

O. Svatiuk<sup>1</sup>, M. Havran<sup>2</sup>, A. Burda<sup>3</sup>

<sup>1,2</sup> Lviv Polytechnic National University,

<sup>1</sup> Department of Human Resource Management and Administration,

<sup>2</sup> Department of Foreign Languages,

<sup>3</sup> Academy of Zamosc,

Institute of Technology and Informatics

ORCID: <sup>1</sup> 0000-0003-0099-2532, <sup>2</sup> 0000-0003-1345-9235, <sup>3</sup> 0000-0002-1962-0264

## PROCESS MANAGEMENT OF HR MANAGER'S WORK DIGITALIZING AT THE ENTERPRISE

<http://doi.org/10.23939/semi2022.01.119>

© Svatiuk O., Havran M., Burda A., 2022

**Purpose.** The purpose of the article is to develop directions and recommendations for implementing chatbot project as an important element of digitalizing work of HR recruiting manager.

**Design/methodology/approach.** The method of comparative analysis of theoretical and methodological priorities among trends of digitalizing work of HR manager has been used, as well as the method of abstract and logical generalization of digitalization issues and directions of chatbot project implementation in the enterprise Telegram channel and method of analogies for solving managerial tasks in HR work.

**Findings.** The research of HR manager work processes has been carried out and the directions of their practical application at the enterprise have been formed. In particular, a chatbot project has been developed, which performs one of the functions of a recruiter and is a component of corporate digitalization of the enterprise. This research and its recommendations can be adapted to various relevant business processes.

**Practical implications.** Digital technologies optimize a large number of routine tasks. At the enterprise HR recruiting manager's duties online are: conducting interviews in the chatbot, maintaining personnel records in a cloud environment, adaptation and training of staff to use Moodle, Zoom, Teams, organizing events to improve staff culture and values.

**Originality/value.** The scientific novelty of the study is: the substantiation of the main priority areas of planning and organizing digitization process of HR managers; the development of a chatbot to optimize the search for personnel of the enterprise; creation of practical recommendations for the digital transformation of HR recruitment business process (optimization of HR recruiting manager's work).

**Key words:** management; digitalization; digital support; HR manager; HR management; labour resources; chatbot.

**Paper type:** Research paper.

### Formulation of the problem

Digital technologies are becoming increasingly important in the context of labour market internationalization. The business sphere is actively transforming all its processes in accordance with globalization pace and IT development in order to achieve a competitive position of an employee developing in the social environment. The digital technologies set the vector according to which HR management systems are developed at the micro- and macrolevels, especially in the context of the Covid-19 pandemic.

### Analysis of recent research and publications

Theoretical aspects of HR management system formation and digitalization have been studied by a number of scientists who have already formed the basis for the research problem. Each year, however, there is a need for further more thorough investigations of management and marketing Internet activities; research of digitalization in the labour market, in particular, for HR recruiting managers; application of a systematic approach to HR management and administration. The information base of the research work includes current publications on digital solutions in legislation [1], government websites, including “Diia” (Action), and enterprises’ reports, financial statements and internal corporate information. S. Rudakova, N. Danylevych, L. Shchetinina, Ya. Kasyanenko argue the need for recruitment through social networks to “determine the mechanisms of their formation, to explore the use of social networks by enterprises” [2]. At the International Forum Human Capital – 2030, which took place on November 12–13, 2021, Yu. Balaniuk and V. Kovtunets provided an overview of the topic of assessment of professional qualifications according to innovations, technologies, prospects for the introduction of digitalization [3]. Using the practical foreign experience of higher education at the Academy of Zamost is also valuable in conducting the research.

### Formulation of hypothesis and goal setting

The **purpose** of the article is to develop directions and recommendations for improving the digitalization of work of HR recruiting managers and chatbot project implementation, as an important digital solution for automation process of working with people. It is important to implement methods that are widely used in social networks as relevant digital solutions in the process of working with employees.

### Research methods

For conducting the research, general scientific theoretical research methods have been used, namely, analysis, synthesis, systematization, explanation. Scientific articles of domestic and foreign scientists, analytical reports, publications in the media, and legal documents were used as an information base for the research.

### Main part

Today, large enterprises are engaged in R&D and application of innovative human resource management technologies. At the same time, the majority of enterprises use the traditional management methods, which belong to the groups of administrative, economic and socio-psychological methods.

Table 1

**Global digital trends in HR management at the enterprise**

Elements of digital trends	
Until 2018, there were used:	Since 2020, with the transition to a mixed form of work, there have been used:
<ul style="list-style-type: none"> <li>– high speed Internet;</li> <li>– smartphones and tablets;</li> <li>– personal computers;</li> <li>– cloud services;</li> <li>– e-knowledge;</li> <li>– social networks;</li> <li>– confidential information and passwords.</li> </ul>	<ul style="list-style-type: none"> <li>–VR virtual reality/AR augmented reality;</li> <li>– gadgets, media and devices;</li> <li>– smart home management;</li> <li>– connection to the network of car computers;</li> <li>– digital banking 24 hours per day;</li> <li>– sensors, sensors, drones;</li> <li>– nanotechnologies;</li> <li>– analysts of large databases;</li> <li>– artificial intelligence;</li> <li>– robotics;</li> <li>– sharing economies;</li> <li>– quick response of employees to information in work emails, messengers, forums, chats</li> </ul>

The effectiveness of these methods has been proven over time and, in most cases, it is undoubted. But along with economic development and changing approaches to production, marketing, innovation and other activities of the organization, there is a need to create new HRM techniques responding current demands.

Trends and opportunities of the enterprise which is actively implementing new directions and technological business processes are described in Table 1. A detailed review of these trends forms the ability to identify ways to develop economic, technological and social events in the future.

