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KHALILOVA A.¹, ALIYEV R.², MEHTIYEVA Z.³, MAMMADOVA A.⁴APPLICATION OF ARTIFICIAL INTELLIGENCE AND THE IMPACT OF
COMMUNICATION TECHNOLOGIES ON GLOBAL MARKETSDOI: <https://doi.org/10.32620/cher.2025.2.25>

Formulation of the problem. Digital technologies enable companies to transform existing product or service models into intelligent models and apply data-driven strategies to become more competitive. The emergence and application of digital technologies enhances the innovative potential of enterprises. In a world where companies operate in a highly competitive environment, they are under increasing pressure to make the most of their available resources to innovate and improve their performance. Therefore, companies that innovate using digital technologies can improve their productivity and become innovative companies. The use of digital technologies such as artificial intelligence, cloud computing, data mining, and the Internet of Things in companies leads to significant business achievements such as improved customer service and engagement, simplified operations, and business innovation. Digital technologies, including information and communication technologies, have enabled some small businesses to cope with some of their liabilities. In addition, due to the 2020 COVID-19 epidemic, which has had a significant impact on global behavior, the simultaneous development of several key digital technologies in the ICT field has developed at an unprecedented pace, affecting all sectors and industries. The development of digital technologies such as artificial intelligence, the Internet of Things, blockchain, and fifth-generation wireless networks (5G) has created a viable ecosystem for identifying and exploiting new opportunities in business and industry. Digital technologies and platforms are transforming existing enterprises and industries. New business models, new products, new forms of innovation, and enterprise transformation to adapt business operations and strategies to the digital era are some of the impacts of digital technologies on business and entrepreneurship. *The purpose of this paper* is to analyze the current methodology of digital transformation based on artificial intelligence, while revealing the flexibility and empowerment of human capabilities. *The object of the study*

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is the accounting methodology used in commercial banks for accounting, classification and presentation of digitalization in the field of artificial intelligence development. *The methodological basis of the study* is based on the Laws and regulatory decrees on the development of science and technology. *The main hypothesis of the study* is that the current methodology reflects a targeted improvement in significantly increasing the transparency and quality of digital decision-making. *Presentation of the material.* The main material of the article is an analysis of the methodology based on the regulatory framework in force in Azerbaijan. It emphasizes the role of artificial intelligence in the structure of the use of digitalization, and also offers recommendations for improving the digital economy to ensure an accurate reflection of the economy today. *The originality of the article* lies in the assessment of the existing methodology of the digital economy, identifying the factors influencing decision-making to strengthen the implementation of the digital economy. *The practical significance of the study* lies in the proposed facts on compliance with regulatory requirements and making more informed decisions both within and outside the country. *Conclusions.* The study concludes that the current methodology leads to transparency and accuracy in reflecting the widespread implementation of digitalization. These methodological improvements are expected to facilitate faster adoption of artificial intelligence.

Keywords:

artificial intelligence (ai), digital agility, human augmentation, machine learning, neurobusiness.

