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The role of information systems in human resource management

Dorel, Dusmanescu and Bradic-Martinovic, Aleksandra

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CHAPTER II

The Role of Information Systems in Human Resource Management[1]

Dorel Dusmanescu[2]

and

Aleksandra Bradic-Martinovic[3]

Abstract: Persistency of the organization, competitive advantage and realization of extra profit, in contemporary environment, are directly connected with balance of the resources available to the firm. One of the key issues of successful business is human resource management and that process is under great influence of modern information technology. Human Resources Information Systems (HRIS) are systems used to collect, record, store, analyze and retrieve data concerning an organization's human resources, but it is not merely reduction of administrative procedures. The importance of HRIS system is multifaceted, ranging from operational assistance in collecting, storing and preparing data for reports, simplifying and accelerating the processes and controlling the available data, reducing labour costs for HR departments, and providing timely and diverse information to the management of the company, based on which it is possible to make quality strategic decisions related to human capital. The aim of this paper is to highlight the importance of HRIS and to give a comprehensive insight of the subject. Special focus in the paper will be on companies in Serbia, which have started to apply this concept, but in most situations not widely, but just partially. They must be aware that positive results can be expected only if this subject is approached in the right way.

Key words: *Human resource management, information systems, HRIS, ERP*

JEL Classification: M15, J24

[2] PhD**,** Faculty of Economic Sciences - Petroleum and gas University of Ploiesti, Romania, zlin50@yahoo.com

[3] PhDc, Research Associate, Institute of Economic Sciences, Zmaj Jovina str. 12, 11000 Belgrade, Serbia, abmartinovic@ien.bg.ac.rs

INTRODUCTION

Social and organizational changes in the economic environment are numerous and extensive. According to that, it is important for human resource management (HRM) to be comprehensive, high in quality, fast, flexible and in line with upcoming trends, because it is one of the parameters of successful business. Use of information and communication technology becomes an imperative for HRM, as well as the other activities in the company.

Enterprise Resource Planning (ERP) is very widely applied in HR departments. For instance, company can track employment's life cycle or engagement of the new labour. These changes can be viewed as transactional data, because employment of workers begin and end within the organizational structure of one company. As a result of that, HRM with its data is ideal for traditional ERP infrastructure, thus it has found the appropriate support in ERP systems. However, modern Knowledge economy and labour statistics impose the need for consistent initiatives in real time, so HRM department must implement these initiatives before the actual employment of workers. For these reasons, HRIS systems separate from standard ERP solutions and become stand-alone platforms with wider range of options, such as adjustable employment statistics for each enterprise.[4]

There are lot of terms in use for these systems, but the most common are the following: e-HRM (*e-Human Resource Management*), HRIS (*Human Resource Information Systems*) and HRMS (*Human Resource Management Systems*). We must be aware that there is a fundamental difference between e-HRM and HRIS. HRIS, as human resource information system, has direct implementation in HR department and employees in this department are users of that system. Enhancement of HR department is the main goal of HRIS, which will indirectly improve business. Term e-HRM covers services not only for HR department, but also for wider range of employees, potential employees and management. Those services are available over Internet or Intranet. The difference between HRIS and e-HRM could be defined as transition from the automation of HR services (*Transactional Systems*) to IT support of HR information (*Management Information Systems*). Apart from that, HRIS can

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[4] We must be aware that software market is characterized by sharp competition, so ERP producers reacted very fast and they added new features in their platforms.

be viewed as a database system or a series of interconnected databases, and HRMS as software that can combine multiple HR functions (*Venkateswaran*, 2007). The differences between two systems are quite blurred so these terms are in use as synonyms in many references. In this paper term HRIS will be used in a wider context, because the aim of this paper is not to define the term precisely, but to give an insight into the importance and necessity of introduction of modern information technology in the processes of HRM. The aim is to comprehensively show the role of HRIS systems, their evolution, structure, advantages and possible shortcomings, as well as the process of implementing the systems in organization and to highlight the importance they play in modern business.

