

Management 4. 0. – requirements, challenges, development trends

Aleksandra Szejniuk

<https://doi.org/10.33542/VSS2019-2-06>

Abstract

Globalization of the economy caused acceleration of phenomena among which the impact of innovative telecommunications solutions, including internet applications. The pace of development of technological progress has reached unprecedented growth. We observe changes in the social, cultural and organizational sphere. Technologies are determinant of working conditions. They allow analysing and studying its environment. They change the place and working conditions, improve the organization's operations and, above all, affect the increase of employees' efficiency.

Entrepreneurs in Poland are open to new technologies as well as transformations related to the workplace. They recognize the need to educate both managerial staff and employees in this area. They have consequences both for employers who introduce new technologies and for employees who have to adapt to new requirements in the workplace.

Keywords: technology, innovation, globalization, management 4.0, automation

Introduction

The future economy is advanced technologies that force us to create a new education system not only in Europe but also in Poland due to the expectations of the labour market. The future is the requirements related to additional skills.

The World Bank, citing the report "Growing United Upgrading Euro'es Convergence Machine", provided information that Poland, besides Germany, Latvia and Estonia, belongs to the countries that offer the greatest opportunities for both companies and employees.

The greatest development will concern those industries in which there will be the possibility of increasing robotization and computerization. So those industries that are creative on the market. In the future, workplaces will be based on the analysis of user experience. Their goal will be to attract and retain talents. In addition, there will be an important process of diversification, diversity and free choice. The amount of space for flexible offices and space for start-ups and micro-businesses will increase.

There must be a change of attitude towards the employee, first of all, e.g. in the way of responding to his real needs. According to Lunely O., Cowling A. (2000), it is an integral

part of the strategic view of the employer's brand, which for companies from other countries is today a standard and for Polish enterprises becomes a challenge due to dynamic changes in the labour market.

It seems important to use modern technologies in the recruitment of human resources management and building career models.

Organizations determine the need for development in these areas. Acquiring and efficient use of talents in the current market situation is not an easy task. As per Grudzewski W.M., Hejduk J.K. (2004), the further development of these abilities will depend on whether they will be able to win the necessary talents, or whether companies will continue to struggle with the difficulties of finding a candidate and getting them interested in the job offer and keeping the employee's organization inside.

1. The future of work is imagination, creativity and strategy

Technology will fill jobs, it will replace people doing this work in the manufacturing or manufacturing industries, the future can happen very quickly. Machine learning methods will replace employees responsible for the optical sorting of parts, automated quality control, error detection and increased productivity and efficiency. Artificial intelligence technology will save millions of dollars in labour costs. They start to believe that the best company is one that employs the least people outside the director.

Other managers claim that the goal of technology is to increase productivity and not to reduce employment. The most difficult tasks in the organization to automate with the currently available technologies are those that involve the management and improvement of the skills of employees, and those that use expertise in decision-making, planning and creative work.

Computers are perfect for optimization, but not for setting goals. And they also do not replace common sense in performing basic duties. Workplaces ensure material comfort as well as psychological gratification necessary for conscious and reliable work.

According to Purcell J. (2001), the conscious leader realizes that post-technological anxiety concerns two directions:

- 1) The way in which the new technology will integrate with the work process.
- 2) The way to deal with the feeling that the new technology is in some sense an enemy.

The lack of action in both of these areas will make anxiety even in the most automated workplaces possible. Technology itself is just a tool that leaders can use according to what they think fit. Technologies can be used to strengthen human work and not eliminate it.

Modern technologies affect the labour market and change the employee's profile.

Increasing automation means replacing people by robots in some professions and industries. The pace of innovation suggests that technologies that seem like a distant future will come into effect much faster than we expect. It will be a relatively long process and the pace of implementation in each country will be different.

According to Stadnicka D., Antonelli D. (2014), automation is guided by the principle that machines are partners in the workplace and not competition.

Mechanisms of the impact of modern technologies on the labour market:

- 1) Technologies replace workplaces, but do not rely on the strength of physical labour muscles.
- 2) New jobs are created for people working in the technology sector.
- 3) Technologies create jobs in knowledge-based sectors.
- 4) Technologies reduce expenditures on basic life needs, thus creating demand for new jobs.