ШТУЧНИЙ ІНТЕЛЕКТ В МЕНЕДЖМЕНТІ ТА ПРИЙНЯТТІ УПРАВЛІНСЬКИХ РІШЕНЬ: МОЖЛИВОСТІ ТА МЕЖІ ЗАСТОСУВАННЯ

Постановка проблеми. Цифрові технології дозволяють компаніям трансформувати існуючі моделі продуктів або послуг в інтелектуальні моделі та застосовувати стратегії, засновані на даних, щоб стати більш конкурентоспроможними. Поява та застосування цифрових технологій підвищує інноваційний потенціал підприємств. У світі, де компанії працюють у висококонкурентному середовищі, вони перебувають під зростаючим тиском, щоб максимально використовувати свої наявні ресурси для інновацій та покращення своєї діяльності. Тому компанії, які впроваджують інновації за допомогою цифрових технологій, можуть підвищити свою продуктивність та стати інноваційними. Використання цифрових технологій, таких як штучний інтелект, хмарні обчислення, аналіз даних та Інтернет речей, у компаніях призводить до значних бізнес-досягнень, таких як покращення обслуговування та залучення клієнтів, спрощення операцій та бізнес-інновації. Цифрові технології, включаючи інформаційно-комунікаційні технології, дозволили деяким малим підприємствам впоратися з деякими своїми зобов'язаннями. Крім того, через епідемію COVID-19 2020 року, яка мала значний вплив на глобальну поведінку, одночасний розвиток кількох ключових цифрових технологій у сфері ІКТ розвивався безпрецедентними темпами, впливаючи на всі сектори та галузі. Розвиток цифрових технологій, таких як штучний інтелект, Інтернет речей, блокчейн та бездротові мережі п'ятого покоління (5G), створив життєздатну екосистему для виявлення та використання нових можливостей у бізнесі та промисловості. Цифрові технології та платформи трансформують існуючі підприємства та галузі. Нові бізнес-моделі, нові продукти, нові форми інновацій та трансформація підприємств для адаптації бізнес-операцій та стратегій до цифрової ери – це деякі з впливів цифрових технологій на бізнес та підприємництво. *Метою цієї статті* є аналіз сучасної методології цифрової трансформації на основі штучного інтелекту, одночасно розкриваючи гнучкість та розширення можливостей людського потенціалу; пропонування методологічних удосконалень штучного інтелекту для підвищення прозорості, точності та актуальності для сьогодення. *Об'єктом дослідження* є методологія бухгалтерського обліку, що використовується в комерційних банках для обліку, класифікації та представлення цифровізації у сфері розвитку штучного інтелекту. *Методологічна основа дослідження* базується на законах та нормативних актах щодо розвитку науки і техніки. *Основна гіпотеза дослідження* полягає в тому, що сучасна методологія відображає цілеспрямоване покращення у значному підвищенні прозорості та якості прийняття цифрових рішень. *Вклад матеріалу.* Основним матеріалом статті є аналіз методології, що базується на чинній в Азербайджані нормативно-правовій базі. У ній підкреслюється роль штучного інтелекту в структурі використання цифровізації, а також пропонуються рекомендації щодо вдосконалення цифрової економіки для забезпечення точного відображення сучасної економіки. *Оригінальність статті* полягає в оцінці існуючої методології цифрової економіки, визначенні факторів, що впливають на прийняття рішень для посилення впровадження цифрової економіки. *Практичне значення дослідження* полягає в запропонованих фактах щодо дотримання нормативних вимог та прийняття більш обґрунтованих рішень як всередині країни, так і за її межами. *Висновки.* У дослідженні робиться висновок, що чинна методологія призводить до прозорості та точності у відображенні широкого впровадження цифровізації. Очікується, що ці методологічні вдосконалення сприятимуть швидшому впровадженню штучного інтелекту.

Ключові слова:

штучний інтелект (ШІ), цифрова гнучкість, доповнення людини, машинне навчання, нейробізнес.



Formulation of the problem. Artificial intelligence (AI) is considered a super-intelligent humanoid robot. It is essentially a system of algorithms that can process “big” data to perform a range of tasks more efficiently than humans. The explosive development of AI is being led by internet giants such as Google, Microsoft, Amazon, Facebook, Baidu and others, and there is currently a surge in startup activity in the sector. Renowned scientist Gartner identifies a number of technologies that are relevant as the sixth and final stage of the transition to the article “digital business”: autonomous vehicles, bioacoustic sensing, biochips, brain-computer interface, digital agility, human augmentation, machine learning, neurobusiness, human literacy technologies, quantum computing, smart advisors, smart dust, smart robots, virtual personal assistants, virtual reality, volumetric and holographic displays. Solving AI-type problems requires, first and foremost, massive amounts of computing power, something that has been made possible in recent decades by Moore's Law.

One of the most ambitious projects in the field of neural networks is IBM's SyNAPSE chip, a non-von Neumann design that attempts to mimic the human brain in hardware. The latest SyNAPSE chip, built from 5.4 billion 28-nm transistors, has 4,096 cores organized in a 64x64 array supported by a mesh network, as well as 1 million programmable neurons and 256 million programmable synaptic connections. Because compute, memory, and communication are tightly integrated and the chip is event-driven, it consumes much less power than traditional (von Neumann) designs: IBM requires only 70 mW of power for its current SyNAPSE chip in real time. As a recent report from Deloitte makes clear, technological advances have always led to the disappearance of some jobs and the creation of others, leaving behind social changes in the form of displaced “legacy” workers. According to Deloitte, there is no reason to believe that this trend will not continue: “We cannot predict what jobs will be created in the future, but we believe that jobs will continue to be created, expanded, and destroyed, as they have for the past 150 years.” A report from analyst firm Forrester from August 2015 outlined this: “While automation will lead to a net loss of 9.1 million jobs in the U.S. by 2025, this is far from the 69 million jobs many experts had predicted.” Moreover, Forrester envisions a partnership rather than an adversarial relationship: “Advances in automation technology

mean that humans will increasingly work alongside robots, software agents, and other machines.” According to a recent YouGov poll in the US, the fear of losing technology jobs is currently concentrated at the bottom of the population:

However, if the current AI boom continues, it is likely that “smart machines” will also affect “white collar” workers and even senior executives. For example, Kensho is a startup that claims to be the “world’s first computational knowledge system for the financial industry” — a system that uses massively parallel statistical computing, natural language input, big data and machine learning to answer complex financial questions.

As we can see, innovative (scientific) potential is a set of characteristics expressing the ability to prepare and implement effective scientific and technical innovations on a large scale in order to sustainably maintain modern rhythms of economic, social and cultural renewal for the benefit of the entire population. Innovative potential is a characteristic of the resource base of the country's innovative development.

Analysis of recent research and publications. Scientific resources (scientific and technical potential, science) determine the capabilities of a country to carry out scientific research and development work (R&D). The scientific and technical potential of a country, its state and development trends are influenced by two groups of factors. The first group is formed by quantitative factors: the availability of trained scientific researchers in the country, as well as the material and technical support for R&D, primarily the volume of financial resources allocated for science and scientific services. The second group of factors (qualitative) includes the R&D organization system, the priorities of scientific developments, as well as the level of development of such an industry as scientific services.

There are large areas of scientific, technical and innovation policy that should ensure the implementation of national interests. Therefore, the sphere of science, as well as the sphere of education, is largely supported and directed by the state. This is done not only through direct management of state research and educational institutions, but primarily through special mechanisms of state orders and target programs or by creating appropriate incentives, a more or less comprehensive scientific and innovation policy is formed and implemented in accord-



ance with the national interests of the country, priorities are set in scientific and technological programs and their resource support is provided. By the Decree of the President of the Republic of Azerbaijan Ilham Aliyev dated May 4, 2009, the "National Strategy for the Development of Science in the Republic of Azerbaijan in 2009-2015" and the "State Program for the Implementation of the National Strategy for the Development of Science in the Republic of Azerbaijan in 2009-2015" were also adopted. On November 8, 2016, the President of the Republic of Azerbaijan signed the "Order on the establishment of the High-Tech Park of the National Academy of Sciences of Azerbaijan". On October 21, 2009, the President of the Republic of Azerbaijan Ilham Aliyev signed an order on the establishment of the Science Development Fund under the President of Azerbaijan. On February 19, 2010, the President of the Republic of Azerbaijan signed a decree approving the Science Development Fund under the President of Azerbaijan. The purpose of this fund is to protect the scientific and technical potential, its effective use in the development of the country's economy and to increase the role of science and technology in solving social problems. The Science Development Fund under the President of Azerbaijan is the main source of financing for research programs and projects, provides incentives for the scientific activity of scientists and creates creative opportunities for them. The fund finances not only fundamental scientific work, but also applied and innovative work. The fund's responsibility is to participate in the formation and implementation of a unified state policy related to the development of science, as well as putting forward proposals, preparing projects, ensuring their implementation in accordance with the National Strategy for the Development of Science for 2009-2015. The fund's budget can be formed on the basis of voluntary donations from individuals and legal entities, income from targeted events, funds allocated by foreign states and international organizations and other sources not prohibited by law.

The purpose of this paper is to propose methodological improvements to artificial intelligence to improve transparency, accuracy, and relevance to today's times.

Presentation of the main research material. INNOLAND (established in 2018 under ASAN Khidmet) is an incubation, acceleration and research center created to develop the private sector, promote innovation and expand the

startup movement in Azerbaijan and beyond. INNOLAND consists of coworking, incubation, acceleration and IT training center. The coworking center is a profitable and multi-featured approach to organizing work for startappers, programmers, people working in the field of innovation, alone or in a small team.

On March 31, 2021, the İNNOKLUB ecosystem was created as part of INNOLAND, the purpose of which is: 1) stimulating the development of startups and innovative enterprises. 2) ensuring effective coordination. 3) expanding activities to support ecosystem players. 4) increasing investment opportunities in local startups.