We should substantiate new and technological HR trends that affect business:

1. *Blended or remote work* – one of the top trends (most affected in other trends). “Remote team and Remote First are no exception. Remote work has become the norm in many countries and industries” [4], especially during the Covid-19 pandemic. According to media sources, during the first quarantine in the spring of 2020 and/or 2021, 35.5 % of employees worked like they had done it before quarantine, 4.5 % of employees lost their jobs, 23 % of employers gave their employees unpaid leave, and 47 % of employers offered their employees remote work with full salary.

2. *“Human cloud”*. When there are “remote” workers, HR management becomes remote. The number of HR platforms for cloud storage is growing. Cloud-based HR is the future of human resource management [5]. Cloud HRIS (Human Resource Information System) allows organizations to store employee data in a single, easily accessible and safe place in the Internet. Data can be accessed instantly, anytime, anywhere, from any device with an Internet connection. The advantages of HRIS use are overcoming communication barriers, raising productivity and employment, saving time, decentralizing the exchange of indicators base and their preservation. “Cloud services can simplify the recruitment process, improve the overall working life by simplifying communication and automating ratings or assessment, reduce the level of distortion of survey data, increase trust and fairness. As a result, overload level is reducing by optimizing routine processes; the security of stored data is increasing” [6].

3. *Employer branding* is a leadership concept used to raise business value by generating teams of inspired employees working together. According to LinkedIn, 72 % of recruiters agreed that enterprise’s brand and reputation have a decisive influence not only on the selection process, but also reduce the cost of finding vacancies and attracting more qualified applicants [7].

4. *Digital technologies and innovations of goods & services in mobile application websites* are currently basic for producing new products, new values of e-knowledge, being the basis of competitiveness in the market. Such digitalization enables small enterprises and project teams to produce new products and actively launch them to the market at the same competitiveness level as large enterprises. The consequence of digitalization is the shift of “innovation centres” to small businesses and start-ups.

5. *Increased data security* requires the use of advanced means of maintaining employee’s confidential data. Storing data in “cloud” and changing General Data Protection Regulation (GDPR) will mean data security for both candidates and employers [8].

6. *People-analytics with AI support*. In the current management, the importance of using databases with human resources is doubtless. They include employee surveys, feedback tools, and sophisticated analytics platforms. AI is a new educational programme at LPNU developed by the best IT professionals and teachers [9]. Analysing the latest research results, we understand what really motivates staff efficiency. HR analytics makes big data meaningful and significant as they are being processed, analyzed and evaluated, which in turn increases the value of business through using resources efficiently, leading to making reasonable and more objective decisions, allowing companies to be competitive [10].

7. *Improving recruitment practices*. Technology is transforming the search and recruitment process. For example, the recruitment function is partially performed by a chatbot communicating with candidates, simulating a real interlocutor, adjusting the time of meetings and calls, asking questions and moving the candidate to the second stage of the interview, without making anyone wait.

8. *Staff training and development*. Blended work is a current trend in HRM, where staff training is performed on platforms. There are also many prospects and opportunities for developing career path and improving business skills.

9. *Planning and calculating the rating* of employees is a motivating factor aimed at achieving enterprise goals. It is based on the provisions of moral and material motivation of staff, teamwork, team building.

10. *Rehabilitation of staff (with emphasis on socio-mental condition)*. The psychological environment of the team has an impact on enterprise activities and on the “effectiveness and efficiency of the team” [11]. Businesses produce projects that focus on supporting staff to avoid emotional and professional burnout, increasing the number of employees.

Global digital trends include ten components that entrepreneurs can choose depending on the industry, its size and other factors.

Artificial intelligence (AI) as a technology makes it possible to perform intellectual operations like the human brain does. These software products have created a “human image” that interacts effectively with job candidates, HR recruiting managers. Chatbots help to provide services more efficiently (e.g., using a recruiter chatbot by Deloitte).

Opportunities offered by artificial intelligence:

- reducing headhunting costs, prevention of losing enterprise’s intellectual capital;
- increasing confidentiality;
- optimizing time for administrative tasks (control and appointment of staff training, recruitment processes, calculation of salaries, verification of competencies);
- increasing the accuracy of HR functions performance by reducing human errors in administration;
- saving labour costs;
- reducing decision-making bias and subjectivity concerning human resources.

Fig. 1 shows advantages and disadvantages of the digitalization process at the enterprise.

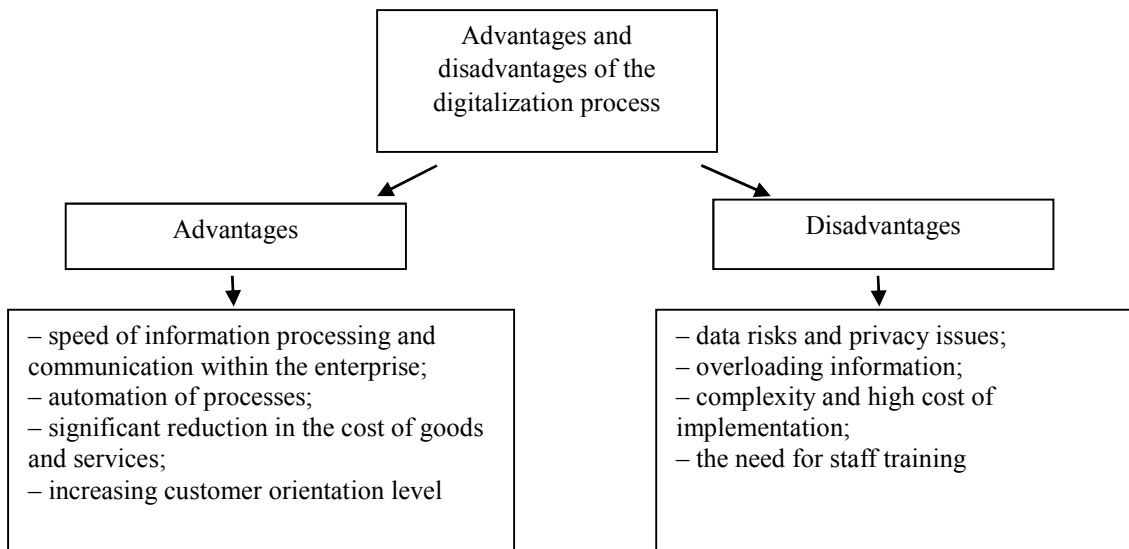


Fig. 1. Advantages and disadvantages of the digitalization process at the enterprise

