SCIENTIFIC REVIEW

HUMAN RESOURCE MANAGEMENT DIGITALIZATION

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ABSTRACT

This article will study the concept of digital transformation in the administration of human resources, as well as the ways in which different technologies are supporting various HR functions and the personnel who work for those activities. The study is of a descriptive character, and its compilation included the use of secondary data such as reports from corporations, web sources, blogs written by subject matter experts, and research papers. This study was conducted with the intention of investigating the concept of "SMACI," which refers to the utilization of Artificial Intelligence (AI), HR Chatbots, Machine Learning, and Robot process automation (RPA) in order to perform the fundamental responsibilities of human resource management (recruitment, screening, interviewing, and onboarding) in a manner that is more intelligently, more quickly, and more effectively. The study also made an intervention in the existing literature by analyzing the different strategies that are employed by companies for the growth and development of their human resources departments. This allowed the researchers to make a contribution to both bodies of knowledge. The benefits of implementing digital transformation in human resource management, the potential obstacles or challenges a company may face during transformation, and the solutions to overcome those obstacles have all been investigated, with the examples of Indian companies and their uniqueness in the business world serving as case studies.

INTRODUCTION

Artificial intelligence, robots, virtual reality, and device learning are all examples of technologies that have progressed to the point that they have the potential to completely take over whole communities, cultures, economies, and businesses. The Sphere is on the verge of undergoing its fourth industrial revolution at this very moment. According to research that was carried out by Deloitte, HR players are rising to the challenge of renovating not only the staff but also the manner work is carried out, in addition to renovating HR processes. This is a positive development. As a result, the digital transformation of human resources is not limited to HR alone; rather, it is a change that incorporates the whole business. The convergence of a number of technologies that, over the course of time, are making the distinction between the digital and the physical domains more difficult to discern is at the heart of this revolution. It includes everything from driverless cars to intelligent robots to artificial intelligence (AI), nanotechnology, and virtual reality once more for the digital environment, as well as the accompanying processes and goods. Not only has the proliferation of digital technology transformed the possibilities that are accessible to consumers, but it has also prompted a reevaluation of traditional ideas about the enhancement of products, the collective production of art, and the management of businesses. It is important to keep in mind that every HR revolution that has endured in the market, regardless of whether or not it is digital, has done so with a particular goal in mind, and this is a solid rule of thumb to follow. Companies often give the impression that they are caving into the worries of their workers, but it is never a good idea to digitalize key HR procedures just for the sake of using digital solutions. As a consequence, the firm in issue ends up implementing technology that is insufficient to meet its goals[1].

LITERATURE REVIEW

Chapano et al.[2] investigated if digital HRM strategies are implemented across the HR value chain by South African organizations and whether they are effective at achieving business objectives. Motivation: This study demonstrates the adoption pattern of digital HRM strategies and their compatibility with business objectives. Quantitative cross-sectional research was employed. In the Eastern Cape Province of South Africa, 312 line managers and HRM experts in the automotive sector were polled. Purposive and snowball sampling were combined with exploratory factor analysis (EFA) and other statistical tests. The adoption of digital HRM strategies across the HR value chain was found to be moderate.

The COVID-19 epidemic caused most firms to adopt remote and hybrid working modes and accelerate HR digitization, according to Kuzior et al.[3]. Due to unusual conditions, this workplace digital revolution was unexpected. The writers investigated the new workplace. The study hypothesized that digitalizing work and HR procedures bring firms closer to sustainable development. Economic, environmental, and social balance is sustainability. Digital procedures and work styles affected CO_2 emissions, plastic waste, energy savings, gender diversity, and inclusiveness. The authors used original and desk research to verify the hypothesis. A Berlin IT startup conducted the original investigation between March 2020 and August 2021. International startups and scale-ups were also surveyed. The authors found that digitalization can improve organizational sustainability.

Zavyalova et al. [4] used data from 449 small, medium, and big enterprises operating in the Russian market to try and shed light on the essential elements of HRM digitization examined against critical features of organizations. The gathered information demonstrated the presence of the qualitative and quantitative elements of digitalization. The study found that greater success and functionality have not necessarily accompanied a company's broad reach and high efficiency.