In the first part of paper HRIS systems are explained in details with the brief history. Evolution of the systems is shown from the point of new role in organization, because they switch their role from transactional to strategic. Following the changes, HRIS systems adjust and start to offer new features for increasingly wider range of users. The second part of paper expose structure of standard HRIS solutions with most important functionality of software designed for a whole variety of activities related to HRM, while the third section presents the advantages of using the system. The fourth part gives an insight into numerous of HRIS advantages for enterprises, and also points to a few problems faced by the enterprises during the implementation. Description of methods that are available to companies during the decision process of HRIS introduction is part of the fifth section, while the sixth section provides a brief overview of the situation in this particular field in the Republic of Serbia.

HRIS SISTEMS – DEFINITION AND EVOLUTION

Effective HRM, in order to provide competitive advantages, requires adequate updated information on current employees, as well as potential employees in the labour market. IT evolution has improved a technique of collecting this information through the development of HRIS systems (*Kavanagh, Mohan*, 2009, p. 5). HRIS includes systems and processes that connect the function of HRM and information technology. Enterprises often choose to introduce this information system after the successful implementation of ERP (Enterprise Resource Planning) and CRM (Customer Relationship Management) solutions, aiming to improve the processes associated with making decisions about employees. Information technology have enabled the broad implementation of HRIS applications and help

companies to improve efficiency in general by increasing the efficiency of HRM (*Nuasair, Parsa*, 2007, p. 70).

Vujovic (2005, p. 310) points out that the modern HR function is not merely reduced to administrative procedures in the processes of recruitment, organizing the employees, regulating their rights and obligations, but also has a major role in creating corporate culture. In the new environment employee can propose, control and execute planning decisions, so development of HR must adapt to the new requirements. De Sanctis (1986, p. 15) indicates that apart from daily and operational information, HRIS has the ability to supply with strategic information management of the company. Data collected within the HRIS provide a mechanism for management decision support. With proper HRM companies are able to provide calculations that will have consequences for the entire business. These calculations include the following: health care costs per employee, turnover rates and costs, the time required to fill in the appropriate position, return on invested capital in HR and increase the value of human capital. Numerous studies have offered evidence supporting the recognition of the role of HRIS systems in support strategic decision making. For this reason, there has been a dramatic increase in the use of HRIS systems in companies, over time. For example, Lower and Mohrman (2001) reported that the use of HRIS is in constant increase over the years. Obviously, the use of HRIS solutions raised sustainable development, even in those companies where HR management does not have a strategic role.

Vujovic (2005, p. 311) put the specific dimension on this themes with the view that modern business requires intensive use of knowledge based on multidisciplinary approach, while education should provide the acquisition of new skills, such as finding relevant information, encouraging creative thinking, effective communication, teamwork etc. We already have companies where employees, in addition of official duties, acquire new knowledge and these organizations are called *learning organizations*.

Hendrickson (2003, p. 382) made a first step in accepting the employee in the form of *human capital*. It was in the period 1945-60. However, that has not led to the substantial changes in the functioning of the HRIS (at that time information systems have existed and operated without the use of modern information technology). In the next twenty years (1960-80) HR departments have become an integral part of the core activities in the

company. During this period, computers (mainly mainframe) provided a new dimension in collecting, storing and processing HR information. At that time HR departments have become one of the most important users of computer's resources in company. Despite that, HRIS were only useful in transactional information processing. The new period started in the last twenty years of the 20th century when computers become available to many users (with commercial use of the Internet) and when companies started to use HR information for strategic management. Management started to relay on HRIS systems in the decision making process about human capital, even in small and medium enterprises. According to that, *HRIS become integrated system with the objective to provide information for decision making on human resources*. The base of their functioning are databases that are used for collecting, storing, searching and manipulating data on employees and other data related to human resources. Typical HRIS includes personal information about employees, information on income, information on various types of training, the most diverse reports etc.

Figure 1 – Parallel functions development of HRM and HRIS
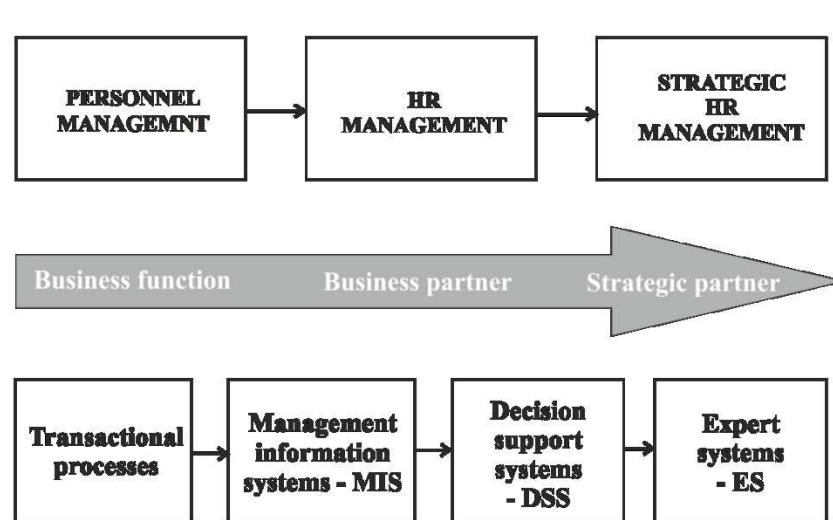
Source: Authors' own research