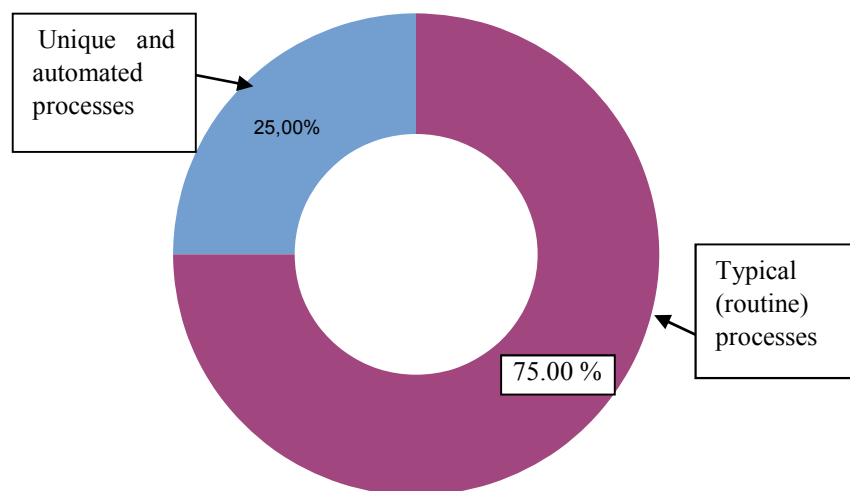
The use of artificial intelligence in HR management creates new obligations for the company, transforming the nature of performing specific HR management functions. To get the greatest benefits from digital technologies, HR competencies must be clearly defined, correlated with business requirements, differentiated by functions, roles and levels, updated at the right time, applied to any HR management functions. Artificial intelligence is a technology used to perform tasks requiring a certain level of intelligence, in other words, it is a tool taught by man to work with intellectual operations which can be performed only by a human being. One of AI application advantages is high speed of calculating a large number of the latest quality indicators based on advanced algorithms. Integrated software products, sophisticated algorithms for responding to users’ actions and words allow you to create an “image of a person” being able to interact

effectively with job candidates, new employees, having adaptive training, specialists in benefits and compensations for salaries and bonuses, HR managers and Line managers during the creation of analytical reports [12].

The ratio of basic HR processes is changing under the influence of digitalization. Having analyzed the work of HR recruiting managers, we found out that the main HR processes can be divided into:

- unique processes (those that require individual involvement and approach);
- typical (repetitive routine processes — a lot of interviews with candidates by phone, checking filled in questionnaires);
- automated (performed by a computer).

The distribution of working time according to the processes of the HR recruiting manager at the enterprise is shown in Fig. 2 in percentages.



*Fig. 2. Distribution of working time of the HR recruiting manager at the enterprise*  
*Source: [13].*

Digitization of the working process allows you to optimize the use of working hours, as well as reduce time on routine tasks by up to 50 %.

Today, there are three main HR management functional areas, where there is a division of competencies and responsibilities in performing tasks into those that can be automated using artificial intelligence technologies. They require the direct involvement of HR specialists, i.e. recruiting, career advancement, staff training and development [14]. The obvious advantages of advanced technologies stimulate businesses to actively implement artificial intelligence technologies in HR management. In order to optimize the recruitment process, it is proposed to introduce a chatbot to the enterprise, digitizing work of HR recruiting managers. Under the influence of digitalization, HR recruiting managers' responsibilities are transforming (see Table 2).

HR digitalization requires the acquisition of non-specific, cross-functional skills, which are necessary because of using chatbots in HR management:

- maintenance, upgrading, reconfiguration of chatbots require HR specialists with additional programming and IT skills;
- availability of data is limited by the trend of HR to SAAS, i.e. software becomes a paid service [15];
- age and inclusive restrictions on people who are no able to use advanced technologies, do not respond in time to the messages, are not ready to conduct a dialogue of artificial intelligence in HR management with chatbots.

**Designing the transformation of HR recruiting managers' responsibilities  
under the influence of digitalization of the enterprise**

HR manager functions	Competences	
	Use of artificial intelligence	Standard methods
Recruiting	Development of resumes, portfolios, data on candidates' knowledge, skills, competencies and personal characteristics, collection and analysis of information about candidates from various digital sources, preliminary selection of candidates, CV analysis	Opening a vacancy, determining a list of professional and qualification requirements of the candidate for the position, his values and demands, personal qualities, making the final decision on employment
Career advancement	Monitoring career promotion, analysis of career opportunities, analysis of staff productivity and professional behaviour, calculation of the programme in overcoming skills gaps	Coaching process, identification of the best career paths, implementation and realization of organizational mentoring system, development of career plans and requirements for vacancies
Staff training and development	Achieving more effective transfer, monitoring and analysis of the results of the corporate training system, individualization of approaches to the implementation of training considering employee's personal characteristics	Development and implementation of a corporate training system, budgeting training and development programmes, decision-making on the implementation of optimal systems

Source: [14].

The artificial intelligence algorithm (AllyO chatbot) performs the initial selection of applicants: the system asks how much time a day a person can devote to work, whether he/she has access to high-speed Internet, which is necessary for work. Then it comes to the conclusion on candidates' professional level and competency. The second stage of the interview is HireVue video interview technology, which analyzes how the candidate answers questions, as well as captures micro facial expressions. While the artificial intelligence system is studying all candidates, it is learning itself and improving its algorithms. These hiring algorithms will reduce by 23% the need for recruiters responsible for hiring staff in corporation's call centres [16].

