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Chapter 4
EVOLUTIONARY PRECONDITIONS FOR THE ENTREPRENEURIAL ACTIVITY DIGITALIZATION

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INTRODUCTION

The dialectical approach to the analysis of the features of the digitalization of modern entrepreneurship provides a retrospective study of the evolutionary prerequisites for changing technology, organization, and management of production processes. The solution of the set scientific problems requires an in-depth analysis of scientific and technological progress to understand the ideas of predecessors and to identify the features of the process of innovative development of economic entities.

Permanent topicality of research into the problems of digitalization of entrepreneurial activity is conditioned by scientific and technological progress and change of socio-economic environment of the functioning of producers. This problem is of particular relevance in the context of the galloping development of information and communication technologies and digital technologies, not only in the field of production but also in the field of management.

The scientific and technological progress that underpins the evolutionary changes of technology, technology, organization and management of production processes is an integral part of modern economic development of any society. Technological renewal of both the production process and its management is the basis for the effective functioning of economic systems and a guarantee of increasing the competitiveness of the latter in a changing market environment. The level of use of technologies has an integral influence on economic, technical, technological, social, environmental on other aspects of the activity of enterprises of all without exception of the branches of the domestic economy.

The intensification of the interest of the scientific community in the problems of digitalization of entrepreneurial activity is conditioned by the profound transformational changes of national economies under the

influence of globalization and integration processes, which have significantly changed the nature of production and commercial activity of economic entities. The digitalization of economies and the accelerated development of the scientific and technological base of social production violates the existing stability of functioning of open socio-economic systems and necessitates the optimization of the use of advanced technologies in the context of new opportunities and threats for entrepreneurial activity.

4.1. Evolutionary preconditions for the development of modern production

The impulse for the process of gradual digitization of entrepreneurship in various sectors of the economy is the renewal of the technological and technological base of production, which is not only a technical or economic task, but above all a social one, since the technological way of production determines the fate of all mankind in the medium and long term. To determine the place of technological basis in the socio-economic system in general, and in the context of individual business entities in particular, we should conduct an in-depth analysis of technological methods of production and outline the main stages of the development of human-technical relationships in the production process.

The first technical assets used by society in the course of its life were the stone tools of labor by which people learned to produce fire, which was the impulse for the gradual development of metallurgical production and the use of iron tools. The next stages of human development (the transition from the original community to slavery and feudalism) are accompanied by the development of technical means, but labor remains manual using the physical and muscular strength of the worker, which was a key factor in the production process. Under these conditions, the main technological operations in the process of social production are performed by a person who sets in motion the tool, manages the production process, coordinates its activities with other participants in the technological chain. In the historical literature[1,2,3,4] the

[1] Chukhno, A. A., Leonenko, P. M., & Yukhimenko, P. I. (2010). *Instytutsiyno-informatsiyna ekonomika* [Institutional-information economy]. Kyiv: Knowledge. [in Ukrainian]

[2] Nesenko, P. P., Artemenko, O. A. & Patlatoy, O. E. (2017). *Suchasni ekonomichni teoriyi* [Modern economic theories]. Odessa: ONEU. [in Ukrainian]

[3] Basilevich, V. D. (2014). *Ekonomichna teoriya: politekonomiya* [Economic theory: political economy]. Kyiv: Knowledge. [in Ukrainian]

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method of combining man and tools of labor is named instrumental technological way of production, which has passed the millennial stage of development and gradually exhausted itself in the conditions of the growing needs of society.

Labor productivity with the use of hand-held equipment remained low and could not meet the urgent needs of society, which gave impetus to the development of brand new tools of work, so the era of machine use began. Machine production is already an industrial-technological method of production, where the basis of the system of man-technology is already a machine, and man complements the work of the system. During this period, mechanized labor was replaced by manual labor, which became the material basis of an industrial revolution, which resulted in the establishment of a capitalist mode of production in Western Europe, which replaced feudalism and proved to be highly effective.

The industrial-technological method of production involved the use of a system of machines, which consisted of a working machine, engine and transmission device, and the person was an appendage of the system. The use of machines in the production process has made significant changes in the economic development of society and has created the prerequisites for the transition to scientific and technological progress in the economy as a whole, and the context of individual sectors in particular.