HRIS are developed following needs of HR department or company management. Changes that have taken place in the role of HR in the company, also reflected in the development of HRIS. The role of HR had three stages: a) phase of personnel or staff management, b) phase of HRM and c) phase of strategic HRM. **Personnel management** was focused on various forms of services in the HR departments. Those departments had to collect and store personal data (records) of each employee, handle their salaries, benefits, vacations

etc. In the next phase, when it became clear that the importance of HR is much higher, personal management becomes **HRM.** Since then, this function developed and became very important function of management, while HR became a component of competitive advantages. The last stage introduces a **strategic component in HRM** and can be defined as: "*development and implementation of human strategies that are integrated within company's strategy ensuring that culture, values and company's structure together with the quality, motivation and commitment of employees fully contribute to achievement of company's objectives*" (*Dainty, Loosemore, Lingard*, 2003, p. 37). In this stage, the level of integration in the processes of HRM is much higher, then in the previous stages. The transformation process can be observed in Figure 1.

The next dimension in HRIS is related to direct or indirect users. Modern HRIS can be seen as a spine of the company and it has to meet the needs of all stakeholders in the company. We can recognize three main groups: 1) HR professionals and directly involved in HR department, 2) management of the company and 3) employee. Each of these groups has unique interest in the use of HRIS (*Hendrickson*, 2003, p. 381), and because of that, each of these groups of users have a special module(s) which can meet the needs.

HRIS can be ranging from strategic to operational level in one company, as we can see in Figure 2.

Figure 2 – Three levels of HRIS systems

	Data	**Aplications**
STRATEGIC LEVEL	• Economic trends • Economic forecasts • Forecasts of labour force demand	• Training projects • Planing of employees • Investions for pension fund
FUNCTIONAL LEVEL	• Data about employee and their experience • Evaluation of experience • Employee skils systematization	• Recruitment • Selection of employees • Assignment of employees • Promotion of employees • Level of compliance with the objectives
OPERATIONAL LEVEL	• Benefin programs • Compensation programs • Insurance programs • Statistics of employee • Position descrtiption	• Internal reports • Records of employees • Estimates of productivity • External reports • Reports about vacations • Monitoring health care

Source: Authors' own research

The HRIS achieved new dimension with development of computer networks. By then, only trained employees, mainly from the HR department could perform operations in separated computers or in mainframes[5], through a local network of terminals. However, the sudden expansion of networks and falling prices of computers enabled everyone to become part of the system, no matter where they are. Under the new conditions each employee can use the HRIS. The level of use is determined by the need and permissions. Structure of the HRIS becomes significantly more complex, and the new problems appear, primarily related to security and privacy of information about employees.

HRIS, like other information systems must be flexible and adaptable to changes. They have to follow the development of the organization in order to satisfy all existing and new needs. On the other hand, if the company does not follow trends in the field of information and communication technology, it can have a problem with inefficient or insufficiently effective HRIS (obsolete or unfit to the company needs). Consequently, it will affect the overall business, especially in large enterprises with complex organizational structure.

THE STRUCTURE OF HRIS SYSTEMS

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[5] Mainframe solutions were available and cost-effective only for large companies.

HRIS applications are systems of databases that allow users to store and track all types of data that are related to human capital in the company. It is necessary to pay attention to the fact that in practice company can buy partial software solutions, which only partially cover the needs of HRM (for example, just a collection of basic information about employees and payroll). These systems cannot be classified as HRIS, because under the term of systems we imply complex and comprehensive software with all integrated functions for HRM. Only properly implemented systems that permeate the entire company will have maximum positive impact. These are systems that are used to collect, store, manipulate, analyze, retrieve and disseminate HR information.