The human resource management area is influenced by technological perspectives, due to the business digitalization processes. Digital technologies affect not only the process of organizing and conducting business, but also all processes and components of entrepreneurial activity. Innovative strategies for company development must meet digital HR management requirements, causing implementation of integrated mobile applications, analytics, cloud technologies, augmented reality in social networks. Business digitalization optimizes organization and management processes, online learning, performance appraisals, automation of the engagement process, simplification of feedback collection, which in turn ensures efficient use of resources, decision-making eliminating subjectivity, increasing competitiveness, access to quality human resources and staff motivation level [17]. Transformation of HR technologies contributes to the renewal and expansion of HR professionals' competencies and cross-functionality, as it requires better knowledge of goods or service technical characteristics.

In order to improve working process of the HR recruiting manager, it is advisable to introduce a chatbot to optimize the recruitment process at the enterprise.

A chatbot is a programme with a written algorithm of questions and answers sent to the user in the form of messages. This allows you to have constant access to communication with customers. Its operation principle consists of clearly defined communication scenarios, and the bot automatically gives the right answer to the interlocutor. The bot simulates communication with a person, this effect encourages closer communication. Thus, a chatbot is a step-by-step action in which a given algorithm is embedded. Chatbots

depending on the platform are divided into: Telegram bots; bots in Facebook Messenger; Viber bots; bots in Whats Up; bots in Slack [18].

Processing a resume and conducting an initial phone or face-to-face interviews take a lot of time, which can be significantly reduced by using a chatbot. Chatbot enables people to be joined into teams; it can be “taught” the selection criteria and other requirements, saving working time; it can also be used in the system of staff training (testing, evaluation); it can test learning outcomes and adapt questions or information to the participant.

Modern chatbots allow you to simulate human interaction to automate business processes at the enterprise. Therefore, the initial interview can be conducted by a bot, where a job hunter will be able to get acquainted with all working conditions and answer standard questions.

The tasks of the recruiter bot can be divided into 3 stages:

1. Collection of candidates. The bot acts as a virtual recruiter, which allows you to optimize the processes associated with the initial processing of candidates data: information about the company, vacancies, working conditions, surveys, testing.

2. Adaptation. There is a personal support during the first weeks of the employee's work. Chatbot sends material for studying, conducts tests for consolidating training, collecting feedback, assessing employee's well-being and their satisfaction with the company. It also allows HR manager to identify problems of new employees in order to create a healthy environment in the team, to be closer to employees and timely identify their needs, as employees are more willing to share their experiences and difficulties arising in the process of work. As a result of the collected information, staff turnover can be reduced.

3. Personal HDBP+L&D (T&D). Chatbot automates mass communications, conducts surveys, ENSP, 360 assessment, creates knowledge databases for employees, provides information and service information.

*Table 3*

**Types of chatbots**

Features	Express	Autonomous	Integrated
Functionality	It has the least functionality, solves one problem, maximum two (for one role, a vacancy, one survey)	Full-fledged modules that are created to solve several tasks and are launched for one department	Solve the maximum number of problems
Development time	From several hours to several days	From a week to a month	Projects that are implemented for months, even years
Estimated cost	\$100	\$100–\$1000	\$1000–\$10000
Creation and maintenance	It is created by one person and runs, for example, 30–40 minutes a week	The creation team consists of several people, the number depends on the functionality	A number of specialists, considering integration with 1C, LMS, HRM-systems
Interaction systems	Does not interact	Interacts with Excel, as a presentation, transmission of information (uploading received data to users)	Integrate with LMS, HRM systems, etc.

*Sources: [19, 20, 21].*

The implementation cost is calculated by the IT department at the company. It is an additional service, therefore, it is paid separately, and the cost is \$150, which is lower than the average cost in the market. According to Papidu Digital Agency, the price on the Lviv market varies from \$250 to \$600. One of the advantages is possibility of changing bot algorithms constantly.

As usual, bots are designed to perform monotonous and repetitive work with the maximum possible speed (obviously, much higher as human capabilities). A person maintaining servers can place a robots.txt file on the server, which contains the restrictions that bots must comply with [22]. The chatbot can be launched via:

1. Links (used where a person can link to, for example, job search websites and social networks).
2. QR codes: advertising, printed materials, where it is not possible to click on the link and get the result.

The next steps that a chatbot is able to do can be integrated with different systems:

Candidates – HR bot – presents the company – talks about vacancies – collects profile data – conducts candidate testing – sends questionnaires of required candidates to email or HRM/ATS – sends notifications about interview date and place – collects feedback – sends an offer copy – prepares for the first day – conducts onboarding – an employee.

The obvious advantages of the express bot are:

1. It is running and starts working with candidates in 1 day.
2. It saves up to 30 % of HR manager's working time due to opportunities to present the company and vacancies to candidates 24/7; to check automatically if a candidate meets the vacancy requirements, level of knowledge; to transmit only relevant questionnaires.

HR ChatBot as automate sourcing candidates and answering the most common questions to speed up recruitment process is presented in Fig. 3.