Scientific and technological progress (STP) has two main forms – evolutionary and revolutionary[5]. The first form implies the improvement of existing production technologies due to the partial modernization of the used machines and equipment, that is, the existing production technologies are being improved. The revolutionary form of STP is based on the use of completely new technical and technological solutions and principles of organization and management of production processes, which dramatically changes the efficiency of production and leads to large-scale shifts in the economy.

The past century has been filled with technical upheavals and inventions, which has greatly strengthened the revolutionary path of development of production processes with radical changes in virtually every branch of production. The above was the cornerstone of the

[5] Azhnyuk, M. O., & Perederiy, O. S. (2008). *Osnovy ekonomichnoyi teoriyi* [Fundamentals of economic theory]. Kyiv: Knowledge. [in Ukrainian]

scientific and technological revolution that began in the mid-fifties of the twentieth century (the creation of OEMs, the entry of man into space, the use of atomic energy, the invention of artificial materials, etc.)

The scientific and technological revolution has contributed to the dramatic increase in the efficiency of the use of productive forces of society[6]. A key aspect of revolutionary transformation was the large-scale automation of the production and management process. The fundamental changes occurred not only in technologies, means and objects of work, organization of production, management, but also in the system of scientific knowledge.

The classic system of use of machines, which consisted of a working machine, engine and transmission device, is complemented by a new element – a control device, which minimizes the need for human contact with the working equipment. For the first time, a person changes his status from a production process participant to a controller of an automated technology system and is no longer tied to a single line, machine, machine or unit, which greatly expands the capabilities and the need for self-development to control the automated system in the complex.

They analyzed historical changes of technological methods of production allow us to draw intermediate conclusions about the irreversibility of evolutionary transformations that have taken place and are taking place in the modern world. Technological development is based on innovations that periodically improved the methods of production, methods of management and fundamentally changed the foundations of human civilization. The beginning of the 21st century is characterized by the rapid development and widespread dissemination of the latest information and communication and digital technologies, which requires a large-scale updating of the production and management processes of all sectors of the economy without exception.

The basics of technological renewal and management of innovative entrepreneurship under the conditions of digitalization are based on the accumulated knowledge about technological structures and the possibilities of applying the achievements of NTP directly in the practical activity of economic entities. The state of technological renewal of individual business entities influences the nation-wide

[6] Gorovy, V. M. (2005). *Osoblyvosti rozvytku sotsial'nykh informatsiynykh baz suchasnoho ukrayins'koho suspil'stva* [Peculiarities of development of social information bases of modern Ukrainian society]. Kyiv: NBUV. [in Ukrainian]

development of the country and determines the level of its competitiveness in the conditions of increased competition in the domestic and foreign markets. The cyclicality of the development of society and economics has been studied by prominent scientists with world names: F. Brodel, J. Van Dane, S. Glazyev, A. Kleinknecht, M. Kondratiev, S. Kuznets, G. Mensch, M. Tugan-Baranovsky, R. Foster, J. Schumpeter, Y. Yakovets and many others.

A reliable scientific foundation for the renewal of the world's economies is recognized by the overwhelming majority of scientists in the theory of cyclicality of socio-economic development, which is based on the works of M. Kondratiev, M. Tugan-Baranovsky and J. Schumpeter. The Russian scientist M. Kondratiev saw the reasons for the cyclical development of the economies of the world in the scientific discoveries and the possibilities of their application, which were to change the technological component of production[7]. The scientist has analyzed the economies of the most powerful countries in the world of the USA, Germany, the United Kingdom, and France for a considerable time and concluded that there are cycles of economic conditions. The processing of large volumes of statistical information (wages, price dynamics, production volumes, gold prices, foreign trade volume, interest on capital, etc.) collected over a century and a half has allowed M. Kondratyev to construct a coherent theory of wavy fluctuations in economic dynamics and to highlight short cycles (up to 3.5 years), medium cycles (up to 15 years) and long cycles (up to 55 years).

Deepening his research, M. Kondratiev argues that the cyclicality of socio-economic development is a natural process associated with scientific and technological progress and inventions (discoveries). In his fundamental work, Long Waves of Conjuncture[8], the scientist emphasizes that wavy changes occur due to the deviation of the economy from equilibrium states and each wave has the following phases: recovery, recovery, a crisis of overproduction and, consequently, depression.

