **Traditional HR activities** involve HR programs such as planning, recruiting, selection, training, compensation, and performance management – 15% to 30% of the time.
* **Transformational HR activities** are those actions of an organization that “add value” to the consumption of the firm’s product or service. An example of a transformational HR activity would be a training program for retail clerks to improve customer service behavior, which has been identified as a strategic goal for the organization – 5% to 15% of the time.
* One of the main purposes of an HRIS is to reduce the amount of time spent on transactional activities and shift that time for HR professionals to use for traditional and transformational activities.

In terms of the broad roles of HR, Ulrich (1998) identifies four main roles—namely, strategic business partner, administrative expert, employee champion, and change agent. Ulrich, Younger, and Brockbank (2008) stress that, in the 21st century, the HR organization should function as a business within a business, shifting its focus from activities to outcomes and capabilities and its structure so that it mirrors that of the business.

This is a major theme of the entire book. Implementing an HRIS will not reduce the number of employees needed to fulfill the HR function; however, the HRIS will allow them to work on activities that can have effects on the “bottom line” and the achievement of the strategic objectives of the company.

## Interface Between HR and Technology

* Technology-driven automation (IT) and the redesign of work processes certainly help reduce costs and cycle times, as well as improve quality. Information systems (IS) can further help decision makers to make and implement strategic decisions. However, IT is only a tool and can only complement, not substitute for, the people who use it. Often, organizations mistake IT as a message and not the messenger, so they divert time, effort, and money away from a long-term investment in people to developing and deploying information technologies.
* In fact, the critical success factors in information systems project implementation are often nontechnical and due more to political, social and managerial issues rather than technical issues (Martinsons & Chong, 1999). This topic is covered in detail in Chapters 8 and 9.

## A Primer on HRIS

* It is important to note that a company that does not have a computerized system still has an HRM system; that is, the paper system used to acquire, store, manipulate, analyze, retrieve, and distribute information regarding an organization’s human resources.
* An HRIS is not simply computer hardware and associated HR-related software. Although an HRIS includes hardware and software, it also includes people forms, policies and procedures, and data.
* The primary purpose of the HRIS is to provide service, in the form of *accurate and timely information*, to the “clients” of the system. There are a variety of potential clients, as HR information may be used for strategic, tactical, and operational decision making (e.g., planning for needed employees in a merger); to avoid litigation (e.g., identifying discrimination problems in hiring); to evaluate programs, policies, or practices (e.g., evaluating the effectiveness of a training program); and to support daily operations (e.g., helping managers monitor the work time and attendance of their employees).
* Because of the complexity and data intensiveness of the HRM function, it is one of the last management functions to be targeted for automation (Bussler & Davis, 2001/2002). This fact does not mean that an HRIS is not important; it just indicates the difficulty of developing and implementing it compared with other business functions—for example, the billing and accounting systems. Powered by information systems and the Internet, almost every process in every function of HRM has been computerized today

This idea of an **HRIS impacting the entire organization is very important**, and you should emphasize it strongly. However, the additional idea is that systems do not make the decisions but people do. At this point it is important to introduce the idea that HR folks design the systems, and IT/IS simply supply the technology.

## E-HRM & HRIS

Confusion can arise concerning the distinction between e-HRM and HRIS. Electronic human resource management, or e-HRM, reflects a philosophy for the delivery of HR; it uses information technology, particularly the Web, as the central component of delivering efficient and effective HR services. Conversely, as conceptualized in this book, an HRIS comprises the technology and processes underlying this new way of conducting human resource management. An HRIS can include technologies such as databases, small functional systems focused on a single HR application (e.g., performance management), or a large-scale, integrated **enterprise resources planning (ERP) architecture** and Web-based applications. In today’s environment, it can even be devices such as smartphones and social networking sites that enable employees to access HR data remotely or to connect with others in the organization.

Another way of looking at the differences between e-HRM and HRIS is that e-HRM tends to be more application and HR-function focused (e.g., e-recruitment and e-training), and an HRIS is more focused on the systems and technology underlying the design and acquisition of systems supporting the move to e-HRM.