Individual HRIS software solutions differ according to the need of company that developed a specific application. The solutions offered by software companies can be generally divided into three groups. The first group represents modules for HRM as part of ERP systems (for example SAP HRMS, as one of the biggest module of SAP R/3[6] system). The second group represents the integral software solutions which merge different modules for computerization of HRM, i.e. integral HRIS. The third group includes partial software packages that cover only one function. This group of software is much simpler and relatively cheap solution for small companies that do not require all modules or solutions for those companies which consider it necessary to automate and improve only certain segments of HR. Regardless of the group they belong all of these solutions are the parts, i.e. modules that are integrated into the HRIS system in one company.

In most cases HRIS contains all or most of the following modules:

- **Collection and monitoring** of applications for employment or online recruiting is an application that allows candidates to apply for a certain position in the company, but also for HR department to collect and process the received applications. In this module of HRIS the using of computer systems and networks are very important, especially because of online accesses to the system. Online collection of application has become standard in developed countries.

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[6] The last version of SAP systems R stands for real-time data processing and 3 stands for 3-tier (three-tier client-server architecture).

After collecting applications, the company accesses to the next level using the HRIS module. This includes support for the following activities: generating reports with statistics about labour market in the country (in U.S. it is called EEO Form), monitoring of interviews and the score assigned by the staff responsible for their evaluation, monitoring of job descriptions, keeping internal statistics on employees, auto-tracking and analysis of profiles of candidates, creating a list of e-mails (for sending circulars), making online remarks etc.

- **Record keeping** of all personal data is application which has database with data of all employees. It is very important for each company to have these data, and in most cases data must be standardized. For instance, if company needs information on whether an employee has a certificate for particular type of work and if the company has 7000 employee only search of standardized records can be effective.

  This module usually includes data for regular and emergency contact with the employee, data on all previously received wages (wage history), data on absenteeism from work, trainings and certificates, estimates the characteristics of employees, information on possible disciplinary action, injuries at work, and data that companies can define by itself, unless they are part of a standard software package. In addition to these data, it is possible to store scanned documents (education diplomas, birth certificates, judgments, etc.).

- **Payroll module** automates the pay process by collecting data on employee time and attendance, calculating various deductions and taxes, and generating periodic pay checques and employee tax reports. This module is often not fully part of the HRIS, because it is heavily integrated into the system for financial management of the company. However, the financial management system cannot work without necessary input of the payroll data on time spent at work, absences, performances or regulatory compliances. We can find very different solutions in synergy of these two applications.

- **Benefits Administration** provides administration of employee participation in various forms of benefits. All employees must be aware of their rights and obligations. The most important activities are included in pension plans, buying life

insurance policies, but also in the distribution of shares of the company or division of profits. The primary function of this module is to monitor all benefit programs and to notice any potential deficiencies.

The advantage of online access is very important in this module. The fastest and cheapest way to maintain the beneficiary database is ability of online access to the data by the employees. In self service module they can fill the forms about their preferences.

- **Training module** and learning management systems provides a system for organizations to administer and track employee training and development efforts. Company can buy this module on the software market as a separate solution.

The most important functions of this module are tracking the education level of employees, their qualifications and / or skills. It allows storing and displaying various types of courses, books, lectures or materials that are suitable for web learning. Online learning and testing of employees is a remarkable savings in time and money, and provides a high flexibility.

- **Performance management** is very important for each company because continuous monitoring and evaluation are essential when company makes conclusions about effectiveness of HRIS. It is also important to realize whether the objectives are met and which segment should improve. The goal of this process is not criticism but insight in potential updates and upgrades of the system. This module contains features for monitoring system performances, which provides valuable information for the management of the company.

- **Employee Self-Service** in modern environment is module based on web technology which allows employee, together with professionals in HR department to manage the employee's database. With the right permission they can access their data with read-only or change status. Depending on the exact solutions data access can be provided within Intranet (safety is increased) or through the Internet (in which case the company has greater availability of data). These applications are usually used with standard Internet browsers, such as Internet Explorer or Firefox.

In addition to these modules, which cover the basic functions of any HRIS, there are still a number of solutions. These include modules with corporate documents such as instructions for the various programs for employees[7], HR planning module which include the analysis of previous employment policy, documents about employee's database development, assessment tasks and jobs and the implementation of various satisfaction survey of employees in the company.