The new (next) wave of the long cycle began with the introduction into the production of new technical inventions and achievements of

[7] Kondratiev, N. D., Yakovets, Y. V. & Abalkin, L. I. (2002). *Bol'shiye tsikly kon'yunktury i teoriya predvideniya. Izbrannyye trudy* [Big business cycles and foresight theory. Selected Works]. Moskow: Economics. [in Russian]

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science (there were significant changes in the conditions of the economic life of the society), which proved the thesis about the direction of economic development. It can be argued that M. Kondratiev presents his scheme of long waves of innovations, as an evolution of scientific and technological progress. Ignoring scientifically grounded laws over time has negative consequences for the development of individual businesses, industries, and economies as a whole.

Carrying out an in-depth analysis of M. Kondratiev's theory, Austrian economist J. Schumpeter concluded that the fundamental causes of cyclical development are, first and foremost, the processes that shape innovation. On the example of his research[9], the scientist showed that the inventions are fairly evenly scattered over time, but innovations are "accumulated" by waves. The rising wave of each long cycle is preceded by significant changes in production technologies (great inventions and discoveries), which significantly affect the socio-economic development of society.

In his works, J. Schumpeter developed the postulates of the theory of cyclical economic development, which is due to the introduction of innovations. The scientific achievements of the researcher suggest that during the last phase of the long cycle (depression) the previous technological innovations have exhausted their potential and groups of basic innovations are gradually forming, which lay the foundations of the future technological way. The author's hypothesis, which explains the long waves, is based on the periodic concentration (clustering) of significant innovations over a small period. The researcher divided the time intervals of long waves into an innovation component (basic innovation) and a simulation component (improving innovation). Subsequently, G. Mensh[10] adds the following component – pseudo-innovation, by which the author understood the slight refinement of existing technologies or methods of management.

From the modern science of innovation (innovation), the theory of long waves consists of economic recovery (basic innovation), growth (improving innovation), recession (pseudo innovation) and depression (technological path)[11]. In times of depression, social tensions increase in

[9] Schumpeter, J. A. (1983). The Theory of Economic Development: An Inquiry Into Profits, Capital, Credit, Interest, and the Business Cycle. London: Transaction Publishers.

[10] Mensh, G. (1979). Stalemate Technology: Innovation Overcome the Depression. Cambridge: Mass.

[11] Ilyashenko, S. M. (2013). *Upravlinnya innovatsiynoyu diyal'nistyu: mahisters'kyy kurs (osnovy innovatsiynoho menedzhmentu)* [Innovation Management: Master's Course (Fundamentals of Innovation Management)]. Sumy: University Book. [in Ukrainian]

a society that needs accelerated change, which is based on favorable conditions for technological innovation and a new wave of economic development.

While detailing the theory of long waves, the scientist noted the uneven development of individual sectors and sectors of the economy, some sectors showed rapid growth, others against stagnation and stagnation. J. Schumpeter investigated the above situation in the framework of his innovative theory.

J. Schumpeter's criticism of the combination of innovation theory and the theory of cyclical economic development was made by S. Kuznets[12], who revealed several contradictory facts, essentially casting doubt on the author's scientific claims. S. Kuznets in his study[13] emphasized the need to justify the mechanism of long-wave formation, that is, innovations should be large-scale and significant, which destabilize the economic system, although such sizes and amounts of innovations are extremely rare. It was unclear to the scientist why the effects of innovations lasted for decades, not years, and why, without deep explanation, the author claims that significant innovations appear periodically and unevenly[14]. One of S. Kuznets' important contributions to economic science is the combination of economic cycles with innovation cycles.

One of the first followers of J. Schumpeter, who developed the ideas of innovative theory and cyclicality of economic development was the famous German economist G. Mensh[15]. Stagnant in the development of the technological component of the economy, the researcher called the "technological path" and justified the regularity of its occurrence. The Technology Path describes a situation where the global economy is in a crisis and a way out is only possible if innovation is introduced, as existing technological solutions have already exhausted their vital resources.

G. Mensh developed his own "model of metamorphoses" according to which each long cycle has the form of an S-shaped curve that describes the life cycle trajectory of the existing technological mode of

[12] Perlman, M. (2001). Two phases of Kuznets's interest in Schumpeter. London: Routledge.

