

Digital project solutions for business and hospitality industry: Modern challenges for the personnel

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Abstract. The importance of establishing the role of digital project solutions using the example of the agribusiness and the hospitality industry is shown particularly for professionals with experience in the field of information technology and agriculture. The aspects of the recruitment process and further employment in the agricultural sector, considering the rapid spread of digitalization, are outlined in the article. The generalized order of the methods for initial assessment of the recruitment process for the agricultural enterprises is described with an emphasis on digital skills. The proportion of households with access to the Internet in urban and rural areas is examined. The main HR trends are identified, among which digitalization and the use of e-platforms are the most prominent. It is established that e-platforms have various applications, such as communication between agricultural holdings and agricultural enterprises as well as search, lease or sale of the land lots, agricultural consulting, etc. The examples of electronic platforms and digital services in the agricultural sector as well as the specifics of their use are considered in the article. The main challenges of digital transformation of agricultural areas and rural labor potential are analyzed. It is concluded that digitalization can pose additional challenges for small farmers and large agricultural holdings, which require strengthening the strategic policy development in production and personnel management through the effective use of digital solutions.

Keywords: digital project solutions, personnel, agricultural industry, e-platforms, HR trends.

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INTRODUCTION

Formulation of the problem. Today's innovative processes and digital technologies hold enormous potential for socio-economic growth through precision, automation and new human resource management capabilities. To a large extent, digital transformation is applied to the primary sector of the economy as agriculture, especially on the basis of the technological diversity of agricultural production and crops, which are connected by the diversity, labor-intensiveness of production processes and new directions of personnel development in the conditions of total digitalization.

Digitization of Ukrainian agribusiness is taking very slow steps, and instead we observe the corresponding reasons, such as: the total volume of agricultural investments in information technologies is very low, there are relatively few scientific developments and patents, and there is also a lack of IT specialists in agriculture. And that is why there is a growing need for highly qualified personnel who would raise the agricultural sector to a higher level of digitalization development.

Analysis of recent research and publications. Both foreign I. Ansoff, F. Becker, P. Drucker, M. Meskon, T. Peters, G. Simon, as well as domestic S. Bandur, O. Grishnova, A. Kolot, N. Lukyanchenko, D. Melnychuk, V. Nyzhnyk, M. Semikina, O. Krushelnytska, O. Stelmashenko worked on the scientific study of socio-economic problems in the field of personnel management. [2, p. 28].

Taking into account the significant contribution of many scientists to the study of many aspects of personnel management, the question of the formation of the personnel role in the conditions of society global digitalization and the intensive development of information technologies, in particular in modern business, remains relevant. Such scientists as M. Zos-Kior, S. Ivanov, V. Klochan, M. Kropyvko, E. Kuzminov, M. Rudenko I. Shevchuk and others are working on the issue of

digitalization and the application of information technologies in the economy of enterprises, as well as the introduction of digital services at enterprises of the agricultural sector. [3, 4; 5, 7]

Highlighting previously unresolved parts of the overall problem. The personnel preservation of agricultural enterprises in the conditions of the digitalization development, considering the consequences of the post-war period.

The purpose of the task is to study the specifics of the personnel role formation in the processes of business digitalization in the agricultural sector and the hospitality industry as priority branches of the sectoral model of the economy of Ukraine, as well as to determine possible directions for improving the main approaches in personnel management and business goals of enterprises related to IT processes.

Presenting main material. In agriculture, there is a rapid increase in the number of high-tech startups that are engaged in the development of their own digital services and solutions for the industry. Announcements about the creation of new digital solutions, marketplaces, and platforms that develop according to the principle of ecosystems appear with an enviable frequency, which means that the agricultural industry needs a large number of high-class IT specialists. But it is worth remembering that after developing a new digital product, it must be promoted to the market and sold, which means that the industry needs not only highly specialized farmers, but also salespeople, marketers, and product managers [2, p. 28].

Therefore, agricultural enterprises as an employer need to focus not only on agronomists, but also on engineers, developers of information technologies and content managers of electronic marketplaces. Creating a digital ecosystem-based platform for agribusiness is an extremely complex, long and expensive process. We need not just top-class professionals for each stage and direction,

but ambitious specialists capable of creative solutions and inventing new business practices that will be able to force the achievement of key business goals. The role of such personnel cannot be overestimated, because profound transformational processes in agribusiness depend on them.