The main players of NNOKLUB are the companies "Innovation Center", "NextStep", "New Idea", "Lotfi Zadeh Technology Center", "New Space", "IBA Innovation Center", "Tech.az", "Technovate", "Paşa Holding"

On February 19, 2020, the "Azerbaijan Innovation House" was established in the "Silicon Valley". The purpose of the Organization: 1). The role of a bridge with Silicon Valley. 2). Establishing a connection with more than 100 of our Silicon Valley startups. 3). Access to foreign investors and mentors.

There are also startups that are developing in e-commerce, marketing, "smart" agriculture, online payments. Examples include startups Whelp, Greact, Nextsale, Eleven Kings Game, HealWith, Botbox, Paylink and others.

AZINNEX is a consortium of the leading IT companies in Azerbaijan. Established in 2017, consists of 10 companies, has 20 local products, exports its products to 30 countries around the world.

The main objective of the state innovation policy is to create conditions for the growth of the competitiveness of the economy. The key element of the innovation development policy is the ability of the state to influence the functioning of market entities and innovation activities. In accordance with UNESCO recommendations, there should be 50 researchers per 10 thousand people in developed countries. In Azerbaijan, this figure is different: 20 researchers per 10 thousand people.

In addition to universities and academies, there is some research base in industries (mainly applied research), related to various ministries. These are industry research institutes, which are a legacy of the Soviet era. In the 1990s, most of these research institutes were closed or privatized.

One of the effective mechanisms for im-



plementing the policy of forming an innovative economy in the republic at present is state programs. Their purpose is to solve those technological, scientific and technical problems that the state defines as scientific and technological priorities for society in the long term. "The Strategic Roadmap for the Development of the National Economy and its Main Sectors" predetermines the goals, objectives and priorities for the development of the scientific and technical sphere and industry in order to meet the needs of the domestic market of the republic, increase exports, develop productive forces, ensure national security, increase the competitiveness of industrial products, increase production efficiency and develop the innovation sphere.

Currently, scientific, technical and innovation activities in Azerbaijan are regulated by the following regulatory and legal acts:

The Law of Azerbaijan "On Science" regulates relations between subjects of scientific and (or) scientific and technical activities, government bodies and consumers of scientific and (or) scientific and technical products (works and services).

The Law of the Republic of Azerbaijan "On the Protection of Intellectual Property and Protection from Piracy" regulates relations in the field of intellectual property, protects the rights of intellectual property holders." Today, innovation centers, business incubators, technology parks, innovative industrial complexes, innovative technology centers, technology transfer centers, etc. operate with varying degrees of effectiveness throughout the country. A network of Technology Transfer Centers is developing in the republic. Technology Transfer Centers operate at the Azerbaijan Technological University, the National Academy of Sciences of Azerbaijan, the Baku Engineering University, and the State Academy of Oil and Industry. The main areas of activity of the Technology Transfer Center are:

1. advertising, marketing, information support, and PR of innovative projects;
2. search for and analysis of innovative projects commissioned by investors, search for potential investors for their implementation, support for received orders;
3. examination and evaluation of innovative developments and proposals, preparation of documentation (in particular, application preparation) for participation in grant competitions;
4. legal protection (registration of trademarks, patents, etc.), legal and consulting services.

The Technology Transfer Center maintains open resources that contain information on investment and innovation projects, as well as methodological information for enterprises engaged in innovation activities. However, the innovative activity of Azerbaijani enterprises is still low. If we analyze the distribution of expenses of Azerbaijani enterprises on technological innovations by their types, then the expenses on research and development (up to 17%) give way to expenses on the acquisition of finished machines and equipment (up to 60%). Another instrument of the financial component of the infrastructural support of innovation activities is the State Fund for the Development of Information Technologies, created by the Order of the President of the Republic of Azerbaijan dated March 15, 2012 under the Ministry of Communications and High Technologies. The main goal of the Fund is to support innovative entrepreneurship, stimulate innovative projects, intellectual business, provide financial support to small innovative firms, and attract investors from abroad to the ITT sphere.

It should be noted that by 2016, the Fund had allocated a total of 8.52 million manats in preferential loans to 13 business entities. The Fund is actively involved in transforming higher education institutions into innovative scientific and educational centers, training competitive professional personnel in the field of technological professions. The Fund is actively involved in the implementation of projects to create innovations based on the inventions of domestic scientists.