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[15] Mensh, G. (1979). Stalemate Technology: Innovation Overcome the Depression. Cambridge: Mass.

production. The moment of gradual transition from one technological way of production to another is described by the "technological path" of the past mode of production. The large-scale concentration of basic innovations allows us to overcome the "technological path" and to provide economic growth at a new level. The transition from one technological path to another is shaped by industrial and agrarian development. Thanks to the work of G. Mensh's theory of cyclical economic development of Kontratyev-Schumpeter has been supplemented and enriched with new ideas, justifications, improved interpretations of basic concepts and more. An analysis of G. Mensch's scientific work suggests that the economic crisis is a driving factor for the innovative development of enterprises.

The contribution of the national scientist M. Tugan-Baranovsky[16] to the theory of cyclical development of economy should be considered from the following points:

– first, the scientist justified the reasons for the emergence of crisis phenomena and their cyclical nature;

– secondly, it tied the downturns, the depressions and the rise of economies to the technological potential of the tools of labor;

– third, he studied the market situation based on the statistical method (based on the example of one of the leading capitalist countries – England);

– fourthly, outlined the main features of the phases of the industrial cycle and made the forecast of market conditions.

The scientist-economist emphasized that technological development of the economy needs improvement and introduction into practical activity of innovations and this process is a priority. The introduction of new technologies will be the search and implementation of new methods of management and organization of production processes, which will allow the economy of the countries to advance to the next stage of development.

According to J. R. Hicks[17], the deliberate and continuous use of innovations will allow the capitalist economy to minimize the negative effects of a crisis and save society from deep social upheavals.

[16] Tugan-Baranovsky, M. I. (1997). *Periodicheskiye promyshlennyye krizisy. Istoriya angliyskikh krizisov. Obshchaya teoriya krizisov* [Periodic industrial crises. History of English crises. General theory of crises]. Moskow: ROSSPEN. [in Russian]

[17] Hicks, J. R. (1993). *Stoimost' i kapital. Issledovaniye nekotorykh fundamental'nykh printsipov ekonomicheskoy teorii* [Value and Capital. Investigation of some fundamental principles of economic theory]. Moskow: Thought. [in Russian]

R. Foster[18], who emphasized the need to involve highly intelligent personnel in the management process, considered the regularities of innovative development of industry on a scientific basis, because he considered one of the reasons for the emergence of crisis phenomena in the economy the underestimation of the role of innovation in both enterprise development and economic development in general.

The formation of the technological system in the framework of the theory of cyclical development of the economy was investigated by C. Freeman, J. Clark and L. Soete[19]. English scientists viewed the technological system as a combination of interdependent technological and social innovations and linked economic growth to the development or decline of technological systems. The mechanism of technological system development was considered the process of diffusion of innovations, which required favorable conditions and appropriate stimulation. The decline and aging of technological systems lead to a lag of the country's economy from the world leaders, which explains the unevenness of interstate economic development[20]. Differences in the pace of implementation of scientific and technological progress into practical activity are one of the main reasons for the lagging of some countries concerning others in technological, economic and social development.

The theory of cyclical development of the economy has played an extremely important role in shaping the concept of modern technological updating of the economies of the world. Paying tribute to the founders of the above theory, M. Kondratiev and J. Schumpeter, let us note that it is the scientists listed above who first raised questions about the place and role of scientific and technological progress in the long-term economic development of the world's economies. In their works, scientists outlined the basics of the future problem of uneven technological development of countries. The concept of the cyclicality of the economy and the idea of uneven technological development are gratefully finished, thanks to the works of G. Mensch, K. Freeman, A. Kleinknecht, and others. The scientific work of these scientists can be

[18] Foster, R. (1987). *Obnovleniye proizvodstva: atakuyushchiye vyigryvayut* [Production Update: Attackers Win]. Moskow: Progress. [in Russian]

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considered a fundamental place for their innovative fluctuations, the cyclicality of development, long waves, uneven implementation of technological solutions not only in the economic literature but also in the work of practitioners, economists, officials, politicians, etc.

Usually, the subject area of research has a number of discussion points, namely a significant part of the work is focused on the sectoral level (or the level of individual inventors or their groups), taking into account macroeconomic problems, but it is extremely difficult to determine the role of individual innovations in the overall economic development. Research problems are exacerbated by the subjectivity of selection of the most significant innovations, differences in the expediency and timing of implementation, the need to attract knowledge from other fields of science, etc. The problematic aspects of determining the contribution of scientific and technological progress to the overall economic growth is generally a separate independent topic of scientific research, which already has hundreds of works in different directions, so we concentrate further author's research on the impact of the achievements of scientific and technological progress on updating production capacities of economic entities and the development of innovative entrepreneurship in the digitalization of world economies.