The labour market and its structure in the economy have not been established once and for all. There are professions that close once and for all, but at the same time completely new development opportunities open up.

Technological development is a challenge for employees of companies. This means that the employee faces the necessity of learning and readiness for change. On the other hand, employers must employ highly qualified specialists.

Due to technological progress, the competencies needed in the labour market change. The changing global economy reveals that no profession exists forever, and the way it is carried out is constantly subject to modifications.

Employees enthusiastically approach artificial intelligence in the workplace. Millennials generation is willing to give up work if the technologies made available by the employer do not meet their expectations.

Contemporary employees expect their employers to easily and safely use the latest technologies. Remote work is perceived as an element that improves the quality of life.

Workers in Europe believe that new technologies make work easier. In addition, new technologies can be used, inter alia, in the recruitment of employees.

2. Knowledge - determinant of the organization's success

The factor that has a big impact on business development is demography. Economic growth now determines a sustained increase in the productivity of the only resource that is the knowledge and productivity of employees using knowledge. Maintaining a competitive advantage in the global economy means continuous work on the productivity of both

knowledge and employees, which, unfortunately, is neglected. Knowledge allows for resource mobility. Educated employees own the means of production and can use them freely. It is worth noting that organizations will undergo the needs of the market. Therefore, their knowledge demand will change. Such a situation will result in the highest paid staff being people who can not be managed. They will be consultants and partners of joint ventures.

As per Grudzewski W.M., Hejduk J.K. (2004) organizations in which knowledge forms the basis for functioning are characterized by the following features:

- they produce products rich in knowledge,
- employ high-class specialists,
- their market value is determined by the value of intellectual capital.

According to Nestorowicz P. (2001), other features of the knowledge-based organization are presented:

- team learning,
- an open information system,
- specific organization culture.

The value of intellectual capital determines the market value of an organization. The effectiveness of the knowledge-based organization is the more effective the human resources are controlled. Because people decide about the company's success. Therefore, the effectiveness of such an organization depends on the skilful management of human resources. In addition, it uses data on HRM task areas. Allows you to specify obligations and responsibilities in these areas.

It can reduce the level of uncertainty in risky ventures. Knowledge that is the organization's resource is located in many places. It is registered in documents, procedures and software. However, the best (place) in which the potential of organizational knowledge lies in people. Information about knowledge workers is indispensable in order to improve personnel policy in terms of selection of employees as well as information on the effectiveness of this group's work. For this purpose, work analysis as well as labour productivity analysis are used. It allows you to specify the desired states in terms of competencies at selected positions. A complex problem is the determination of appropriate standards in specific task areas.

In knowledge-based organizations, the method of acquiring knowledge and its processing is analysed. And also the rules of transferring knowledge to those employees who need it most. Therefore, it seems important to analyse computer programs that support knowledge. The results obtained are guidelines for improving human resources management.

According to Hargreavaes H. (2000), the characteristics of knowledge-based enterprises relate to:

- change as a permanent condition. The goal of management will be to achieve a balance between chaos and stability,
- constant and noticeable tension between freedom and control as well as freedom and responsibility,
- the existence of a large social capital,
- common team work and employee involvement,
- acquiring employees with unique knowledge,
- perception of young employees as a potential source of new ideas,
- waiting for innovative behaviour.

Market development is determined by globalization processes. Organizations are looking for a strategy of action in creating efficiency and effectiveness in order to achieve success. New challenges facing the company require continuous improvement of management processes and, above all, new managerial behaviours. The development of the organization depends on knowledge, information and financial capital. In addition, the ability and speed of adaptation to constant changes to gain a competitive advantage in the market.

Knowledge makes it easier for managers to run and manage a company. Management processes are subordinated to the basic goal of profit. An important role in this process is fulfilled by both managers and employees. Effective management of human resources is an important element of goals set for the organization. To meet these requirements, personnel management must be constantly improved. Therefore, your capital should be appropriately used to achieve the success of the entire organization. A kind of capital management system is created. The result of the organization's operation should be an action plan aimed at improving the practice of human resources management in relation to the objectives of the rules and procedures used. The work should be based on an assessment of the risk of important mistakes made in the HRM area.