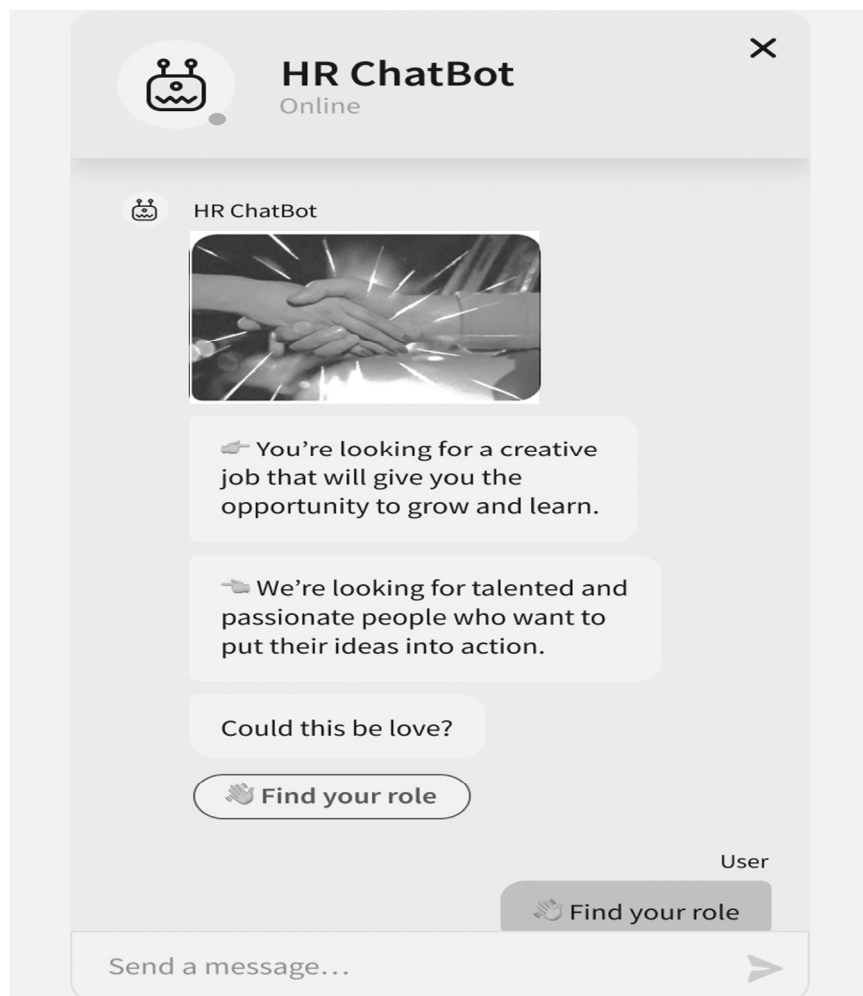


Fig. 3. Recruitment chatbot template

Source: [23].



Further analysis shows that companies require chatbot in the following cases:

1. Company needs to hire a team of specialists.
2. Company should test candidates before interviewing.
3. Company gets many inappropriate responses from candidates.
4. Candidates who do not meet the basic requirements of the vacancy should be automatically eliminated.
5. Company needs workers for mass positions, when there is a high employee turnover.

Modern chatbots can simulate human interaction to automate the improvement of business processes in the enterprise, receive e-mail notifications about relevant candidates and view analytics for each or all candidates. Bots in the HR departments can significantly reduce the burden on HR managers and automate the employee quality classification process, using automatic employees' work and skills assessment algorithms.

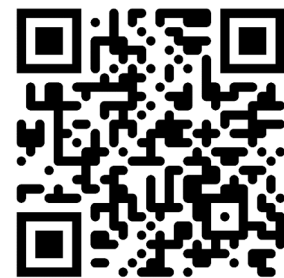
Having analyzed HR bot, which can optimize most of the HR recruiting processes, reduce candidate selection time and overall simplify headhunting and onboarding processes at the enterprise [24], we understand that its implementation requires some changes, that can cause stressful situations and new challenges for employees and managers, so in order to cope with them the later should be able make justified decisions to ensure the economic efficiency of enterprises, influence employees opinions, create favourable emotional environment in the organization [25].

It is worthwhile noting that links to the chatbot can be pasted into any job search website or social network article. It is also possible to generate a QR code and print it out on paper, if we are searching for employees where there is a lack of digital sources. Today, QR codes are convenient because every smartphone equipped with a camera is capable of reading them. For example, during the quarantine period, all catering establishments have generated QR codes, after their scanning customers follow to hyperlink to the site with a menu.

As far as we know, QR code was invented about 20 years ago in Japan, it is such a two-dimensional bar code that encodes any information. The QR code is visually represented in the form of a black and white square, similar to a maze. It can encode 7089 digits, 1817 hieroglyphs and 4296 characters; it can also contain any text combination consisting of numbers and symbols.

One of the most important advantages of using QR code is the ability to scan it with a regular smartphone camera, as well as the amount of information that can be encoded. Ready-made code is a JPG image that can be posted on a web resource, published on a social network or printed on any surface, or simply displayed from any smartphone. QR code as store data system is not a novelty now, but an example of business digitalization, it is widely used to read information on tickets, advertising, and contact information or to get access to sites or applications (e.g. Privat24 actively uses this method), it is also used in schools during education process. So, a reasonable explanation of QR code popularity today may be that it is easy, efficient, available and convenient for users.

The recruiting chatbot proposed to be implemented at the enterprise can be used on three different platforms: Telegram, Viber, Facebook. The most convenient is Telegram, which is easy to use and has a simple algorithm for creating a chatbot. The advantage of recruiting chatbot is that it works 24/7. It can conduct a survey of candidates, send potential employees questionnaires or links to fill them out, accept survey results and pass them to the HR department. The chatbot can answer frequently asked questions about the company, share general information about the company, available vacancies and other important information for employees. It allows company to digitize the initial selection of candidates for the vacant position. Nevertheless, it is important to distinguish the advantages and disadvantages between live communication with HR manager and chatbot (see Table 4).



*Fig. 4. View of the QR code of the recruitment chatbot*

**Advantages and disadvantages of chatbots**

Advantages	Disadvantages
Effective collection of information	Ability to process only simple requests
Request processing speed	The need for constant analysis and optimization
Availability 24/7	Difficulties with handling “problem clients”
Savings	Unable to display emotions
No “human factor” (never get tired, no breaks and errors)	
No language barriers	
Processing a large number of requests simultaneously	
Message delivery speed	

Consequently, the advantages of using the recruiting chatbot are obvious, it is a one-time investment that does not require any additional costs, but it can optimize working time of the HR manager up to 50 %.