4.2. The impact of digitization on changing technological modes of production

The cyclical nature of the development of the economy in general, and particular sectors in particular, within the framework of the modern theory of innovation, must be considered in the context of changes in technological modes of social production. Each technological way of production is characterized by a common technical level of means of labor, availability of innovative technologies, the sufficiency of workforce qualification for implementation of technological solutions in practical activity, and opportunities to realize the scientific and technical potential of society.

Changing long-term cycles of economic development is reflected in the global transition from existing technology and technology to new technological solutions that arise as technology changes. There is a process of allocation of basic directions of technical and technological development within a separate technological structure. The current trends of the latest technological way can be considered: biotechnology (genetic

engineering, technological biochemistry, bioinformatics, hybridization technology, engineering enzymology), nanotechnology (colloid chemistry, colloid physics, molecular biology, microelectronics).

In the vast majority of scientific literature[21,22,23], the technological way is treated as a complex of self-sufficient technical and technological innovations on a homogeneous scientific and technical base. The set of technological innovations is an interconnected chain of sequential technological processes of production, the supply of raw materials and management, which are combined by related technological operations of other sectors of the economy involved. Basic technological innovations form the basis (core) of technological structure. The above-mentioned innovations, as a rule, emerge in the leading sectors of the economy and determine the speed of development and spread of a new technological way.

The life cycle of each technological facility involves the following phases and is determined by a sufficiently long period:

– emergence (in the bowels of the previous technological structure new technological sets, basic innovations are formed, which have a completely new technical approach to the existing mode of production);

– growth (speed of implementation of basic innovations is high and has a global character, new industries, products, innovative activities, professions are emerging. The process of creating better innovations is gaining momentum, the demand for new products is increasing, production efficiency is increasing, costs are being reduced, investment efficiency is increasing maximum);

– maturity (the intensity of implementation of basic (radical) and improving innovations is significantly decreasing, the pace of technological development of economic sectors is slowing down, the expansion of production is almost stopping);

– recession (characterized by insignificant technological changes, which are essentially pseudo-innovations. The potential of existing technological solutions is exhausted, which instantly affects the efficiency of production (profitability decreases, costs increase). Living

[21] Chukhno, A. A., Leonenko, P. M. & Yukhimenko, P. I. (2010). *Instytutsiyno-informatsiyna ekonomika* [Institutional-information economy]. Kyiv: Knowledge. [in Ukrainian]

[22] Basilevich, V. D. (2014). *Ekonomichna teoriya: politekonomiya* [Economic theory: political economy]. Kyiv: Knowledge. [in Ukrainian]

[23] Lobas, M. G., Rossokha, V. V. & Sokolov, D. O. (2016). *Upravlinnya innovatsiyno-tekhnolohichnym rozvytkom ahrosfery* [Management of innovation and technological development of the agrosphere]. Kyiv: IAE. [in Ukrainian]

standards decrease the impulse to search for new technological solutions and the formation of new technological ways).

It should be noted that the basis of life cycle formation of the new technological way is the basic innovations introduced in new products, technological solutions, management and communication systems that meet the existing and just formed demands of the main population.

The problems of using technologies of different modes of production in the domestic economy were investigated by the luminaries of Ukrainian science – V. M. Geets, L. I. Fedulova, A. A. Chukhno and others. In their works, highly respected scientists have researched the actual state of technology use in the Ukrainian economy, in the context of different technological structures, and outlined the most optimal options for the development of the domestic economy based on available resources.

We will conduct an in-depth analysis of existing and future technological structures to outline the role and place of digitalization in the processes of the formation of new production methods and mechanisms for managing modern complex economic systems. Table 1 provides a brief description of the technological contexts and describes the technologies that have dominated and, in our opinion, will dominate in the specified period and the near future.