Selection of software solution depends on the company's management and its decision. This situation also involves the possibility of internal development, acquisition of complete solutions (outsourcing) or renting the resources, i.e. cloud computing. Regardless of the choice management must assess their needs and thus choose a software solution that will have the highest level of utilization. It is equally wrong to choose software that has too many options, which will never be used or does not possess the necessary options. Decision on HRIS choice must be taken as a strategic decision.

ADVANTAGES OF USING HRIS

In situation when administrative and HR department tasks become too large, the implementation of HRIS is solution to the problem. Companies, regardless of the size have already recognized the benefits of this solution, so they continuously implement software packages. In that way they improve the efficiency of the entire organization.

HRIS advantages can be systematized according to Kovach (*Kovach*, et.al., 2002, p. 47) as follows:

- Increase competitiveness by improving the operational transactions in the HR department;
- The ability to implement a number of different operations related to HR;
- Shift the focus from the operational (transaction) HR information to strategic HR information;
- Include employees as an active part of the HRIS and

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[7] The name of this module is *Employee Manual* (*Handbook*) and usually contains all the instructions for new employees (various guidelines and codes of conduct, code of ethics, various policies, procedures) in order to easily turn-up companies.

- Re-engineering the entire HR department.

Many authors (*Hendirks*, 2003; *Beadles, et all*, 2005, *Kovach*, 2002) emphasize the advantages of HRIS. If we collect all those opinions with practical advice in web sites of HRIS producers (*www.employease.com, www.hrworld.com, www.link-softsolutions.com* etc.) we can observe all HRIS advantages through three dimensions: the benefits for the management, the benefits for the HR department and benefits for employees.

The most important advantages for management of the company are:

- Increase of overall decision making efficiency,
- Cost reducing and better control of budget,
- Business transparency,
- A clear business vision and
- A clear insight into the process of hiring and firing employees, at the aggregate level.

The HR department also has a numerous benefits for HRIS:

- Possession of single database of all employees in the company with all necessary information and opportunities for different reports,
- The ability to update databases in real time, on the basis of all changes, which is of extreme importance to regionally diversified companies;
- Elimination of paper forms that are much slower and with much higher probability of errors;
- Minimize errors caused by human factor;
- Employees in HR department do not have to constantly refer to the instructions on working hours, because the application is configured according to existing guidelines, which have reduced delays and uncertainties;
- Improved management system in accordance with the legislation;
- Reduction or elimination of redundancy in the system;
- Standardization of business processes;
- Highly reliable data in the system, whether it is external or internal threats;

- Increased employee satisfaction in HR department because the easiest and efficient execution of the tasks;
- The ability to establish full control over internal migration of employees and the management of their talents and
- The ability to take preventive measures to avoid unpleasant situations in the company.

HRIS provide the advantages to the employees among which the most important are the following:

- The possibility of independent access to data, which often means working in one software window;
- Saving time (for example, if the employee wishes a day off the simplest wait is to fill the online form available as an option of the HRIS and wait for approval by superiors);
- Automatic tracking and reminder to the business obligations and events;
- Encouraging employees to make decisions and initiatives on the basis of information obtained in the HRIS system (for example, workers can monitor the internal competition for jobs and thus to advance in your company);
- Data availability 24/7;
- Reducing the time required for desired information, which are available in the system;
- The ability to attend internal training courses via the web and the development of personal skills and knowledge and
- Increasing staff morale.

Besides all these advantages, there are a few shortcomings that need to be mentioned. First it is the need of additional training of employees for using self-service module. There is a problem to force employees to use new features that system provides instead the way they previously used (for instance, some of employees always use contact phone in order to obtain the desired information). In addition, employees in HR department must attend several trainings to be able to use modules and to exploit all the options it provides. This problem is given special attention in companies, because without competent software users the company can miss a large number of advantages. The last problem is connected with

the process of replacing the old system with the new one. If the company chooses another producer or provider the problem may arise with incompatible data or possible danger to the security of database. Because of privacy issues, replacement process can be much longer comparing to other types of software integration.

Regardless to the shortcomings connected with the implementation of HRIS the benefits provided by these systems are dominant. However, these systems may not be introduced without prior analysis of company needs. In this context, the main question is: What are the criteria that should be fulfilled when the company has to decide whether to introduce or replace the existing HRIS system?