**Conclusion**

The findings of this study indicate that about half of the total digitalization investment is accounted for HR processes. The main areas of development are: automation of HR processes, digital integration with cloud services, predictive people-analytics, augmented reality, artificial intelligence.

Digitization of work of the HR manager at the enterprise plays an important role, because successful work depends on a well-selected team of employees. It is the HR manager who creates the team and corporate culture, participates in all search and recruitment processes. It is proposed to use a chatbot for digitizing work of the HR recruiting manager in order to optimize the recruitment process at the enterprise.

There are different information technologies used by the HR manager at the enterprise:

- sites for finding employees (Rabota.ua, Work.ua, Jooble, Jobs.ua, Talent.ua, Freelancehunt.ua, OLX);
- widely used social networks that nowadays work effectively and provide a high level of feedback, they are Facebook, Instagram;
- internal personnel reserve is actively used.

During the process of digitalization at the enterprise, the HR recruiting manager’s responsibilities are transforming, they are:

- 1) recruiting is the processing of large amounts of data on candidates’ knowledge, skills, abilities and personal characteristics, collection and analysis of information about candidates from various digital sources, pre-selection of potential candidates, CV analysis;
- 2) career advancement is tracking career advancement, analysis of career opportunities, analysis of staff productivity and professional behaviour, calculation of the programme in overcoming skills gaps;
- 3) staff training and development is achieving more effective transfer, monitoring and analysis of the results of the corporate training system, individualization of approaches to the implementation of training considering employee’s personal characteristics.

Our chatbot project is a programme with a written algorithm of questions and answers being sent to the user in the form of messages. This allows a company to have constant access to communicate with customers. The dominant work consists of clearly defined communication scenarios. The bot automatically gives the right answer to the interlocutor and simulates communication with a person, encouraging closer communication. Therefore, the chatbot is a step-by-step action in which a given algorithm is embedded. The main advantages of using chatbots are: effective collection of information, request processing speed, availability 24/7, savings, no “human factor” (never get tired, no breaks and errors), no language barriers, processing a large number of requests simultaneously, message delivery speed. The proposed

chatbot project is autonomous, according to the algorithm this chatbot is limited and according to the format of interaction it is a button one. The cost of project development from the IT department of Private Austrian Investments LLC is \$150; the development time is from a few days to several weeks.

### **Prospects for further research**

Our research has gone some way towards enhancing the understanding of digitalization processes at the enterprise. We are confident that further research should be undertaken in the area of implementing artificial intelligence projects such as using GitHub Enterprise platform, being an up-to-date digital solution for analysis and routine work of the manager.

1. Про захист персональних даних: Закон України. Документ 2297-VI, чинний, поточна редакція. Редакція від 12.01.2022, підстава – 1962-IX. Available at: <https://zakon.rada.gov.ua/laws/show/2297-17#Text>.
2. Рудакова С. Г., Данилевич Н. С., Щетиніна Л. В., Касяненко Я. А. (2020). Digital HR – майбутнє кадрового адміністрування. *Бізнес Інформ*, № 1, С. 265–270. DOI: <https://doi.org/10.32983/2222-4459-2020-1-265-270>.
3. Людський Капітал – 2030. Форум. (2021). Available at: <http://humancapital2030.nqa.gov.ua/>
4. Дистанційна робота в пріоритеті: 10 компаній, які обрали модель Remote First (2020). Available at: <https://hurma.work/blog/distancejna-robot-a-v-prioriteti-10-kompanij-yaki-obrali-model-remote-first/>
5. 8 інноваційних та технологічних HR-трендів. *Ekol Logistics 4.0*. (2020). Available at: <https://www.ekol.com/uk/8>
6. Riya Sand. HR and cloud computing: how the cloud is transforming HR. Available at: <https://www.hrtechnologist.com/articles/digitaltransformation/hr-and-cloud-computing-how-the-cloud-is-transforming-hr>.
7. EvoTalents.School. LinkedIn. Available at: <https://ua.linkedin.com/company/evotalents-school>.
8. Загальний регламент про захист даних. *Вікіпедія*. Available at: <https://uk.wikipedia.org/wiki>.
9. Програма “Штучний Інтелект” у НУЛП/Artificial Intelligence. Available at: <https://www.facebook.com/ai.lviv.ua>
10. Жуковська В. М. (2017). Цифрові технології в управлінні персоналом: сутність, тенденції, розвиток. *Науковий вісник Міжнародного гуманітарного університету*, № 2, С. 13–17 Available at: <http://www.vestnik-econom.mgu.od.ua/journal/2017/27-2-2017/5.pdf>.
11. Chkheailo A., Tkachenko I. (2020). Аналіз сучасних соціально-психологічних методів управління персоналом. *Соціальна економіка*, 1(60), С. 203–213. DOI: <https://doi.org/10.26565/2524-2547-2020-60-19>.
12. The new age: artificial intelligence for human resource opportunities and functions. Survey by EY (Ernst & Young LLP). Available at: [https://www.ey.com/Publication/vwLUAssets/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions/\\$FILE/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions.pdf](https://www.ey.com/Publication/vwLUAssets/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions/$FILE/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions.pdf).
13. Zaharets A. O., Svatiuk O. R. (2021). Digitization of the work of the HR-manager on recruitment (based on the materials of LLC Austrian Private Investment): master's thesis. Lviv Polytechnic National University, Lviv.
14. Guenole Nigel, Lamb, Feinzig Sheri. (2018). Competencies in the AI era. *IBM Talent Management Solutions*. Available at: <https://www.ibm.com/downloads/cas/ONNXK64Y>.
15. The future of HR 2019: In the Know or in the No. (2018). *KPMG International Cooperative* 24 p. Available at: <https://assets.kpmg/content/dam/kpmg/pl/pdf/2019/05/pl-Raport-KPMG-The-future-of-HR-2019-In-the-Know-or-in-the-No.pdf>.
16. Живко З. Б., Святюк О. Р., Копитко М. І. (2018). Корпоративне управління в системі економічної безпеки: навч. посіб. / за заг. ред. З. Б. Живко. Львів: ЛьвДУВС, 456 с. Available at: <http://dspace.lvduvs.edu.ua/handle/1234567890/671>
17. Семенчук О. Алгоритми найму в hr: ефективність і вигода для компаній. Available at: <https://www.everest.ua/ai-platform/aibusiness/algoritmi-najmu-v-hr-efektivnist-i-vigoda-dlya-kompanij>.
18. Бей Г. В., Середа Г. В. (2019). Трансформація HR-технологій під впливом цифровізації бізнес-процесів. *Економіка і організація управління*, № 2(34). DOI: <https://doi.org/10.31558/2307-2318.2019.2.10>
19. Режепа В. (2016). Боты в соцсетях: что это такое, и с чем их едят? Available at: <https://gagadget.com/how-it-works/20734-botyi-v-sotssetyah-cto-eto-takoe-i-s-chem-ih-edyat/>
20. Что такое бот вообще и в соцсетях, для чего нужен и как пользоваться. Available at: <https://smmplanner.com/blog/cto-takoe-bot-voobshchie-i-v-sotssietiakh-dlia-chiegho-nuzhien-i-kak-polzovatsia/>
21. Robot (programme). *Wikipedia*. Available at: <https://uk.wikipedia.org/wiki/>