Currently, business incubators have been created in various Higher Universities of Azerbaijan to stimulate the interest of young people in innovative activities.

To support innovation, such investment companies as the Azerbaijan Investment Company (AIC), the Azerbaijan Export and Investment Support Fund (AZPROMO), etc. operate in the republic. The main goal of the AIC is to attract domestic and foreign investors, as well as the fund's resources, to the development of the non-oil sector. AZPROMO has launched extensive activities to attract foreign investment in the non-oil sector of the economy with an innovative focus. The institute of venture financing is also developing in the republic. Special venture funds are created for innovative lending.

In particular, in 2016, a venture fund and an investor club in the field of information technology were established. The following



companies joined the investor club: Sinam, BestComp, Neuron Technologies, Azercell, Enginet, Hesab.az and other entities in the telecommunications technology market. Today, other innovation infrastructure institutes are also developing in Azerbaijan, and in particular, the institute for personnel provision of innovations, the main task of which is to meet the needs of the republican innovative economy for highly qualified specialists in the innovative profile. Azerbaijan has an intellectual potential that provides a reliable basis for innovative transformations.

The measures to support and develop innovative activities in small businesses have been included among the highest priorities by the Government of Azerbaijan. The activities of a special support fund, created with the aim of stimulating the formation of the venture financing sector in Azerbaijan, were aimed at developing innovative activity in Small and Medium Businesses. The National Fund for Support of Entrepreneurs of Azerbaijan provides preferential loans to business entities and monitors issued loans.

An important element of stimulating innovation in small and medium businesses is leasing activities. Encouraging the widest use of leasing, developing the leasing market as a means of financing by small and medium entrepreneurs, creating favorable conditions for attracting domestic and foreign investment in the small and medium entrepreneurship sector, stimulates businessmen to introduce innovative products into production.

Science today plays an unequivocally fundamental role in the dynamic development of any state. It is simply considered impossible for a country without high scientific progress to become an influential international legal entity and achieve important successes in its development.

It is no coincidence that Azerbaijan, striving to strengthen its position as an independent subject of international law, pays special attention to scientific progress, and a certain state policy is being implemented in this direction. But, of course, scientific policy alone is not enough. In order for any country, including Azerbaijan, to be able to independently cope with the challenges of modern times and properly participate in the scientific and technical life of the world community, education in the field of science and technology must be strengthened at all levels.

It is well known that countries need high potential in science and technology to solve sustainable development problems, including in such areas as healthcare, agriculture, communications, energy, industry and infrastructure. At the same time, investments should be directed not only to national management systems and effective scientific policy, but also to capacity building, which includes high scientific education at all levels, effective engineering training, high-quality universities and research centers. Scientific knowledge and skills obtained as a result of local research or imported technologies play an important role in the development and implementation of adequate responses to the numerous challenges facing modern society on the path to sustainable development.

Using the potential that involves the use of science to create useful products and services plays an important role in solving the problems facing the country. Against this background, there is a serious change in the social order for the training of specialists in modern conditions. The result of innovations in scientific and pedagogical activity is a multi-level system of training specialists.

One of the decisive factors in the implementation of the concept of sustainable development of regions is the accelerated development of the education system, taking into account regional characteristics. Therefore, the main priority of the educational policy implemented in our country is the creation of a model aimed at reducing significant differences in the level of development of educational complexes in Azerbaijan and the formation of a single educational space.

At the same time, the international aspect of development is taken into account. The formation of an effective system for managing fundamental scientific research, ensuring the demand and significance of scientific research results for the development of the national economy and society, also comes to the fore. This is served by reforms in the education and science system of Azerbaijan.

Science and technology have always been the engine of social development, the basis of the national economy, innovation and scientific and technological progress. The development of practical research by scientists and engineers today is an absolute state priority. It should be noted that there are many famous names, discoveries and achievements in the history of Azerbaijani engineering science.