Table 1

Characteristics of existing and prospective technological structures

Technological mode (period of dominance)	The core of the technological way	Major economic achievements
I – 1770-1830	Textile production and mechanical engineering, iron smelting, iron processing, trunk line construction	Mechanization of production processes, the concentration of production in factories and manufactories
II – 1830-1890	Rail transport (steam engine), coal industry, mechanical engineering, ferrous metallurgy	Increasing the scale and volume of production, increasing the speed of delivery of raw materials and goods, industry concentration
III – 1880-1940	Heavy engineering, steel production, steel rolling, shipbuilding, power line construction, inorganic chemistry	The flexibility of production, increase of assortment of goods, improvement of product quality, standardization of production, urbanization

Table 1. (Continued)

Technological mode (period of dominance)	The core of the technological way	Major economic achievements
IV – 1930-1980	Automotive, electronics, non-ferrous metallurgy, synthetic materials, organic chemistry	Mass and batch production, conveyors, regulatory standardization of production processes, problems of overproduction, the formation of corporations
V – 1970-2030	Computing, measurement, electronic, optical fiber engineering, software, information services, aviation, robotics	Industrialization of production, automated systems of production management, command approach in management, accessibility of most goods to the main population, growth of services, acceleration of the speed of goods turnover
VI – 2020-2080	Biotechnology (genetic engineering, technological biochemistry, bioinformatics, hybridization technology, engineering enzymology) nanotechnology (colloid chemistry, colloidal physics, molecular biology, microelectronics), robotics, photonics, nanomaterials, nanoelectronics, nanoelectronics	Robotization of production, 3D production, reduction of a production defect, production of goods with new properties, development of innovative corporate culture, galloping introduction of information-communication and digital technologies
VII – 2070-2130	Biocomputer systems, biomedicine, unconventional energy, CALS technologies, robotics, interconnection technologies of artificial and organic systems	Digital production, repair of breakage before its appearance, "personal factories", production in space, alternative modes of transport

Source: grouped and organized by the author based on[24]

Analyzing the data in Table 1, we can say that the processes of digitalization are actively influencing the emergence of new ways of production and management mechanisms of modern complex economic systems since the fifth technological way. The implementation of

[24] Lobas, M. G., Rossokha, V. V. & Sokolov, D. O. (2016). *Upravlinnya innovatsiyno-tekhnolohichnym rozvytkom ahrosfery* [Management of innovation and technological development of the agrosphere]. Kyiv: IAE. [in Ukrainian]

automated control systems inti production, the growth of services, the formation of a team approach to management forms the basis and at the same time requires the use of information and communication and digital innovations based on the use of the Internet, mobile and space technologies (including IoT, Big Data, digital platforms, blockchain, start-up contracts, 3D printing), multifunctional sensors and high-tech sensors, artificial intelligence, robotics, machine learning, etc. The gradual transition to higher technology is, in fact, dependent on the use of modern and future digital technologies as their production and management processes become more intelligent and technological.

CONCLUSION

Thus, outlining the main economic achievements of existing and promising technological structures for domestic enterprises and entrepreneurs should be principally orientated in the development of existing and promising technologies. The mentioned problems are investigated by the author through the prism of substantiation of the special role of technological structures in the further development of innovative entrepreneurship and the search for mechanisms of adaptation of existing digital technologies to the realities of entrepreneurial activity in the territory of our country in order to improve the efficiency of domestic business entities.

Digitization, as a direction of modern transformation of business activity, requires deep rethinking in the search of possibilities of application of separate components of technology depending on the direction of work of the business entity. The above reinforces the author’s assertion about the necessity, expediency, and inevitability of the use of digitization technologies in each enterprise since the above is a question of the survival of producers under the present conditions of doing business.

SUMMARY

The problems of forming the evolutionary prerequisites for the digitization of entrepreneurial activity have been researched in the article. The topicality of the work has been conditioned by the profound transformational changes of national economies under the influence of globalization and integration processes, which have significantly changed the nature of the production and commercial activity of economic entities. The in-depth analysis of technological methods of

production has been conducted and the main stages of development of human-technical relations in the production process have been outlined. It has been found that the scientific and technological revolution contributed to the dramatic increase in the efficiency of the use of productive forces of society. The life cycle phases of each technological unit have been described to identify the basic innovations that are introduced in new products, technological solutions, control systems, and communications. The brief description of technological structures has been presented in the article and technologies that dominated and will dominate in the specified period, as well as soon have been described. It has been determined that modern high-performance entrepreneurship requires the use of information and communication and digital innovations based on the use of the Internet, mobile and space technologies, multifunction sensors and high-tech sensors, artificial intelligence, robotics, machine learning, which is the basis for the development of innovation mechanisms for adapting existing digital technologies to the realities of entrepreneurial activity in our country to increase the efficiency of domestic business entities.

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