In their study, Zhou et al. [5] drew on the adaptive structuration theory (AST) and embeddedness theory to examine how HRM digitalization and system maturity interact with company performance, as well as the moderating effects of HR strategy and business participation. Findings suggested that the interaction between HRM digitalization and HRM system maturity is positively connected to firm performance based on a sample of 211 listed firms in China. The study discovered that digitalizing HRM could significantly improve business performance. The impact of HRM digitization will be greater when HR departments are actively involved in the strategic management of the company. HR departments will have a greater positive impact on corporate operations when they are actively involved in them.

Melnychenko et al. [6] researched and formulated ways of digitalizing the enterprise's HR management system in the context of globalization developments using HR technologies and HR-functions transformation analysis. The research focuses on HR technology modification, which affects HR function development in digital times. Research methods are a set of theoretical, methodological, economic, and applied issues of defining, developing, and implementing the enterprise's HR management system's digitalization in the context of globalization. It analyzed research articles on digitalization processes, digital goods, and HR solutions, HR-management digitalization process directions, and globalization's impact on the enterprise's HR-management system. The article explains digital technology's role in HR and the opportunities it presents. The impact of digitization on HR activities and HR procedures was examined. Digital workforce, workplace, and HR are the primary HR-management digitalization trends. Digitalization has proven its HR-management benefits. Due to fast-moving digital decisions and native countries' globalization and digitalization influence, HR-technologies development demands further research.

In order to determine the causes of the discrepancy between the actually achieved level and the planned level of digitalization of HR management and to support management decisions about the introduction of digital technologies, Gaponenko et al. [7] created a methodology. The methodology entails a diagnosis of the degree of HR management digitization in three areas: digital workplace, digital management system, and digital workplace competency. For the diagnosis of staff digital skills, a combination method that combines self-diagnosis and manager evaluation on a single scale, then compares the results, has been presented. For estimating a digital workspace and a digital control system, a coefficient method is suggested. The benchmarking method is used to determine how much an organization's HR management has been digitalized.

Rudakova et al. [8] examined the evolution of HR functions under digitalization, and assessed the extent of automation of human resources administration activities, identifying the key opportunities for HR. Digital HR management requires mobile apps, social networks, analytics, cloud technology, VR, and new business development strategies. Everyone must first acquire the skills necessary to work effectively as a part of a team in order to facilitate a speedy shift to digital thinking for both management and employees. Implementing an integrated cloud platform that serves as the digital foundation for the company would be an excellent step to take in order to modernize the HR system. Research and adapt long-term plans to technology and evolutionary realities. HR must prioritize innovation. A team that understands all HR procedures and duties and can monitor, analyze, and use new stack technologies that arrive regularly is essential.

Fedorova et al. [9] analyzed different studies on the impact of digital technology introduction into personnel work in Russian enterprises of various industries and ownership types. Primary and secondary data were obtained. Surveys and interviews with respondents provided empirical data. The study's purpose determined the sample. Respondents were students, employees, and retirees. Summarizing and evaluating the research data, the authors illustrated how Russian companies are digitalizing human resource management. The article presents studies on HR-brand company development, sales manager recruiting, and employee labor function computerization. The authors concentrated on how digital technologies influence people's labor market and workplace behavior, such as work content, motivation, and efficiency.

Fedorova et al. [10] evaluated the impact that labor activity digitization procedures have on employee well-being, which is a topic that has gotten very little attention in HRM research and practice. The research investigates the causal relationship between employee well-being and the digital transformation of HRM practices. The research method used includes narrative and content analysis, as well as data analysis from sociological questionnaires. Furthermore, by utilizing the largest Russian institution as an example, the case study approach allows us to comprehensively investigate the issue. The findings of the study indicated the challenges that develop when digital technologies are more frequently employed in HRM systems, indicating both the good and negative effects that these procedures have on employee well-being. As a result, workplace wellness management techniques must be devised.