Practice and experience in this matter indicate that to begin with, when creating a startup, one should think about several specific digital services that should help farmers, but as the electronic platform project develops, there should be a gradual immersion in the specifics of the agricultural market. Therefore, when communicating with customers, the concept of an integrated platform was developed, on which all the services and services needed by producers of agricultural products will be collected and which will allow distributors and providers to increase their sales due to the introduction of their own consulting services and technologies into the business processes of their customers. The corresponding change, or rather the expansion of the development vector, led to a revision of personnel search strategy [1].

Agriculture remains one of those industries where the construction of new innovative products is closely related to the accumulation of fundamental knowledge possessed by narrow groups of experts. Therefore, the synergy of academic knowledge and modern digital technologies is important for creating viable and truly effective solutions for the agricultural sector. The lack of top specialists – those who can become ideologues and determine the strategy of a new business – is especially acute in the agricultural labor market.

Therefore, the development of computer sciences, modern economic trends and digital learning skills in agricultural universities, which will specialize in the training of specialists in Big Data analytics, digital economy and marketing, digitalization of electronic

document flow, business promotion in social media and work with cloud services. Therefore, it will be extremely valuable for the rapid digitalization of agriculture, since today there is a serious shortage of professional personnel, and even those who actually work cannot know everything and be on time everywhere.

It is thanks to the digitalization of the agricultural industry that the decrease in the number of personnel in the labor market is compensated for, and highly specialized professionals can help more farmers to farm at the cutting edge of technological progress. At the same time, it is important that both categories of farmers do not compete unfairly, but complement each other. This can be achieved only by the correct construction of the HR policy of timely value enhancement in the actions of each of these two groups. For example, if “senior experienced” specialists appreciate the importance of classic books on professional recommendations for the organization of work on agricultural land in precision agriculture projects, then the personnel service must necessarily turn the digitization of these books or the creation of agronomists’ electronic guides into an important internal corporate event. which were implemented in the company by a group of IT development specialists [3].

Therefore, with the help of digital solutions, it became possible for such expertise to be scaled and transferred to those who previously did not have access to such a level of competence. One of the main tasks that employers in agriculture are trying to solve is the integration and implementation of professional expertise in agrarian processes, when the knowledge and experience of the most valuable and qualified professionals of the agricultural industry become available to all participants of a single agricultural information system, regardless of their enterprises’ size.

At the same time, digitalization allows applying their expertise with correlation to the conditions of different agricultural

lands and farms. Therefore, employers should make efforts in their own knowledge bases, in providing the Internet network with the further goal of mastering educational platforms by employees. In this way, it will help to create trust and attract qualified personnel of enterprises, because providers of industry IT solutions must be able to personalize, and this is impossible without a broad professional worldview.

Such a management decision can also be applied to the development of the service sector, namely the hospitality industry as a tertiary sector of the economy that provides direct uncomplicated services. And therefore, considering the quaternary sector of the economy, which provides services to the population in the dissemination of information about tourist products using social networks, has long been a promising factor for doing business. However, recently, the use of digital applications has become widely used, which contributes to the integration of information and communication technologies in the system of improving the quality of cooperation between enterprises of the hospitality industry and consumers. Of course, the hotel and restaurant complexes of Kyiv and other large cities of Ukraine can boast of the use of digital applications. Instead, the relevant institutions located in rural areas are also beginning to confidently move towards the implementation of digital tools for communication with customers [1, p. 28].

After analyzing the use of the TripAdvisor digital platform, it should be noted that in the Riviera House (Kyiv) and Radisson Blu Resort (Bukovel) hotels, all customer reviews are personalized and built on the basis of the information contained in the guest's feedbacks unlike Firmont Grand Hotel Kyiv (Kyiv), where the client is addressed by name, but the answer is formed in a standard form for everyone [9, p. 21].

