

## Adaptation of the human resource management system of a large company to the new technological conditions of the industrial revolution «Industry 4.0»

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### Abstract

The article examines aspects of the functioning of human resource management systems of large industrial enterprises in the context of digitalization. **The purpose** of the article is a comprehensive review of the current problems of adapting the human resource management system of a large company to the new technological conditions of the industrial revolution «Industry 4.0». **Research results.** The article reveals the transformational aspects of production and management in the new technological order, identifies the impact of digitalization at «Industry 4.0» enterprises on the transformation of corporate HR management. Based on observations, analysis of internal management reports, as well as interviews with managers, the experience of 20 Russian industrial enterprises on the transfer of production (workshops, sites) to the concept of «Industry 4.0» is analyzed, and the results of the analysis indicate the contours of the updated human resource management system at the largest industrial enterprises that are switching to the concept of «Industry 4.0». **Conclusions.** Digitalization of large industrial enterprises has a dual impact on the human resource management system, to a certain extent contributing to its more professional functioning, but, meanwhile, actualizing existing and generating new HR risks. Recommendations are proposed for implementation on adapting human resource management systems of large industrial enterprises to the conditions of Industry 4.0.

**Keywords:** *digital technologies, human resource management, Industry 4.0, digitalization, industrial revolution, large companies, artificial intelligence*

### References

1. Burenina I.V., Biryukova V.V., Sayfullina S.F. Practical tools for adapting the labor market to the widespread introduction of Industry 4.0 technologies // *Economics and management: scientific and practical journal*. – 2019. – No. 5. – Pp. 20-23. (In Russian).
2. Glazyev S.Yu. New technological structure in the modern world economy // *International economics*. – 2010. – No. 5. – Pp. 5-27. (In Russian).
3. Ilyin I.V. et al. Main trends in digital transformation of Russian business // *Science and business: ways of development*. – 2019. – No. 7. – Pp. 137-143. (In Russian).
4. Korovkina E.V. Digital transformation of the economy: the main trends and impact on the banking sphere of social reproduction // *Multilevel social reproduction: questions of theory and practice*. – 2019. – No. 16. – Pp. 75-82. (In Russian).
5. Kuznetsova A.A. On the issue of the use of intelligent technologies in the automation of state control facilities for gas transmission systems // *Instruments and mechanisms of modern innovative development*. – 2019. – Pp. 35. (In Russian).
6. Nasybullin R.N., Akhmadiev F.G., Bakhareva O.V. Cyber-physical systems: the concept of a digital twin in the investment-building complex // *Mathematical methods in engineering and technology-MMTT*. – 2020. – Vol. 7. – Pp. 120-125. (In Russian).
7. Pozdnev BM et al. Integration and interoperability of automated digital production management systems in a virtual machine-building enterprise (based on the product «1C: ERP Enterprise Management 2») // *New information technologies in education*. – 2019. – Pp. 449-454. (In Russian).
8. Sergeeva O.Yu. «Industry 4.0» as a mechanism for the formation of «Smart production» // *Nanotechnologies in Construction*. – 2018. – Vol. 10. – No. 2. – Pp. 100-113. (In Russian).
9. Tolstykh T.O., Gamidullaeva L.A., Shkarupeta E.V. Key factors of development of industrial enterprises in the conditions of Industry 4.0 // *Economy in industry*. – 2018. – Vol. 11. – No. 1. – Pp. 11-19. (In Russian).

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10. Ustinova L.N. Industry 4.0 – new challenges for Russian production // Digital economy and Industry 4.0: new challenges. – 2018. – Pp. 81-87. (In Russian).
  11. Schwab K., Davis N. Technologies of the fourth industrial revolution. – M.: Eksmo. – 2018. (In Russian).
  12. Gabryelczyk R. Has COVID-19 Accelerated Digital Transformation? Initial Lessons Learned for Public Administrations // Information Systems Management. – 2020. – Pp. 1-7. (In English).
  13. Grzybowska K., Łupicka A. Key competencies for Industry 4.0 // Economics & Management Innovations. – 2017. – Vol. 1. – No. 1. – Pp. 250-253. (In English).
  14. Lee J. et al. Industrial Artificial Intelligence for Industry 4.0 – based manufacturing systems // Manufacturing letters. – 2018. – Vol. 18. – Pp. 20-23. (In English).
  15. Dudin M.N. The organization approaches peculiarities of an industrial enterprise financial management / Dudin M.N., Lyasnikov N.V., Yahyaev M.A., Kuznetsov A.V // Life Science Journal. – 2014. – Vol. 11. – No. 9. – Pp. 333-336. (In English).
  16. Dudin M.N. Methodological approaches to classification of innovation potential in the context of steady development of entrepreneurial structures // Dudin M.N., Ljasnikov N.V., Omel'chenko E.V., Shirokovskikh S.A. // World Applied Sciences Journal. – 2013. – Vol. 27. – No. 13A. – Pp. 563-566. (In English).
  17. Rajnai Z., Kocsis I. Labor market risks of Industry 4.0, digitization, robots and AI // 2017 IEEE 15th International Symposium on Intelligent Systems and Informatics (SISY). IEEE, 2017. – Pp. 000343-000346. (In English).

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