OBJECTIVE

The research aimed to fulfill the following objectives:
–   Human resources digitalization
–   Improvements in human resource management thanks to digital innovation
–   Problems faced by human resources in the age of digital transformation
–   The upsides of hr.'s digital makeover

METHODOLOGY

At this moment, the effects of the digital revolution are still being felt inside the department of human resources. To put this in more understandable words, the digital technology that was used to carry out the responsibilities that were delegated to this department resulted in those responsibilities undergoing significant shifts as a direct consequence of those shifts. This shift occurred as a direct consequence of the operations being delegated to the aforementioned department in the first place. Because of this, the company is able to save both time and money, which are two resources that are very significant to the operation of a firm. The information that you want is given down below for your convenience. The fundamental objective of this endeavor is to discover fresh and original approaches to incorporating digital tools and technology into the human resources department. Modifications may be made to every aspect of the operation, and it is strongly advised that these adjustments be made whenever feasible. This includes each and every step of the candidate selection and selection process. It's possible that incorporating certain elements of automation into the workflow of your company's human resources department can allow you to boost overall productivity at your organization. When this takes place, you are in a position to make better choices about recruiting and to better manage your team, both of which ultimately help your organization flourishing and thrive in a people-centered way over the long run.

HUMAN RESOURCES DIGITALIZATION

As HR advances toward digital transformation and the future is determined by mobile, artificial intelligence, social media, and cloud computing, the capacity for organizations to train their employees to become more flexible, active, and modified is crucial. The acronym SMACI alludes to the interweaving of five different technologies: the internet, mobile devices, analytics, and social media platforms. Because of this comprehensive digital measurement framework, it is now possible to give the green light to initiatives that span product or service development, customer service, company operations, and human resource management. Customers have access to knowledge, commerce, and cooperation anytime and wherever they choose as a result of the synergistic benefits of the multiple components that make up SMACI.[11]

The use and utilization of technology inside the Human Resources department with the intention of improving that department's efficiency is what is meant by the phrase "HR digital transformation." Automate the digital transformation of human resources to save time and money, and simultaneously gather and analyze data from those cycles so that choices can be made with a greater level of awareness and understanding.

HR digital transformation is possible:
–   A candidate worldwide positioning framework (ATS) may automatically screen through terrible up-and-comers using catchphrases and information from your high-performing reps rather than having to manually pursue every resume from job seekers who apply to your company.
–   Onboarding software automates and streamlines the process of guiding new employees through a large volume of paperwork.
–   Progression-arranging frameworks may combine data on worker performance, individual career goals, and authoritative skills to provide organizations with more evidence to guide advancement decisions than can be obtained via impulsive promotions.

Improvements in Human Resource Management Thanks to Digital Innovation

– Intelligent Employment Practices: The study found that roughly forty percent of companies are now using AI in their HR departments. The most successful organizations in the world, such as IBM, SAP, Facebook, and Hilton, are already putting this game-changing information to use in their recruitment processes in order to find great individuals, attract them to their companies, and ultimately employ them.

– Simplify screening and interviews: AI is proven effective in interviewing candidates by assessing their replies to standard questions and studying their body language. This helps to simplify the screening process. An AI can analyze a candidate's video interview in only 15 minutes and extract over 20,000 data points regarding the candidate's facial movements, originality, and word choice. This process takes just 15 minutes. Using machine learning may also help collect information on the communication styles of the candidates and evaluate whether or not they are a good cultural fit for the firm. Similarly, it may assist in determining whether or not the company is a good cultural match for the applicant. [12].

– It has been shown in the study that the onboarding process has a long-lasting influence on staff retention; thus, it should be strengthened. Because of this, it is very important to make a positive initial impression. AI is helping HR create a strong and positive first impression by reinventing the whole employee entry process via the production of maps. This process begins with the pre-hiring assessment and continues all the way through the interview stage, the Onboarding phase, and beyond.

– The use of technology allows for the prediction of whether or not an employee would condone an instance of bribery, corruption, or any other kind of probable unethical behavior. Using techniques such as Big Data and In-memory technology, businesses are now able to swiftly filter through massive amounts of unstructured data (such as emails, messages, scanned invoices, and so on) in search of indications of illegal or inefficient activity. A gadget of this kind is already being used by the accounting firm Ernst & Young.