22. Чат бот. Available at: <http://www.robotstxt.org/> The Web Robots Pages 1.
  23. HR Chatbot. Available at: <https://www.chatbot.com/chatbot-templates/recruitment-template/>
  24. Кузнецова А. Я., Скринник З. Е., Жеребило І. В., Комаринська З. М., Кадикало О. І., Олійник Н. Ю., Семів Л. К., Сватюк О. Р., Якимів А. І. (2021). Соціальне забезпечення в Україні: навч. посіб. Львів: Видавництво Університету банківської справи, 547 с. Available at: <http://repository.ubs.edu.ua/xmlui/handle/123456789/2729>
  25. Havran M., Svatiuk O. (2021). Teaching emotional intelligence to students obtaining bachelor's degree in management. *Перспективи та інновації науки (Серія "Педагогіка". Серія "Психологія". Серія "Медицина")*, № 4 (4). С. 25–33.
1. Pro zakhyst personalnykh danykh [About personal data protection]. Law of Ukraine. Document 2297-VI, current, current version – Version dated 12.01.2022, basis – 1962-IX. Available at: <https://zakon.rada.gov.ua/laws/show/2297-17#Text>
  2. Rudakova S. H., Danylevych N. S., Shchetinina L. V., Kasianenko Ya. A. (2020). Digital HR – maibutnie kadrovoho administruvannya [Digital HR – the future of personnel administration]. *Business Inform*, No. 1, pp. 265–270. DOI: <https://doi.org/10.32983/2222-4459-2020-1-265-270>
  3. Human capital 2030. Forum (2021). Available at: <http://humancapital2030.nqa.gov.ua/>
  4. Dystantsiina robota v priorityeti: 10 kompanii, yaki obraly model Remote First [Remote work is a priority: 10 companies that have chosen the Remote First model] (2020). Available at: <https://hurma.work/blog/distancezjina-robota-v-priorityeti-10-kompanij-yaki-obrali-model-remote-first/>
  5. 8 innovatsiinykh ta tekhnolohichnykh HR-trendiv [8 innovative and technological HR-trends]. *Ekol Logistics 4.0* (2020). Available at: <https://www.ekol.com/uk/8>
  6. Riya Sand. HR and cloud computing: how the cloud is transforming HR. Available at: <https://www.hrtechnologist.com/articles/digitaltransformation/hr-and-cloud-computing-how-the-cloud-is-transforming-hr>.
  7. EvoTalents.School. LinkedIn. Available at: <https://ua.linkedin.com/company/evotalents-school>.
  8. Zahalnyi rehlament pro zakhyst danykh [General Data Protection Regulation]. *Wikipedia*. Available at: <https://uk.wikipedia.org/wiki>.
  9. Programme Artificial Intelligence in LPNU. Available at: <https://www.facebook.com/ai.lviv.ua>.
  10. Zhukovska V. M. (2017). Tsyfrovi tekhnolohii v upravlinni personalom: sutnist, tendentsii, rozvytok [Digital technologies in personnel management: essence, tendencies, development]. *Naukovyi visnyk Mizhnarodnoho humanitarnoho universytetu [Scientific Bulletin of the International Humanities University]*, No. 2, pp. 13–17. Available at: <http://www.vestnik-econom.mgu.od.ua/journal/2017/27-2-2017/5.pdf>.
  11. Chkheailo A., Tkahenko I. (2020). Analiz suchasnykh sotsialno-psykholohichnykh metodiv upravlinnia personalom [Analysis of modern socio-psychological methods of personnel management]. *Sotsialna ekonomika [Social economy]*, 1(60), pp. 203–213. DOI: <https://doi.org/10.26565/2524-2547-2020-60-19>
  12. The new age: artificial intelligence for human resource opportunities and functions. Survey by EY (Ernst & Young LLP). Available at: [https://www.ey.com/Publication/vwLUAssets/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions/\\$FILE/EY-the-new-age-artificial-intelligencefor-human-resource-opportunities-and-functions.pdf](https://www.ey.com/Publication/vwLUAssets/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions/$FILE/EY-the-new-age-artificial-intelligencefor-human-resource-opportunities-and-functions.pdf)
  13. Zaharets A. O., Svatiuk O. R. (2021). Digitization of the work of the HR-manager on recruitment (based on the materials of LLC Austrian Private Investment): master's thesis. Lviv Polytechnic National University, Lviv.
  14. Guenole Nigel, Lamb Chris, Feinzig Sheri (2018). Competencies in the AI era. *IBM Talent Management Solutions*. Available at: <https://www.ibm.com/downloads/cas/ONNXK64Y>.
  15. The future of HR 2019: In the Know or in the No. (2018). *KPMG International Cooperative* 24 p. Available at: <https://assets.kpmg/content/dam/kpmg/pl/pdf/2019/05/pl-Raport-KPMG-The-future-of-HR-2019-In-the-Know-or-in-the-No.pdf>
  16. Zhyvko Z., Svatiuk O. & Kopytko M. Korporatyvne upravlinnya v systemi ekonomichnoyi bezpeky [Corporate management in the system of economic security] (2018) / Ed. by Z. Zhyvko. Lviv: L`vDUVS, 456 p. Available at: <http://dspace.lvduvs.edu.ua/handle/1234567890/671>
  17. Semenchuk O. Alhorytmy naimu v hr: efektyvnist i vyhoda dlia kompanii [Hiring algorithms in hr: efficiency and benefit for companies]. Available at: <https://www.everest.ua/ai-platform/aibusiness/algoritmi-najmu-v-hr-efektivnist-i-vigoda-dlya-kompanij/>