The realities of today's trend of hotels digital transformation have certain difficulties related to the shortage of skilled labor that would specialize in direct online

booking of conference rooms, apartments, etc. According to meetingsbooker.com's online meeting booking report, hospitality businesses spend an average of 47 minutes processing offline meeting bookings. Therefore, the technology of direct online booking not only simplifies the process of organizing business meetings, but also makes it easier for people who are responsible for planning events, which definitely saves time for the business team [5].

Therefore, the main task of the digital strategy of hospitality industry establishments is the introduction of mobile devices, namely digital mobile applications. Using digital mobile applications allows customers to access services such as reservation options, room service, hotel and destination maps, customer service chats with staff and any other guest services they may need. In addition, digital mobile applications can function as a suite key and allow remote check-in/check-out. These capabilities create a feedback loop between the hotel and the guest, and most importantly, customers can access hotel services when they need them. Instead, the hospitality industry can connect with the customer at the right time and provide notifications, updates and current offers directly in the mobile application [14].

Having considered the principles of working with mobile applications, which are the core of the conceptual strategy for the digital development of hospitality industry establishments, let us move on to their tangential elements, such as digital payment technologies, biometric authentication, mPOS mobile wallets, and hermetic security based on artificial intelligence and machine learning (Fig. 1).

It is clear that transformational solutions will be different for various fields of activity, because the digital reality affects diverse industries in different ways. According to research by the Institute of Management Development in their report entitled Digital Vortex 2019, the industries whose activities are most affected by

digital changes due to the speed of updating digital technologies and services include: media and entertainment,

technological products and services, telecommunications, trade, financial services, tourism.