As is known, a state program for the creation and development of the space industry is being implemented in the Republic of Azerbaijan. The beginning of a qualitatively new stage in the development of the modern space industry of Azerbaijan was laid on November 4, 2008, with the launch of telecommunication satellites into orbit. Today, a telecommunication satellite has been launched into orbit, with the help of which about 154 TV channels and more than 30 radio stations are broadcasting. The leading satellite operator in the South Caucasus is AzerCosmos. Telecommunication satellites AzerSpace-1 and AzerSpace-2, operated by AzerCosmos, provide highly reliable, broadband and broadcasting solutions to its customers in Europe, Africa, the Middle East, the Caucasus and Central Asia. The high-resolution (1.5 m image) Earth remote sensing satellite AzerSky provided high-quality Earth observation and geoinformation services.

Institutions such as Technopark will allow conducting the necessary tests already in Azerbaijan. Technopark will operate in a new modern environment that meets international standards and will use foreign experience.

Technopark opens up broad opportunities for the formation of a new generation of researchers and specialists, as well as the possibility of cooperation between the university and the private sector, for the implementation of technology transfer, commercialization of scientific developments, implementation of the principle of "theory in business" for startups and business ideas.

In the field of agriculture and ecology - the introduction and industrial use of mineral fertilizers obtained using nanotechnology. The parallel use of this type of fertilizer and resource-saving irrigation technologies in practice allows obtaining a grain yield of 51 centners per hectare in the conditions of the flat regions of Azerbaijan. Scientists of the Engineering Academy conducted experiments on the experimental fields of the Research Institute of Agriculture using silicate fertilizers (pure silicate and silicate dioxide) and studied their effect on the yield of the Gobustan soft wheat variety. In recent years, the world has been paying increasing attention to digital transformation, which involves the introduction of modern IT technologies into the business processes of enterprises and the financial sector, the activities of state and public organizations. This most important trend is fully supported in Azerbaijan, where the charter, structure and regulations of the In-

formation and Communication Technologies Agency under the Ministry of Digital Development and Transport were recently approved by the decree of the head of state. Acceleration of digitalization processes is one of the most complex and in-demand tasks that the government of Azerbaijan will have to implement in the coming years. Based on the country's basic network infrastructure, it is necessary to accelerate the development of the digital economy, expand innovative production and the service sector, create prerequisites for the formation of human capital, including in the software business, startups, etc. These tasks are to be addressed within the framework of the strategic program "National Priorities of Socio-Economic Development: Azerbaijan 2030" and the "Strategy for Socio-Economic Development of Azerbaijan for 2022-2026" implemented in accordance with it. One of the goals of the digital transformation of the domestic economy, in particular, is to increase its competitiveness, focus on innovative trends and more fully integrate it into the system of international division of labor. To this end, the country has already begun work on forming an ecological niche for IT startups, introducing IoT technologies and other elements of Industry 4.0, and significant support is provided by Turkey, Israel, a number of European countries, as well as the relevant structures of the World Economic Forum, on whose initiative a branch of the IV Industrial Revolution Center was recently created in Baku. Digitalization processes in Azerbaijan are not yet developing evenly enough. For quite some time now, a significant part of public services have been provided in electronic format, digital signature mechanisms have been introduced, utilities and fiscal services have been digitized, and IT elements are generally used in public administration, but the country is still lagging behind in the digitalization of corporate governance processes, industrial production, financial and transport sectors, trade and a number of other areas.

The need to accelerate digital transformation and new tasks assigned to the country's communications department were formulated in the decree of the head of state dated April 27, 2021. A logical continuation of this trend was the decree signed by the President of Azerbaijan Ilham Aliyev on October 11 last year on some measures to improve management in the field of digitalization, innovation, high technology and communications. In particular, based on the new vision of the tasks and goals of the





communications department, it was renamed the Ministry of Digital Development and Transport and four agencies were created in its structure - legal entities of public law, one of which was the Information and Communication Technologies Agency (ICT Agency).

And the other day, another decree of the president concerning the activities of the ICT Agency approved the charter, structure, and regulations of the new division of the ministry. In particular, the authorized capital of the agency will amount to 100 thousand manats, and within a month, the communications department will have to approve the wage fund, staffing, and take other measures provided for by the decree. The key objective of establishing a legal entity under public law - the ICT Agency - is to optimize the process of regulating the ICT sector and create more flexible mechanisms for managing the industry to adapt it to global technological changes. In this regard, the Agency's responsibilities include certification, accounting, regulation and control (including quality) in the field of mobile communications and ICT, including regulation of relations between telecommunications operators and other market participants. The Agency's scope of activities also includes the registration of telecom operators and providers providing Internet telecommunications services.