– Robotics, an intelligent AI-machine learning technology, may be able to learn via observation how a human worker completes a repetitive action, leading to increased levels of productivity. Robots excel at automating labor-intensive jobs that include a lot of data. Robots are used for a wide variety of tasks, including data gathering from XLS files or systems, report production, data copying, data verification for completeness, email reading, processing, and approval, and data taping in HR or Payroll systems.

– Encourage continued learning in the workplace. Cloud-based productivity tools like Microsoft 365 may make it easier for employees to work and communicate at their highest levels without adversely affecting the amount of time available to do so. The HR department is able to construct individualized learning and development programs for each employee by making use of AI technology. This has a number of advantageous impacts, including greater productivity and job satisfaction, less stress at work, and reduced employee turnover.

– Assists Businesses in Preserving Their Edge in the Market: The integration of technological advancement into plans that are both realistic and sustainable is no longer a choice but a must. The use of good technology should be predicated on the idea that it should make your life easier in some way. No of the size of your business, you should develop a sound strategy for digital transformation and choose the technology that is most suited to fulfill your objectives.[13]
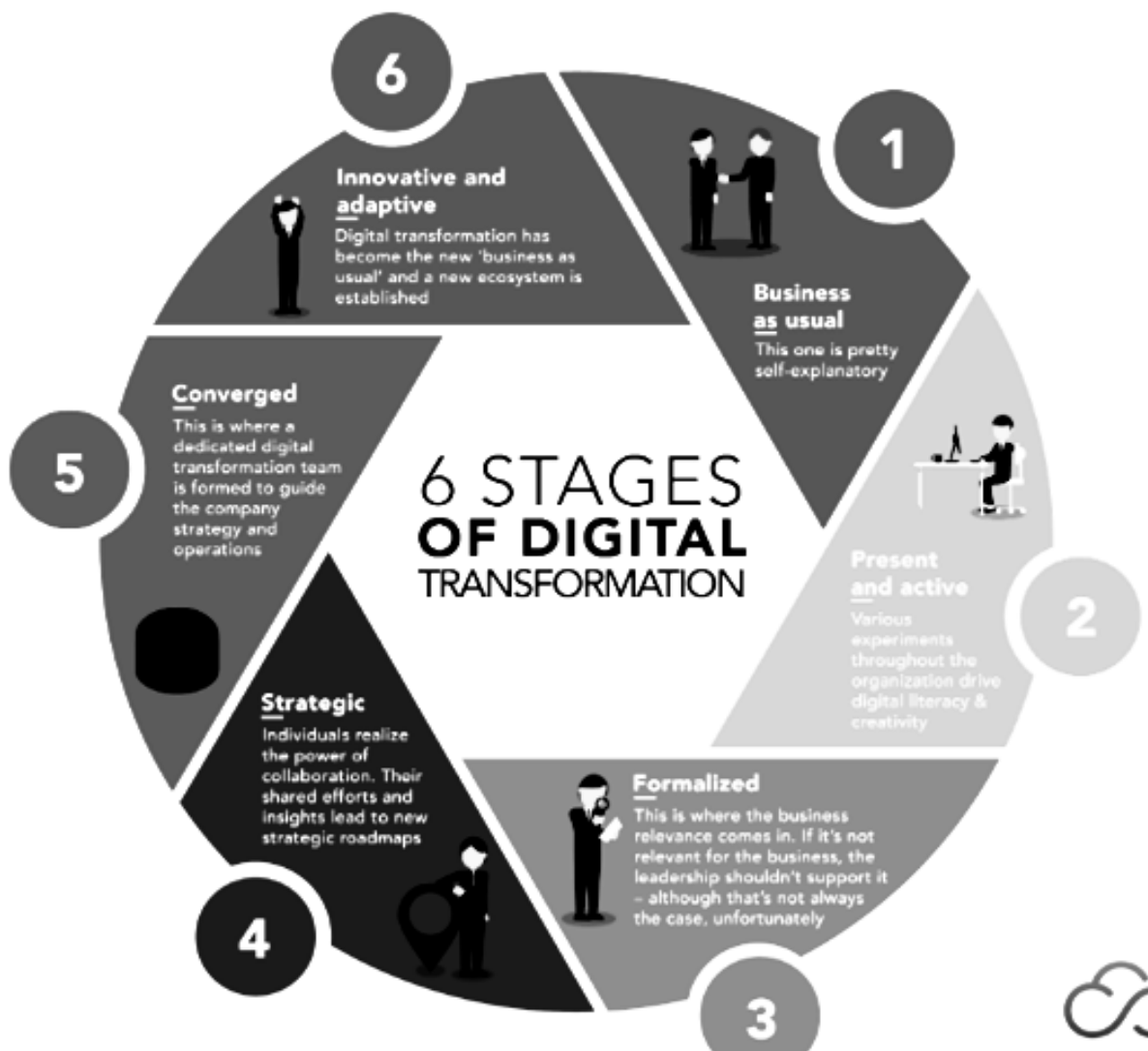
Figure 1. Stages of Digitalization of Human Resource Management