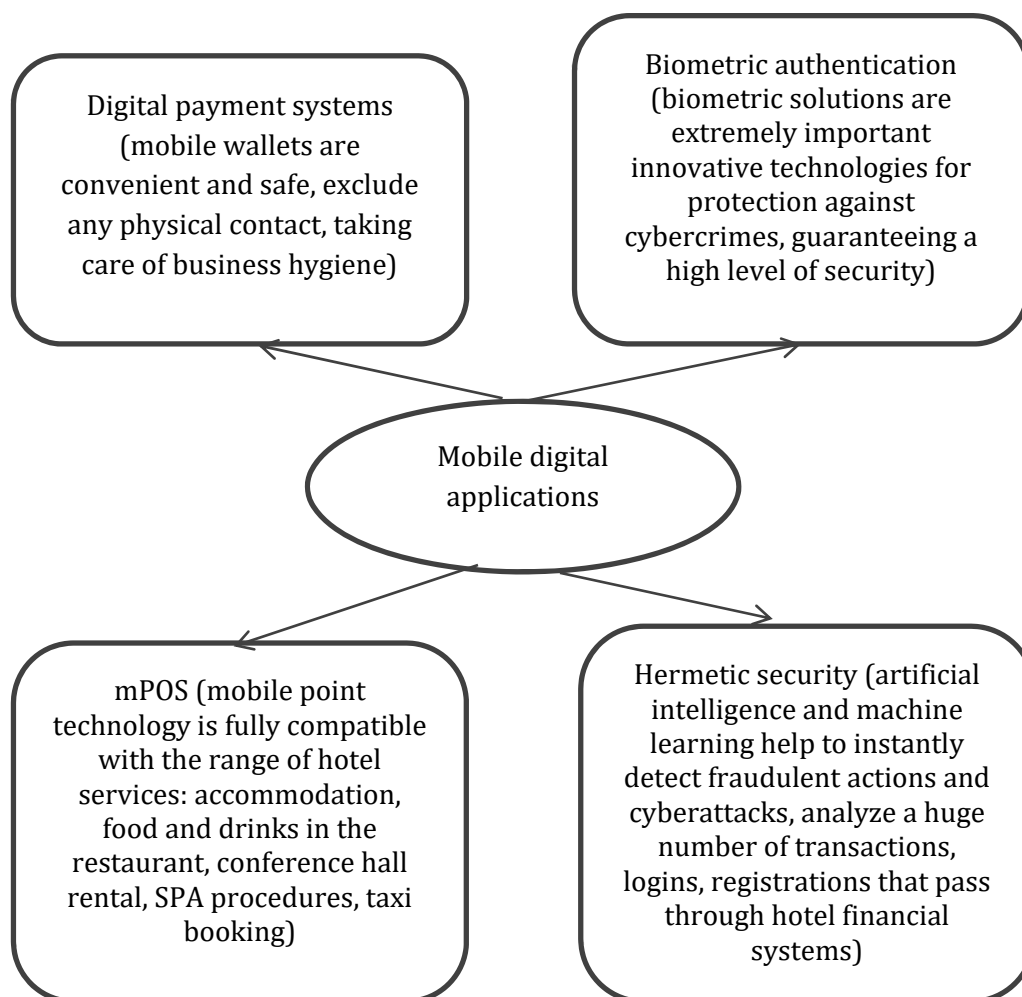


Fig. 1. Factors in the strategy formation of digital design solutions of the hospitality industry

Source: built by the authors based on [9, 10].

Business structures that were not prepared for these types of threats found themselves outside the competition or were forced to urgently make decisions about changing strategic behavior, and these decisions were not always complex enough to be successful. First of all, this is caused by the unpreparedness of traditional sectors to perceive the new reality (lack of understanding of opportunities and lack of proper justification for implementing transformations), their vision of the future from the point of view of a one-sided approach to digital transformations (focus on improving operational activities), lack of

digital leadership (skills to forecast and predict likely future trends, a transparent and open decision-making process, the ability to quickly adapt and learn new things).

The roadmap for creating a new value proposition in such a case contains the following elements: identification of key consumers by types of value capture, determination of current value for each consumer (elements of value and overall value proposition), determination of accompanying threats (new technologies, need for change, competition and substitute goods), strengths' assessment of current components of the offered value,

creation of potentially valuable elements (new technologies, socio-cultural and business trends, unsatisfied needs) [7].

In accordance with this road map, a digital transformation strategy should be formed, operational processes and automation solutions updated, a clarified vision of one's own digital presence (including on mobile platforms), marketing directions, interaction with customers, suppliers, the external environment, security issues, etc.

Despite the clarity of the above steps, only about 30% of digital transformation projects can be called successful, and no more than 16% of business owners note the increase in productivity and other positive effects from the transformations carried out [12].

The objective reasons leading to such low results at the stage of implementation of digital transformations are insufficient attention to human (presence of employee resistance, lack of adequate information and resource support from management, insufficient clarity of goals and expected results, weak or insufficient communications) and technological (lack of understanding of the scope and detailed plan of transformations, absence or lack of budget and resources for its implementation, inaccurate or overly complex metrics for measuring its progress) component.

The latest conditions of the digital environment are considered by the majority of business owners as threats, not opportunities, because they cause an understanding of the uncertainty of the near future, the risk of a complete loss of the market or its share, a decrease in profits, a significant outflow of customers, and a negative image formation.

In view of the recent events, the world economy is currently experiencing a large-scale impact, which is expressed not only in a possible recession, but in a fundamental change in the behavioral patterns of conducting business and conducting life: the virtual way of conducting economic

relations is joined by those categories of the population who practically did not use it or did not plan for such a possibility in the near future, remote performance of work, provision of services and their consumption demonstrate an unexpected level of efficiency, digital solutions for business and algorithms for their implementation are becoming available and easy to use.

All this becomes possible thanks to the strengthening of the level of availability and accessibility of the basic digital infrastructure – in 10 years, the number of households with Internet access and mobile network users for every 100 inhabitants in Ukraine exceeded the world average and almost reached the European average. The number of new users of digital services every day is growing, as well as the number of remote interactions on any work issues, so the usual strategic business issues, such as confident development and profit generation, are expanded by requests to maintain employee productivity and transform business processes, products and services, and make sales [3].

The need for digital transformation, which was considered by most business owners as a strategic perspective, today turns into a tactical issue, requiring quick implementation and the search for simple solutions that do not require significant costs. At the same time, without a deep transformation of business processes and a review of the existing business model, the implementation of digital transformations is unlikely to lead to long-term optimization, increased productivity and improved experience of interaction with key stakeholders. The long-term effect is achieved when the goals of digital transformation are clear and understandable, and the main business processes are revised according to the requirements of digitalization.