18. Bei H. V., Sereda H. V. (2019). Transformatsiia HR-tekhnologii pid vplyvom tsyfrovizatsii biznes-protsesiv [Transformation of HR-technologies under the influence of digitalization of business processes]. *Ekonomika i orhanizatsiia upravlinnia [Economics and organization of management]*, No. 2(34). DOI: <https://doi.org/10.31558/2307-2318.2019.2.10>.
19. Rezhepa V. (2016). Boty v sotssetiakh: chto eto takoe, i s chem ih ediat? [Bots in social networks: what are they and what do they eat with?] Available at: <https://gagadget.com/how-it-works/20734-botyi-v-sotssetyah-chto-eto-takoe-i-s-chem-ih-edyat/>
20. Chto takoe bot voobshche i v sotssetiakh, dlia cheho nuzhen i kak polzovatsia [What is a bot in general and in social networks, what is it for and how to use it]. Available at: <https://smmplanner.com/blog/chto-takoe-bot-voobshche-i-v-sotssetiakh-dlia-chiegho-nuzhien-i-kak-polzovatsia/>
21. Robot (programme). *Wikipedia*. Available at: <https://uk.wikipedia.org/wiki/>
22. Чат бот. Available at: [http://www.robotstxt.org/The\\_Web\\_Robots\\_Pages\\_1](http://www.robotstxt.org/The_Web_Robots_Pages_1).
23. HR Chatbot. Available at: <https://www.chatbot.com/chatbot-templates/recruitment-template>.
24. Sotsialne zabezpechennia v Ukraini: navchalnyi posibnyk [Social security in Ukraine: a manual]. (2021) / A. Ya. Kuznietsova, Z. E. Skrynnyk, I. V. Zherybylo, Z. M. Komarynska, O. I. Kadykalo, N. Yu. Oliinyk, L. K. Semiv, O. R. Svatiuk, A. I. Yakymiv. Lviv: University of Banking Publishing House, 547 p. Available at: <http://repository.ubs.edu.ua/xmlui/handle/123456789/2729>
25. Havran M., Svatiuk O. (2021). Teaching emotional intelligence to students obtaining bachelor's degree in management. *Perspektyvy ta innovatsii nauky (Seriiia "Pedahohika". Seriiia "Psykhohiia". Seriiia "Medytsyna") [Perspectives and innovations of science (Series "Pedagogy". Series "Psychology". Series "Medicine")]*, No. 4 (4), pp. 25–33.

О. Сватюк<sup>1</sup>, М. Гавран<sup>2</sup>, А. Бурда<sup>3</sup>

<sup>1,2</sup> Національний університет "Львівська політехніка",

<sup>1</sup> кафедра менеджменту персоналу і адміністрування,

<sup>2</sup> кафедра іноземних мов,

<sup>3</sup> Академія Замосця,

Інститут технологій та інформатики

## УПРАВЛІННЯ ПРОЦЕСОМ ЦИФРОВІЗАЦІЇ РОБОТИ HR-МЕНЕДЖЕРА НА ПІДПРИЄМСТВІ

© Сватюк О., Гавран М., Бурда А., 2022

Розглянуто впровадження чат-бота як важливого елемента цифровізації роботи HR-менеджера. Використано метод порівняльного аналізу теоретико-методологічних пріоритетів серед трендів цифровізації роботи HR-менеджера; метод абстрактно-логічного узагальнення питань цифровізації й напрямів упровадження проєкту чат-бота в телеграм-каналі підприємства; метод аналогій щодо розв'язання управлінських завдань у кадровій роботі. Досліджено процеси роботи HR-менеджера та сформовано напрями їхнього практичного застосування на підприємстві. Зокрема, розроблено проєкт чат-бота, який виконує одну із функцій рекрутера та є складовою корпоративної цифровізації підприємства. Також це дослідження та рекомендації можна підлаштувати під різні відповідні бізнес-процеси. Наукова новизна дослідження полягає в: обґрунтуванні основних пріоритетних напрямів планування та організації процесу цифровізації HR-менеджера; розробленні чат-бота для оптимізації роботи із питань пошуку персоналу підприємства; створенні практичних рекомендацій щодо цифрової трансформації бізнес-процесу (оптимізації роботи менеджера з питань пошуку персоналу) з питань набору персоналу. Цифрові технології оптимізують велику кількість рутинних завдань. HR-менеджер із питань набору персоналу на підприємстві онлайн займається: проведенням співбесід у чат-боті, веде кадровий облік у хмарному середовищі, здійснює адаптацію та навчання персоналу із використанням moodle, zoom, teams, організовує заходи із підвищення кадрової культури та збільшення цінностей.

Ключові слова: управління; цифровізація; цифрове забезпечення; HR-менеджер; менеджмент персоналу; трудові ресурси; чат-бот.