PROBLEMS FACED BY HUMAN RESOURCES IN THE AGE OF DIGITAL TRANSFORMATION

Because workers are likely to disagree with any line of reasoning if they fear it may put their employment in jeopardy, the field of human resources is going to have a challenging future. The department that deals with human resources is already beginning to feel the impact of machines. The function of human resources (HR) will become much more important in the future to play the role of assuring employees of their talents and the resources required to apply those skills, all while automating the tasks that are superfluous to their occupations. In the future, HR will play the role of assuring employees of their talents and the resources required to apply those skills.[14] .

The following is a list of some of the potential difficulties that an organization can encounter:

1. Resistance to change: Technology is not the silver bullet that will miraculously free us from all of our problems; it can't cure any problem until we change the fundamental mindsets that underlie our thinking. People, in general, are not likely to inspire change unless and until they see it to be of significant importance.
2. Support from the Leadership: There should be a leader there to back and inspire the technology since the majority of businesses won't be able to practice digitalization because their managers or leaders were not encouraging enough. Therefore, having the backing of a decent leader who inspires revolution is something that is really necessary.

3. Sourcing the Right Talent, the collaboration of workers from different departments is one of the most important things that can be done to stimulate digital transformation. Don't allow the divide to do harm to the system, and in order to prevent this, make sure you have the proper technological advantage in the right location. This will help you bridge the gap between the developer and the communicator.

4. Having a Good Understanding of Your Customers: Businesses such as Amazon, Uber, Airbnb, and Tesla have fundamentally altered the future prospects of the market. The average customer today expects businesses to be able to identify their unique desires and requirements and devise individualized engagement strategies to meet those requirements. The vast majority of company executives are aware of this concept, yet they often become bogged down in conversations about modern technologies.

The upsides of HR's digital makeover

Projects are expanding, and the need of translating promise into justification is compelling them to adopt HR digital transformation in order to provide development solutions. The benefits of HR digital transformation include creating the workforce of the future, guaranteeing a better representative experience, increasing accuracy in Dashboards and Analytics Data, managing the workforce, and increasing efficiency and agility to meet evolving business demands. [15]

- Mix and match your findings at every step

The Digital transformation framework is capable of properly managing data sources and criticism from customers and business associates.

- Form Adaptive Action Teams

By using sophisticated change in addition to business professionals and technology, we can ensure that decisions are taken after carefully examining our customers' needs rather than imposing them from on high. This benefits not just the company but also the customers.

- Third, use the executive's progress toward their desired changes as a metric of change success.

Adopting the new framework is crucial if continuous efforts are to be made to implement the best adjustments so that employees do not revert to practices that were ineffective before.

- Fourth, improve human resources productivity

Using Leave Board to request time off takes no more than 5 seconds. Those in charge of a group are automatically updated and given the chance to provide their stamp of approval. Try practicing your inner cycles and boosting your correspondence. Keep tabs on representative-training history to better predict future outcomes."[16] .

- Spend less money and less time

This is a great chance to reduce time spent on physical labor and stress caused by authoritative responsibilities. When relatives learn to maximize their time together, they are less likely to waste it on pointless activities and more likely to accomplish their goals. In a minute or two, I'll have the financial report ready for you. There are oblique savings to be had from using such systems, for instance, in the form of reduced time spent on quarterly reporting and carryforward administration.