In addition, before the implementation of digital transformations, a check of the readiness of the technological infrastructure and means of cyber security,

business processes, personnel, products and services, and the sales system must be performed.

The issue of maximum integration of all key services to ensure close collaboration of all interested parties should be resolved in the first place. Fast data exchange is provided on the basis of modern i-net channels, cloud solutions optimize infrastructure costs and enable digitization of activities, clear and understandable metrics – manage real efficiency. All-encompassing integration leads to a shortening of the decision-making chain, allows you to automate routine processes, speed up document processing, reduce costs for unproductive communications, and optimize work with data arrays [2, p. 38].

An effective formula for implementing change consists of five elements: formulating a vision, developing skills, building motivation, attracting resources, and developing a clear plan of action. If any element is missing, digital transformation processes turn into chaos, slow down, become frustrated, or lead to wasteful costs and significant errors, which significantly encourages to abandon the implementation of any changes and work in the usual mode. Readiness for changes can be assessed on the basis of monitoring the understanding by staff, customers, suppliers, society of the benefits they provide, the presence of specialists of the required level capable of implementing the planned changes, transparency and availability of information regarding plans and stages of project implementation, opportunities to improve knowledge and skills in system of personnel development, clarity and clearness of criteria for measuring performance indicators, sufficient development of technological and digital infrastructure, determination in providing the necessary resources. The results of this monitoring will determine the key issues that business structures should focus on in order to gain competitive advantages in the latest socio-economic conditions.

That is why it is sometimes even more effective to take marketers, managers of various levels for the industry with cross-industry experience, when they do not yet have relative blind spots and are ready to flexibly adapt the existing experience of market sales technologies to the realities of the hospitality industry or agribusiness, where sometimes rational and emotional arguments, eloquent client objections. In the era of technological breakthrough, innovative solutions in the field of IT, automation, alternative energy and biotechnology are becoming significant sources of opportunities for obtaining additional income of agricultural enterprises, improving the quality of agricultural products and reducing the cost price. Currently, many agricultural enterprises have exhausted the obvious points of development, such as the purchase of productive agricultural machinery, the increase of the bank of agricultural land, the use of new hybrids, and therefore the need to find and implement new innovative solutions arises [11].

The issues of optimizing agricultural production and how to move forward have become urgent. Therefore, solving these issues belongs to the new generation of “digital farmers”, who will be able to effectively combine the academic base of fundamental knowledge with the leading developments of Industry 4.0.

So, summing up the relevant issues regarding the optimization of agricultural production in the conditions of digitalization, the challenges for personnel formation will be the flexible adaptation of specialists directly at the workplace, taking into account the employment crisis in the conditions of martial law and the post-war period. Let us consider certain conditions under which the process of recruitment and labor activity of personnel should take place:

- 1) Develop the recruitment of specialists with a broad digital worldview who have experience in the field of “IT environment and agricultural industry”,

but not necessarily only in agriculture. For example, such types of economic activity as retail, the pharmaceutical sector, and even logistics will organically strengthen the acquired skills and knowledge of such a specialist, as well as allow him to quickly grasp the essence of reformatting, which is currently taking place in the agricultural sector in terms of automation, robotics, and market analytics.

It is extremely important to note that the strategic basis now is the consolidated state policy measures in the wartime and postwar period regarding the preservation of the two pillars of Ukraine's economy. We are talking about agriculture as one of the largest export industries and the IT sector, which during the state of war in the country maintains personnel and is one of the main donors of the Ukrainian economy. The maximum preservation of these industries, taking into account the existing full-scale military invasion of the Russian army, is the main task for the Government of Ukraine, on which the present and future development of the country's economy depends [8].

Priority measures in preserving agricultural potential and preventing a food crisis against the background of the Russian-Ukrainian war in the world should be effective negotiations and attracting support with world organizations and country governments regarding the stimulation of the 2022 seed company and harvesting in Ukraine.

Meanwhile, the international food and agricultural organizations FAO and WFP expressed their desire to finance the production of flour mills and bakery enterprises in Ukraine to stimulate their economic activity. The Austrian Government expressed its support for providing assistance to Ukrainian farmers in the form of seed material. The appropriate concentration of support from the international community will allow to avoid the problems of hunger for the population of the Middle East and North Africa in the future.

