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DIGITIZATION AS THE MAIN FACTOR IN THE DEVELOPMENT OF AGRICULTURE

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Abstract: This article explores the significance of digitization in the agricultural sector and its impact on the development of farming practices. It discusses how digital technologies and data-driven solutions are transforming traditional farming methods, improving efficiency, productivity, and sustainability. The article highlights various aspects of digitization, including precision agriculture, smart farming systems, IoT devices, data analytics, and artificial intelligence. It also examines the benefits and challenges associated with the adoption of digitization in agriculture and provides insights into future trends and opportunities in the field.

Key words: Digitization, agriculture, development, farming practices, digital technologies, precision agriculture, smart farming systems, iot devices, data analytics, artificial intelligence, efficiency, productivity, sustainability, benefits, challenges, adoption, future trends, opportunities.

The main reasons for the tense situation in the complex development of rural areas are the insufficient comfort of living in rural areas, the unsatisfactory financial situation of the main part of the rural population, unacceptable living conditions, as well as the absence or very low state of cultural, recreational, social and information infrastructure.The sustainable development of rural areas is primarily due to the comprehensive development of engineering, transport and industrial infrastructure, providing the population of these regions with jobs, as well as a favorable environmental situation, it depends on the formation of the cultural and social sphere.Digitalization today can rightfully be called an important factor in the sustainable development of rural areas.

Today, in the conditions of innovative development of the modern world, it is digital transformation and robotization that have become one of the priority areas of activity in all spheres of society.

Despite a number of studies[1], at present the paradigm of agricultural education is an important prerequisite for the development of science and science. Shubasis, davlatning for a long period of territorial attestation, digitized number of zhoria etishning, necessary conditions of islandi.

Digital problems, information development, problems of digitization and robotization of the country in general, and rural areas in particular, require new, high-quality, transparent and unified legislation.

At the same time, in the economy of rural areas, there are stable trends associated with the transfer of many operas to digital and online environments. In our opinion, this should increase the economic efficiency of villages, ensure their competitiveness. Another reason why there is little use of Information Technology in rural areas is due to low or inadequate computer, including internet usage skills.

According to foreign scientists[2] , digital platforms are the embodiment of a new era and are able to effectively coordinate the interaction between spatially dispersed agents, forming the basic infrastructure of economic and social relations. In its most general form, the digital platform is a virtual platform that provides the interaction of two (or more) parties (user groups) according to certain rules.

Digital literacy will be of great importance in the context of rural digitization, which includes digital security, computer consumption and information competence. Digital education will be the key to popularizing and disseminating the skills and abilities of digital tools required in a new generation of professions. To solve long-term tasks, a new generation of personnel with multidisciplinary knowledge, large-scale competencies, the ability and readiness to work in an rapidly changing environment in the economy and country is already needed.

The classic digital platform includes five main blocks: 1) traditional IT systems - data centers and networks that are being updated for inclusion in the digital platform; 2) interaction with users in digital form; 3) Internet of Things; 4) analytics, machine learning and artificial intelligence; 5) ecosystems as a basis for interaction in the digital world. The project platform" digitization of rural areas " provides for the placement of certain information for each rural area in the context of municipal districts.

Using the classic five-block approach to building digital platforms, we present the design option in the form of a block diagram (Figure 1).

The analysis platform block provides for the placement of servers such as an interactive map of rural areas in Real time, data collection in Real time, training programs in the digital economy. Municipal for digitizing the economy, a database of local programs, a map of land plots of rural areas showing their characteristics, a digital signature, etc.

The intellectual platform block houses servers for interaction of subjects with users in a digital environment: platforms for the sale of products produced in rural settlements, platforms for the exchange and evaluation of ideas for the development of territories, platforms for the development of rural areas, surveys of rural residents, etc.

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The optimization platform block is aimed at optimizing processes by combining data from existing platforms to carry out relevant calculations and conclusions, for example, combining with the national platform "digital agriculture".conclusions, for example, combining with the national platform digital".

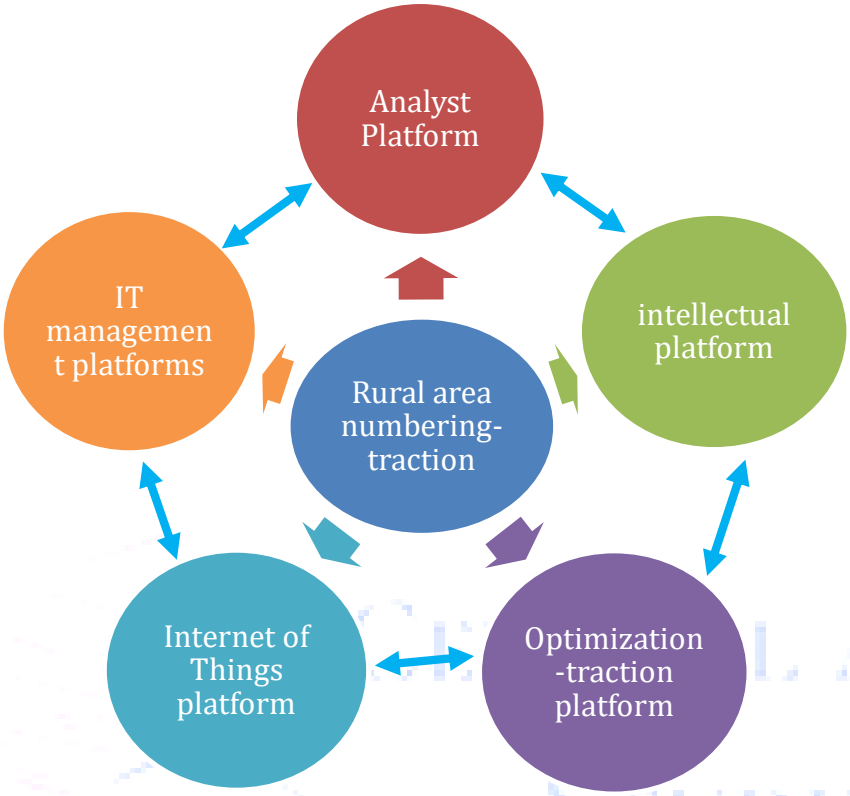

Figure 1. Information and communication digital platform model "digitalization of rural areas"

The Internet of Things platform block includes modern digital technologies introduced in rural areas, information about the availability of possible digital technologies for rural areas: traffic jams on roads, smart greenhouses, robotization of production and services to the population, remote monitoring of Medicine. In other words, the server is aimed at providing intelligent solutions for agriculture, transport, housing and communal services, medicine, education, everyday life of local residents, etc.

The IT systems platform block includes the formation of predictive estimates and scenarios for the development of rural areas, visualization of projects of strategic management decisions, data processing centers, calculation of the potential of rural areas, determination of the level of their digital development, formation of reports of heads of municipalities and rural settlements, analysis of digital technologies being introduced in the territory.

The project Platform provides data integration with the National Digital Government platforms that were created and are currently being implemented.

Summing up the above, it is worth noting that digitization in villages is just emerging, and the development of villages will depend on the level of use of it technologies. The main areas of digitization of the village should be the use of smart tractors and combines, the Internet of things, rural e-commerce, distance education in education and the development of all kinds of IT services in the social life of the villagers. However, the digitization program without targeted state assistance to the countryside and agriculture itself may fail. This process of spontaneous, uncontrolled development leads to the destruction of villages, the predominance of imports in the agricultural market.

Today we can safely say that digitization is the main thing to improve the quality of life of the rural population, as well as the sustainable development of villages becomes one of the factors.

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