## Why Do We Need HRIS?

There are several advantages to firms in using HRIS. They include the following:

* Providing a comprehensive information picture as a single, comprehensive database; this enables organizations to provide structural connectivity across units and activities and increase the speed of information transactions
* Increasing competitiveness by improving HR operations and improving management processes
* Collecting appropriate data and converting them to information and knowledge for improved timeliness and quality of decision making
* Producing a greater number and variety of accurate and real-time HR-related reports
* Streamlining and enhancing the efficiency and effectiveness of HR administrative functions
* Shifting the focus of HR from the processing of transactions to strategic HRM
* Reengineering HR processes and functions
* Improving employee satisfaction by delivering HR services more quickly and accurately to them

The ability of firms to harness the potential of HRIS depends on a **variety of factors**, such as

* the size of the organization, with large firms generally reaping greater benefits;
* the amount of top-management support and commitment;
* the availability of resources (time, money, and personnel);
* the HR philosophy of the company, as well as its vision, organizational culture, structure, and systems;
* managerial competence in cross-functional decision making, employee involvement, and coaching; and
* the ability and motivation of employees in adopting change, such as increased automation across and between functions.

**Different Types of HRIS**

Although there are multiple typologies for the classification of computer-based systems, we are going to define the most basic types of systems that are most readily applied to the HR context and for use within an HRIS. Although there are many ways of categorizing information systems, one of the most common ways of doing this is to focus on what level of organization processing the system supports: daily operations, managerial functioning, executive-level processes and strategies, and those that span organization levels. Table 1.1 lists the major types of information systems and their major focus and goals, as well as providing examples of how they can be used to support human resources.

We briefly focus more deeply on one type of information system, the decision support systems (DSS). A DSS focuses on decision making, enabling users to work intimately with the data, developing multiple “what if” scenarios and queries with the system. Although there are numerous reports that can be generated by a DSS on a regular basis, the critical question is this: How many of these reports are used by either line managers or HR professionals in their daily work, *particularly in their decision-making capacity?*

Transaction Processing System

* Improved transaction speed and accuracy
* Improved efficiency in the processing of daily business transactions
* Automation of routine transactions
* Reduced transaction costs

Management Information System

* Provides key data to managers
* Supports regular and ongoing decisions
* Provides defined and ad hoc reporting

Executive Information System

* Provides aggregate, high-level data
* Helps managers with long-range planning
* Supports strategic direction and decisions

Decision Support System

* Interactive and iterative managerial decision-making
* Supports forecasting and “what-if” analysis
* Supports business simulations

Expert System

* Embed human knowledge into information systems
* Automate decisions with technology

Office Automation Systems

* Designing documents
* Scheduling shared resources
* Communication

Collaboration Technologies

* Supports electronic communication and collaboration between employees
* Supports virtual teams

Enterprise Resources Planning System

* Integration and centralization of corporate data
* Share data across functional boundaries
* Single data source and common technology architecture

## System Development Process for an HRIS

The formal design of any information processing system is supposed to follow a set of steps labeled the System Development Life Cycle (SDLC). There is agreement that the SDLC has five general phases: (1) planning, (2) analysis, (3) design, (4) implementation, and (5) maintenance.

However, it is recommended that the following system development process should be used for an HRIS: The HRIS development process refers to the steps taken from the time a company considers computerizing its human resources functions through the analysis, design, development, implementation, maintenance, evaluations, and improvement of the system.

Walker (1982) indicated that development of an effective HRIS should follow seven stages: Proposal to Management, Needs Analysis, System Specifications, System Design, System Development, Installation and Conversion, and Evaluation.

**Note:** The important point is that the SDLC for an HRIS should follow a structured approach, and this book will cover that approach in detail.

There are two *critical* points to be emphasized from the various descriptions of the phases or stages of system development. One, the HRIS system development process ***begins*** when the company first begins to consider computerizing its HR functions. It is important to ***document*** this beginning of the process so that it can be considered when the system is being evaluated and maintained. The second critical point is the ***importance of the* *evaluation*** and, as needed, improvements to the system.

**A Model of Organizational Functioning**

There are PowerPoint slides for this model. The focus of the model is on the centrality of the effects of the HRIS on the Strategic Management Plan, as well on operational implications in terms of specific HR programs.

# **Central Themes of the Book**

There are some central themes that are emphasized in this book, which can also be seen in the model of organizational functioning. These are the major factors that influence the effective operation of the organization through their effects on managerial decisions. In addition, they directly affect the success of both the HRM programs and the use of the HRIS. These factors are as follows:

1. The effective alignment between the strategy of the firm, the HR strategy, and HR programs

2. The importance of tying HRM programs to IT applications and databases

3. The importance of legal considerations in all HR programs and functions

4. The need for a cooperative relationship between HR and IT professionals

5. The critical need for the creation and use of HR metrics to both guide decision making and evaluate the cost effectiveness of the HR strategy and programs

All of the chapters of this book will contain some reference to some or all these factors, and their effects will be discussed in detail in the chapters.