With regard to challenges concerning the personnel of agricultural enterprises during the martial law in some regions, it is impossible to resume seasonal work due to the demining of fields and the destruction of infrastructure and equipment, and as a result, Ukrainian farmers are unable to work. In addition, not all agricultural enterprises are capable of relocating production. Therefore, there are large agricultural holdings with a network of enterprises in a more favorable situation, which have more opportunities to save jobs and internally relocate personnel.

Given the extremely complex conditions of conducting agribusiness, agricultural enterprises need to maintain a course for digitalization of production in the main directions: products, business models and services. Special attention should be paid to training in the selection of personnel on the knowledge of digital farming as a technology of the future in agriculture, which will strengthen the initial selection when evaluating personnel for desired vacancies [13].

2) Strengthen the methodology of the initial evaluation of personnel selection, so as not to miss those who have extensive practical experience in field work (in precision farming, land management, with agricultural machinery, geodesy, with maps, etc.) in the abyss of hiring. In addition, one well understands the specifics of communications with ordinary farmers, but one has already mastered enough and pumped himself/herself with digital soft skills – the skills of long-term focus on tasks and processing large data sets, finding non-standard ways of promoting agricultural products at the expense of cross-industry benchmarking, etc.

3) Maximize the opening of channels in the agricultural company for the barrier-free experience transfer between the bearers of academic industry knowledge, mainly aged agricultural workers and younger employees: software developers, marketers, business analysts and managers of various management branches.

For this, it is necessary to effectively accelerate the interaction of divisions, to be more active in the internal announcement of implemented projects, because they will demonstrate to the “older generation” and young specialists the most important thing for further motivation, which will consist in their consolidated cooperation, rather than working in isolation.

You should also invest more actively in the HR brand and vividly broadcast to the market the success stories of your own cases, which require talented and ambitious specialists. It is a known fact, when the audience is more or less aware that, for example, drones have already come from civil transport to the

agricultural sector, but there are still not enough people from among the potential number of developers and agricultural marketers who are experienced and in the trend of knowledge about the development of AI systems, ML, neural networks, analytics based on the Internet of Things [4].

However, talking about the possibilities of obtaining information and awareness on such important issues today without access to the Internet in households at the place of residence is partly problematic. Considering Fig. 1 distribution of households by Internet access in households by place of residence in 2020.

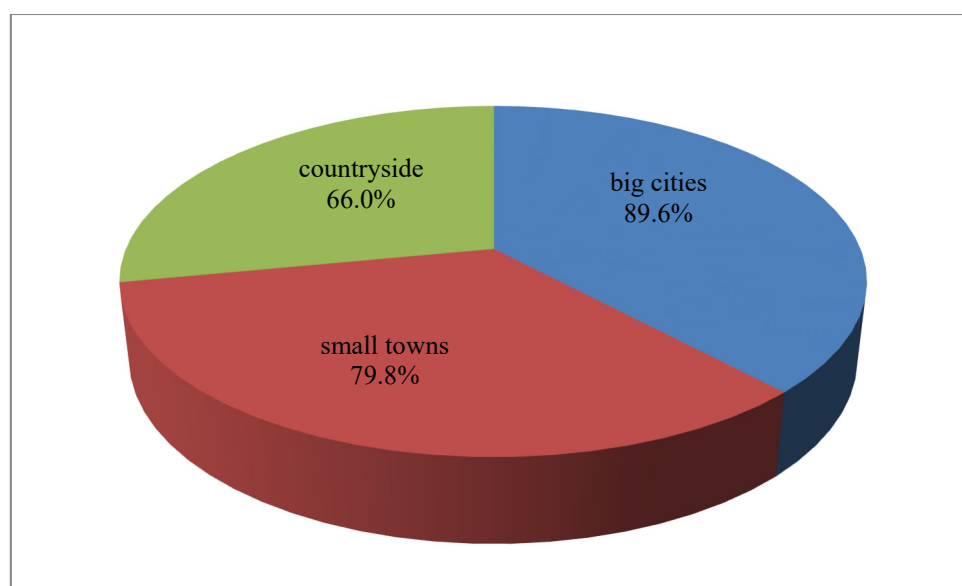


Fig. 1. The share of households that have access to the Internet at home by place of residence in Ukraine in 2020.