Human resources management covers issues related to employment, rewarding people in organizations and creating the right relationship between the management and employees. These issues concern line managers and team leaders.

The purpose of HRM is to strive to build the principles of identifying employees with the organization. Employees represent specific attitudes and, above all, they are attached to their own values as well as values related to belonging to a professional group and family. They are a source of competitive advantage. The consequence of this is the integration of strategies in the field of managing people with the overall company strategy.

This means the need to engage managers in solving problems related to personnel issues. It needs to be emphasized the need for line managers to actively engage in planning, organizing, managing and controlling personnel matters. This is the effect of assuming that human resources are a priority in business processes. The organization's culture, which is the basis of activities in the field of organization management, is of great importance. Enterprises, regardless of their size, have to face the challenges of new technologies and create intellectual capital as a source of competitive advantage. However, the most important is the need to act in a changing environment.

The 21st century is a new economic order in which the most important factor is the knowledge that is inseparable from the people who create and distribute it. It is thanks to well-motivated and educated staff that the organization is competitive on the market. Skills, abilities and values have a specific value. As per Król M., Ludwicyński A. (2006), it is emphasized that human capital:

- it has a serious impact on the innovation of the economy and societies,
- promotes the propagation and dissemination of modern designs,
- shapes modern technical and organizational infrastructure, information, social, etc.

Underinvestment of human capital causes both civilizational and educational deficiencies. Human capital is unique and difficult to follow by competitors. Thus, as per Poczowski A. (2008) human capital management in the future will be an interactive non-linear configuration of individual elements that make up the human resources management system, which elements will form a network of value creation.

The basic elements of value creation regarding the use of human capital are related to the organization of work, efficiency management and communication.

Human capital management recognizes people as the basic and invaluable resource of an organization. The basic factor determining the success of the organization is the employment of personnel with the highest qualifications, who are able to cope with increasingly large and complex tasks. Enterprises operating in a knowledge-based economy must offer the best products and services. It is possible only via work of highly qualified personnel, whose main feature is commitment, motivation and ease of adaptation to changes.

3. Management in 4.0 reality

Revolution 4.0 is a difficult changes on the labour market. The impact of technology at the employment level as well as employer-employee relationships force to respond to current needs as part of corporate social responsibility. It concerns both bearing responsibility for

degradation of the natural environment as well as for social changes.

It is a factor influencing the company's position on the market and, above all, its development capabilities. In Europe, the idea of corporate social responsibility was the result of the involvement of enterprises in activities to improve the life of society. The European Commission has popularized this concept by introducing a model of business responsibility. His assumption was to develop social awareness of managers.

According to Gasparski W. et al. (2004), contemporary enterprises must function at various levels to meet social expectations and fight for market positions therefore they must take seriously both the economic and ecological dimension as well as the social dimension of their activity. They recognize that the future of the organization depends on the natural environment and the way in which enterprises identify with it. It is up to the top management to overcome any barriers that occur at any hierarchical level. Their task is to create an organizational culture by disseminating to the employees the missions, values, standards and principles of human resource management. As per Poczowski A. (2008), it naturally forces a change in the organization. Its effectiveness depends primarily on the competence of managers and a well-developed strategy of the company, which most often refers to:

- business goals,
- action plan,
- a policy including guidelines and principles.

The goal of human resource management is to use and provide value to stakeholders through the high work activity. In addition, it is extremely important to raise the value of human capital, which corresponds to the overarching goals of the organization.

4. Manager - propagator of changes

The challenge for management in the 21st century is a manager who is an opportunity, not an obstacle to the proper functioning of the organization. Its feature should be innovation, as well as the effective use of new technics and technologies. According to Drucker P. F. (2000), this requires :

- creating a policy of creating the future,
- systematic use of search methods and the possibility of predicting changes,
- the right way to make changes both inside and outside the organization, creating a policy of balancing changes and their continuation.

Innovative organizations are characterized by the ability to implement changes in their current activities, as well as anticipating different ways of functioning in the future.

Making changes is a difficult and risky process. Therefore, they should be entrusted to people with appropriate competences and skills for effective creation of the future. It is

therefore necessary to introduce the principle of organized rejection of the past. The task of the leader of change is to regularly control all processes taking place in the organization. The involvement of the most effective and competent employees, whose task is to launch a new, innovative solution on the market, is indispensable in this process.