- Improve the working conditions for your staff

Your family's skills, vitality, and productivity will all increase if you provide them access to training and education. In addition, your employees will be more loyal, focused, invested, and content in their work. They will be able to home in on the most critical tasks at hand and free up precious hours formerly spent on activities that generate a return on investment. The HR department may now create a unified representative experience to meet their evolving requirements thanks to cloud-based tools, big data, measure mechanization, clever combinations, and bots.

- Collect and store personnel information in one place

Find the illustrative data you need quickly and easily. Get rid of clutter and old paperwork. It is easier to provide the information you need at the time you need it when you use representative data sets. The use of data-driven strategies will become a standard differentiation factor across all industries. [17]
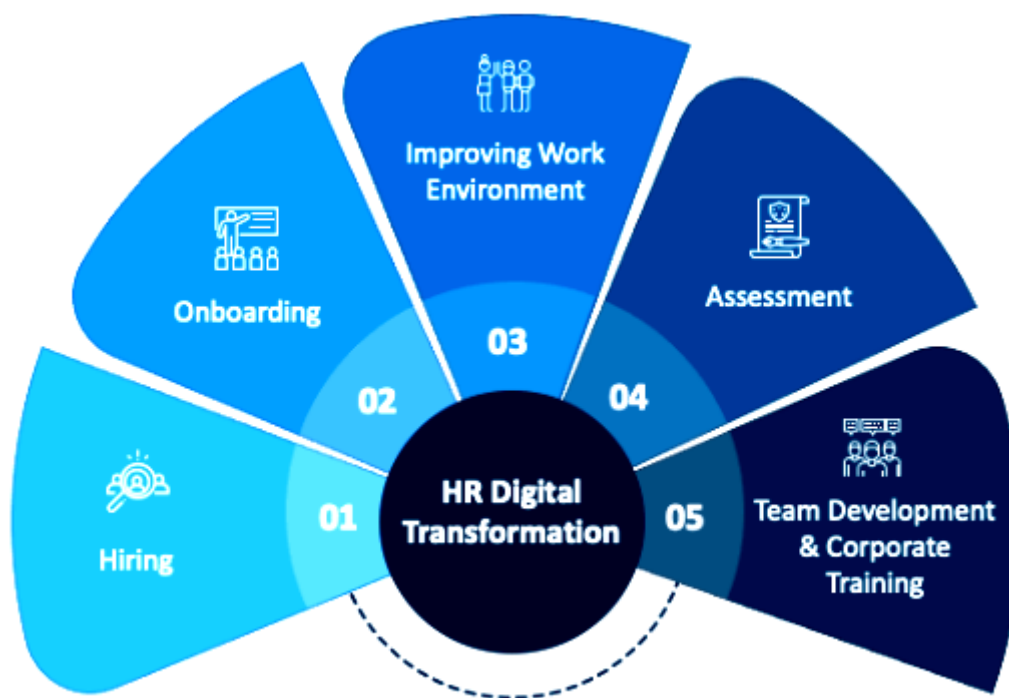
Figure 2. Digitalization of Human Resources

CONCLUSION

Human resources digitalization is the use of cutting-edge technology to digitally alter long-standing HR procedures. The term "digital HR" refers to the automation of HR procedures and workflows via the use of cloud and SaaS technologies. Cloud is revolutionizing HR, reducing HR procedures, and enabling HR and People teams to concentrate on people. Organizations acquire cloud and SaaS technologies on a rolling subscription basis. With this digital strategy, businesses may avoid making a large upfront investment in physical infrastructure, instead spreading the expense out over time and adjusting it based on actual needs. By centralizing all of an organization's People data for analysis and reporting, digital HR empowers businesses to make informed, data-driven decisions. Businesses may take use of the cloud's potent analytic tools with a purpose-built, contemporary HRMS that is provided as SaaS. Management data and real-time inquiries allow HR & People teams to gauge progress, anticipate problems, and address them before they become major setbacks. With the help of HR technology, businesses can strategically plan their workforces and create exceptional employee experiences, putting them at the forefront of their industries by attracting and keeping top talent.