Source: built by the author based on [6].

As it can be seen from Fig. 1 in 2020, the share of households in rural areas had 23.6% less access to the global Internet than households in large cities. With this in mind, it can be argued that the digitalization process in rural areas is still problematic. Therefore, the Internet is used by young people and middle-aged people, and there are fewer of such age groups in rural areas every year due to unstable employment, total labor and educational migration of the rural population, and the

lack of proper social and industrial infrastructure. However, the agricultural labor market should not remain aloof from global HR trends caused by the digital transformation of business, as well as which employers of agricultural enterprises should approach and adhere to in the further organization of the production process [9, p. 26].

Considering the above, the main barriers to the digital transformation of

rural areas and rural labor potential are as follows:

1) The need for digital transformation of the agricultural sector is primarily caused by low labor productivity, technological lag behind competing countries with developed economies and the need to deeply develop the processing and food complex of agricultural products to increase and improve the quality of exports, in accordance;

2) There is a lag in the digital transformation of agriculture compared to leading countries and even other sectors of our country's economy, which is explained by the difficulties of digital business conduct and the use of innovations and, as a result, this process is accompanied by a low level of application of digital technologies by business structures. Each of the above possible directions of digital transformation may face risks that prevent their full use, for example:

1. Imperfection of regulatory and legal support in the field of digital transformation, which restrains investments in the agricultural sector:

1.1.) regulated rules for the drones usage;

1.2) lack of methodological recommendations and rules regulating the quality of data on the soils condition and the their collection periodicity;

1.3) lack of methods of forming standards (technical standards or DSTU) for the development of digital duplicates of the product and the consumer;

1.4) lack of rules regulating the use of consumers' personal data for the purpose of personalizing meals, ensuring their safety level;

1.5) lack of normative regulations for handling food waste and packaging.

2. However, there should not be any abuse of technologies that are associated with new opportunities, namely, unauthorized use of other people's information, using other people's resources. This, in turn, provokes risks that lead to growing cybercrime under the guise

of hacking IoT ("Internet of Things") devices, carrying out an attack on mobile devices and financial mobile applications as part of the infrastructure of remote banking services (RBS) and payment systems, carrying out an attack on smart - contracts, etc.;

3. Changes in the global regulation of the planet's ecosystems, restraining factors at the level of regional systems caused by collective security, corporate social responsibility, general orientation towards "green trends" and environmental friendliness;

4. Insufficiently developed infrastructure that would allow processing data in real time – broadband high-speed Internet anywhere, including mobile, as well as data storage and computing power to support robotic-automated and high-precision equipment;

5. The problem of the lack of regional/rural personnel with knowledge of information technologies and digital services remains quite acute.

CONCLUSIONS

Thus, digitalization can create additional difficulties for small farmers: in the competitive struggle, they will have to face new technologies that can provoke higher prices in the conditions of the market increasing concentration. With regard to large agricultural holdings, the implementation of digitization processes primarily affects the availability of highly qualified personnel, on whom the organization and the work process realization on a large scale of production depends. When talking about the implementation of digital technologies in agri-food systems, many aspects should be taken into account: these are the requirements for the formation of strategic policies in production and personnel management, limited access to financial means, limited digital skills of a number of participants, as well as the need to overcome existing digital gaps that limit access to infrastructure and information [2, p. 218].

At the same time, an important aspect remains the preservation of the sustainable development of agricultural enterprises in the conditions of wartime and the postwar period, which will take into account the components of an economic, social and ecological nature. The economic component should consist, first of all, of partnership with international financial institutions, constant improvement of production products, and most importantly, investments in enterprises and establishment of international standards. The environmental component should reflect the work with innovative

and environmentally safe technologies, the use of resource-saving technologies, energy efficiency and energy saving, the implementation of control over the management of environmentally safe technologies, as well as the development and implementation to minimize the impact of production. The social component will be responsible for decent working conditions, the development of regions and cooperation with local communities, and the main element of sustainable development in the post-war period – the safety and health of workers.

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