INTRODUCTION AND REPLACEMENT OF HRIS

The work that employees in the HR department do is very suitable for computer processing. Many of these activities are the transaction processes, routine, recurring daily, weekly, monthly. A study of a pharmaceutical company[8] showed that just before the HRIS introduction 71% of employees in the HR department s conducted the transactional and administrative tasks. In other words, it is time consuming to perform tasks such as checking worksheets (carnet), updating various information about employees (change of addresses, phone numbers, different status, etc.) and tracking data and employees for the benefits (insurance, contributions, etc.).

Introducing HRIS is a significant investment for each company, but most of the companies are forced to do that when HR activities become extensive, slow and inefficient and start to limit the decision making efficiency. But there is a huge difference between small and medium enterprises and large companies.

For example, if we consider the organization of a large company with decentralized structure, number of branches and numerous employees it is obvious that this company must introduce a certain level of HRIS in HR department. Performing tasks manually or partially computer-integrated in these conditions is very slow and expensive, so they choose to implement one of the solutions. Some of them internally developed information

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[8] *www.citeman.com/8022-hris-in-action/#ixzz1A4KwG16u*

system, relying on its own capacity, while some implement external ERP systems that include modules for HR management.

Small and medium enterprises generally find alternative methods for resolving the backlog of manual labour in this department. For that purpose they usually use standard Microsoft Office or similar software, especially spreadsheet (Excel). There are also open source solutions, such as Orange HRM[9] software. Web sites like *www.comparehris.com* offer free advice about HRIS/HRMS software[10].

In practice it is common for companies, and this applies particularly to small and medium ones, to begin a job with the ad-hoc network and information system. They start from the basic needs and then they add information step by step as well as communication resources. They do not need feasibility study for that process. Such a system slowly grows and becomes more difficult for future maintenance. After a while, when the information system reaches critical point, management of the company meets with the problem of further development, so they must define objective criteria for replacement of the earlier solutions (*Milašinović*, 2010, p. 1).

There are few available techniques for assessing cost-effectiveness of HRIS, regardless of company's size.

The first criterion that can measure the contribution and importance of the introduction of these systems is the return on investment or ROI coefficient. It is a ratio of profits and investment. The calculation of this ratio is not easy because many financial benefits are immeasurable. However, despite of that it is strongly recommended to carry out this analysis.

ROI analysis should include the following segments:

1. ***Data Management*** (with the goal of achieving a satisfactory level of operational efficiency). In this segment, it is necessary to calculate the savings that are realized

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[9] This company offers the ability to download program from the web *site www.orangehrmlive.com*, with the reference of 500,000 users. They also offer so-called *Live version* and this software does not require IT professionals, software installation or server -it is for online users.

[10] After filling the series of questions, company get a list of proposals with the best software for them.

through the reduction of time and resources to fulfill the task, the benefits to be obtained by increasing the reliability and value data in the system and eventually to incorporate the costs for the purchase and maintenance.

2. ***Human resource management*** (as an organizational unit - department). It is necessary to calculate the savings that are realized through the reduction of time and resources to fulfill the task, the benefits to be obtained by increasing the reliability and value data in the system, the benefits of improving individual and team performance and improving the attractiveness of jobs in this department, which retain high quality employees.

3. ***Talent management***. As in the previous two cases it is necessary to calculate the reduction in time, the benefits of increased reliability, but also contribute to achieving strategic business goals and achieve strategic objectives in the development of talent within the company.

4. ***Organization Management***. In this segment it is needed to be focused on the expression of the global benefits of achieving the strategic goals and objectives in the field of talent.

Further analysis of the ROI ratio is reduced to the inclusion of measurable investment costs and direct costs, which are necessary for HRIS implementation or replacement. This is useful for cross-section analysis of the system, at some point of work.

As we can conclude, the ROI coefficient is an extended Cost/Benefit analysis. Cost-benefit analysis includes consideration of all the positive and negative impacts that occur when implementing new or replacing old HRIS system. The aim of this analysis is to relate all positive and negative impacts, to perform a certain type of evaluation and to make a decision, based on results. This analysis is very useful for HRIS evaluation over long time.