REFERENCES

[1] Nichols, A. (2022). Digital Nomads: A savvy enterprise's newest HR frontier. Strategic HR Review, 21(6), 185–190. https://doi.org/10.1108/shr-08-2022-0049

[2] Chapano Munodani, Michelle R. Mey, & Amanda Werner. (2022). Adoption of digital strategies across the human resource value chain. SA Journal of Human Resource Management, 20(0), e1–e12. https://doi.org/10.4102/sajhrm.v20i0.1992

[3] Kuzior, A., Kettler, K., & Rąb, Ł. (2022). Digitalization of Work and Human Resources Processes as a Way to Create a Sustainable and Ethical Organization. Energies, 15(1), 172. MDPI AG. Retrieved from http://dx.doi.org/10.3390/en15010172

[4] Zavyalova, E., Sokolov, D., Kucherov, D., & Lisovskaya, A. (2022). The Digitalization of Human Resource Management: Present and Future. Foresight & STI Governance, 16(2), 42–51. https://doi.org/10.17323/2500-2597.2022.2.42.51

[5] Zhou, Y., Liu, G., Chang, X., & Wang, L. (2021). The impact of HRM digitalization on firm performance: investigating three-way interactions. Asia Pacific Journal of Human Resources, 59(1), 20–43. https://doi.org/10.1111/1744-7941.12258

[6] Melnychenko S., Lositska T., and Bieliaieva N. 2021. "Digitalization of the Hr-Management System of the Enterprise in the Context of Globalization Changes." Financial & Credit Activity: Problems of Theory & Practice 6 (41): 534–43.

[7] Gaponenko, T., Malkhasyan, A., Filin, N., & Bulatova, R. (2021). Diagnostics of the depth of digitalization of HR management. In E3S Web of Conferences (Vol. 273, p. 08086). EDP Sciences.

[8] Rudakova Svetlana H., Danylevych Nataliia S., Shchetinina Liudmyla V., & Kasianenko Yaroslav A. (2020). Digital HR - the Future of Human Resources Administration. Bìznes Inform, 1(504), 265–270. https://doi.org/10.32983/2222-4459-2020-1-265-270

[9] Fedorova, A., Koropets, O., & Gatti, M. (2019, May). Digitalization of human resource management practices and its impact on employees' well-being. In Proceedings of the International Scientific Conference" Contemporary Issues in Business, Management and Economics Engineering", Vilnius (pp. 740-749).

[10] Fedorova, A., Zarubina, A., Pikulina, Y., Moskovskikh, A., Balandina, T., & Gafurova, T. (2019). Digitalization of the human resource management: Russian companies' case. In International Conference on Education, Social Sciences and Humanities (Vol. 12271230).

[11] Rimon, G. (2017). Six surprising truths about how Digital Transformation Will Change HR. Strategic HR Review, 16(2), 102–104. https://doi.org/10.1108/shr-02-2017-0010

[12] Biglova, A. A. (2021). HR-digital: Digital Technologies in Personnel Management. Economic Development Research Journal, (11), 67–72. https://doi.org/10.54092/25420208_2021_11_67

[13] Englert, M. (2018). HR goes Digital & Sustainable – Exzellente hr-Kommunikation und der weg zu human relations. Digitale Unternehmensführung, 307–317. https://doi.org/10.1007/978-3-658-23053-1_19

[14] DiRomualdo, A., El-Khoury, D., & Girimonte, F. (2018). HR in the digital age: How digital technology will change HR's organization structure, processes, and roles. Strategic HR Review, 17(5), 234–242. https://doi.org/10.1108/shr-08-2018-0074

[15] El-Khoury, D. (2017). Digital Transformation and the world-class HR difference. Strategic HR Review, 16(2), 86–88. https://doi.org/10.1108/shr-01-2017-0001

[16] Dorogovtseva, A., & Erygina, A. (2019). HR-digital trends. Management of the Personnel and Intellectual Resources in Russia, 8(5), 19–22. https://doi.org/10.12737/article_5dc960ab94c068.61133850

[17] Weigert, M., Bruhn, H.-D., & Strenge, M. (2016). Digital Hr oder HR digital – die bedeutung der digitalisierung für HR. HR-Exzellenz, 323–337. https://doi.org/10.1007/978-3-658-14725-9_20