The leader of changes in the strategy of action deals with the policy of creating changes. Improvement and development can contribute to achieving success for many organizations.

As per Drucker P. F. (2000), the essence of changes in the leader's strategy should be the policy of systematic innovations, and therefore the policy of creating changes. Such an attitude allows to gain a better position on the market in areas defined as (market opportunities):

- unexpected success and failure of an organization or its competitors,
- incompatibility of processes taking place in the company,
- needs appearing in the process of operation,
- changes taking place in industry and market structures,
- changes in demographic phenomena,
- new knowledge.

The innovation process is very difficult and requires management's attention at all levels of management. Therefore, it is necessary to carry out pilot studies to show their application. In addition, they should indicate the possible difference between the producer's expectation and their proper use.

An important goal of any organization is to continue planned activities. They must adapt to emerging changes in their environment and at the same time introduce changes in their organization. They should take care of continuing their existence in a competitive market. Employees of the organization need to know the realities of the organization and, above all, what principles and values it applies to. This is a condition for the effective work of people. The possibilities of responding to changes in the environment depend on constant contacts with contractors. It is equally important for the organization to have a characteristic image that promotes its identification among various companies.

The leader-manager should be the initiator of changes. Encourage employees to acquire knowledge as well as skilful communication of information. The management of enterprises must bring a balance between change and continuation, for example by maintaining existing contacts with contractors. They require constant access to information, its proper transmission in order to keep you informed about the activities of the organization. Ensure compliance with basic assumptions in the form of missions, values and achieved results. It should be emphasized that persons ensuring stable development and continuation should be rewarded accordingly.

All countries in the world feel changes of an economic, demographic, political and social nature. Organizations must be prepared to create the future and adopt the upcoming changes. They can not afford to ignore them, because a different than expected situation may occur.

Conclusion

Management 4.0 changes the current work. New technologies and innovations create new jobs. Organizations are forced to react quickly to changes and adapt to the needs of new consumers. Revolution 4.0 is a difficult change on the labour market. The impact of technology on the level of employment as well as employee-employer relationships force you to respond to current needs as part of corporate social responsibility, which is an important factor determining its position on the market.

Changes concerning new technologies, the way information is processed and communication forces strategic human resource management on organizations.

Information technology has made information flow easy, which is conducive to the implementation of new products and services. Knowledge has contributed to technological changes in a competitive market in which particular importance is attached to innovation and the ability to respond to changes in the environment.

References

DRUCKER P. F. 2000. *Management practice*. Modernity p. 73.

DRUCKER P. F. 2000. *Effective manager* pp. 85-86.

GASPARSKI W., LEWICKA-STRZELECKA A., RAK B., SZULCZEWSKI G. 2004. *Principles of ethics and social responsibility in the practice of companies* [in] Kolarska-Bobińska (red) Economic awareness of society and business image Warsaw p.102 Institute of Public Affairs.

GRUDZEWSKI W.M., HEJDUK J.K. 2004. *Enterprises of the Future Warsaw* p.97, 135 Diffin.

HARGREAVES H. 2000. *Knowledge as the basis for the functioning of the organization* pp.51-52.

KRÓL M., LUDWICZYŃSKI A. 2006. *Human Resources Management* p.111.

LUNELY O., COWLING A. 2000. *Strategic Human Resources Management Cracow Economic Outbuilding* p.76 ISBN 83-88597-10-8.

NESTOROWICZ P. 2001. *Organization on the Edge of Chaos Cracow Publishing House of the Professional Business School* p.80 ISBN 838749366X.

POCZTOWSKI A. 2008. *Human Resources Management Warsaw* pp.41, 52 PWE.

PURCELL J. 2001. *The Critical Text Thomson Learning London* p.124 ISBN 978-186526052.

STADNICKA D., ANTONELLI D. 2014. Implementation of Augmented Reality in Welding Processes. *Technology and automation of assembly* No. 4 pp.56-60.

Contact address

PhD in economics, assistant professor Aleksandra Szejniuk
WSGE
University of Euroregional Economy in Józefów - Warsaw
Henryka Sienkiewicza 4,
05-410 Józefów, Poland
a.szejniuk@gmail.com