The third method that can be used is the Kaplan-Norton's method – Balanced Scorecard performance measure system. It assumes that it is necessary to consolidate financial and non-financial measures in order to provide a quality requirement for decision-making by management. This method requires that each company develops its own system of

measures for assessing organizational performance. It is necessary to perform through four dimensions: a) the perspective of users, b) internal process perspective, c) the perspective of finance and d) learning and growth perspective.[11]

Now we can make a conclusion that presented methods, which are used in practice, are not ideal solutions, but it is certainly recommended to use one of them. In the future, information systems will be changed and improved, so it is useful for the companies to have a specific benchmark that will help them in decision making process about this business segment.

HRIS IN SERBIA

The business use of information systems in the Republic of Serbia is increasing over the years, although the situation is far from satisfactory. Based on data obtained from survey of the Statistical Office of Serbia presented in the publication "Use of ICT in the Republic of Serbia in 2010" during that year 97.8% of enterprises used a computer in their business and 79.5% of companies have Wire based LAN. If we observed using of ERP systems the situation is very bad, because only 11.5% of companies use this type of systems. Analysis of enterprises by size shows that 43.1% of large enterprises use ERP, while the number of medium-sized enterprises is more than half - 17.8%. The worst situation is in small businesses, because only 7.6% own ERP system. Banks and insurance companies use these systems the most - 27.3%, and followed by companies from the manufacturing industry - 15.4%.

The reason for this situation is that most of large companies are faced with the need to increase efficiency and cost savings benefits so they are forced to implement modern information system. Companies that have introduced ERP systems as an integral part of these systems use modules for managing HR, to a greater or lesser extent (for example 2008. Zdravlje Actavis has introduced a SAP HR module).The situation in small and medium enterprises is much worse. Most of these companies do not have specialized and trained employees for HR, and often they do not know enough about this topic. In small companies Microsoft Excel is more than enough to satisfy all the requirements of HRM

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[11] More about the subject: Hagood, W., Friedman, L. (2002), „Using the Balanced Scorecard to Measure the Performance of Your HR Information System", *Public Personnel Management*, Vol. 31, No. 4

sector, but with increased number of employees companies need appropriate specialized software.

In the software market in Serbia there are two producers of HRIS modules. SoftLINK company from Belgrade offers HRIS (trademark), software platform with all options for HRM in companies regardless of the size or type of business. Wurth, Imlek, Tropic Group and Tagor Electronic use their own software. The other one is company Perfecta, also from Belgrade. They made Module KADROVI which includes all most important records, but also additional options like training on protection and safety at the workplace or scholar records.

Awareness of this need in Serbia has increased over the last ten years, but the general impression is that there is no systematic analysis during the implementation process. In many situations, the introduction of the HRIS is done ad hoc. It would be interesting to conduct a comprehensive analysis of domestic companies, small, medium and large, in order to reach a conclusion at what level of development is the implementation of HRIS system in Serbia.

CONCLUSIONS

HR management had undergone radical changes over the last fifty years, while technological development has enabled the transformation of many business activities. Small and medium enterprises managed to overcome the HR management tasks without specialized software, more or less successfully. Large enterprises, with numerous employees and complex structure, on the other hand are no longer able to do that. The importance of HRIS system is multifaceted, ranging from operational assistance in collecting, storing and preparing data for reports, simplifying and accelerating the processes and controlling the available data, reducing labour costs for HR departments, and providing timely and diverse information to the management of the company, based on which it is possible to make quality strategic decisions related to human capital.

In the conclusion it is necessary to point out several trends that lead to further improvements. First of all we expect improvement in the field of dashboard type of view over data, so management of the company can access accurate information when they need it. Then, we expect the improvement in the Intranet and Internet interface for self-service modules, as well as further development of e-learning, which is believed to become very popular among younger generations. We also expect further development of distance working and in that environment HRIS will improve control and track the impact of this category of employees. Technological development will enable the widespread use of certain functions of HRIS through web, mobile phones, WAP or PDA, with e-mail, as a key component.

At the end we can point the importance of these systems with the citation of Martyn Sloman[12]: "Professionals who deal with human resources, and who fail to realize the potential importance of HRIS system will not be able to fulfill their role in the organization. They will not be able to provide information which management need for successfully manage operating costs and development of their employees. Management of the HR department should be more ambitious in terms of their requirements and to unite with the IT sector, to enable better functioning of the system."

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