A very pressing task - management of the radio frequency spectrum - has also been entrusted to the Agency, in connection with which it is necessary to optimize the process of its use, ensure a fair distribution of frequencies between market participants. An equally important goal is to increase the efficiency of protecting the republic's radio frequency resources.

Another area of activity of the regulatory body is the modernization of the regulatory framework, the implementation of advanced international experience, as well as the fulfillment of Azerbaijan's obligations under international treaties. At the same time, the Agency, together with the relevant government agencies, has been instructed to take measures to attract investment in the IT sector and ensure the preparation, implementation and management of international and local investment projects. All of the above steps are intended to accelerate digital transformation, including the development of the digital economy, and will ultimately increase the added value of the ICT sector in the country's GDP.

The most important task of the new structure will be to perform the functions of a regu-

lator in the field of pricing and tariff policy: in particular, it is necessary to ensure healthy competition in the industry by preventing the monopolization of individual sectors and suppressing unfair competition. Perhaps this is the most important point for the domestic telecommunications sector, since regulatory gaps and not always well-developed and clear administrative mechanisms, as well as the lack of development of the regulator's functions, sometimes cause discontent among local market participants, not to mention the fact that the republic has been criticized by specialized international organizations. The Agency's activities will also be aimed at overcoming difficulties and strengthening control over the sphere of mobile and fixed broadband communications and universal services in peripheral regions. The latter is a very urgent task, since in a number of remote regions and mountain villages access to high-speed Internet services is difficult. The new structure will also have to optimize the policy in the field of compliance with quality standards and technical regulations, and carry out systematic monitoring in this area. The lack of proper control also causes complaints from consumers of IT services and has a serious negative impact on the country's technical readiness indicators.

The experience gained with the Certification Services and e-signature Center allowed us to create a new signature platform called SIMA (this word means appearance, personality). SIMA is primarily a biometric signature. This platform was created based on the requirements of digital transformation, and thanks to this signature, it will be possible to provide more efficient and accessible user services. It will also contribute to the popularization of digital activities of business entities and the development of the digital economy.

SIMA is based on biometric authentication, which combines a "public key" and cloud technologies. Thus, an identity card scanned by a user using a mobile application is checked to see if it belongs to this person. The test operation is performed by identifying the face based on the application through the web camera of the mobile device. If the identity card information belongs to this person, the user is provided with a signature certificate, otherwise the request is rejected.

In 2022, the world's largest festival of technology, civil and military aviation "Technofest" was held in Baku for the first time. The main goal of the event is to popularize such ar-

eas as aviation, space industry, digital economy among young people, encourage entrepreneurship in these areas, reveal the knowledge and skills of young engineers through various competitions, as well as present national technologies to the international community. Holding this festival in Baku will open up broad opportunities for Azerbaijani youth.

Of course, our action plan is not limited to the listed projects. In 2022, we plan to implement several more large-scale projects with both national and international partners. Our goal is to significantly improve the development and position of Azerbaijan in the digitalized world. The term digital technology refers to a set of intelligent and innovative technologies such as big data analytics, the Internet of Things, and cloud computing that enable connectivity, communication, and automation.

The importance of digital technology in the 21st century is well known. The use of digital technology in business has become a determining factor in improving management, service, and production factors, increasing productivity, and implementing innovation. Digital technology can help small and medium-sized businesses grow and innovate. Digital technology plays an important role in any business and facilitates collaboration between companies, storing and analyzing data, and bringing innovation to business. The emergence of many new and powerful digital technologies, platforms, and digital infrastructures has led to innovation having a broad organizational and political impact. The use of digital technology has had a significant impact on business innovation processes.

Entrepreneurial orientation (EO) is an organizational focus on new resources and value creation that describes the entrepreneurial decisions, methods, and actions used to create a competitive advantage. EO is one of the most common and well-known research constructs in the entrepreneurship literature. It is a strategic orientation that occurs at the firm level. It includes the firm's strategies, administrative philosophy, and the methods it uses to develop behavior that is inherently entrepreneurial. EO can be observed in the processes and organizational environment of an organization. It is considered the key to achieving higher performance and helps companies find better solutions through differentiation to increase the level of acceptance of complex environmental conditions. EO leads to the introduction of new products, services, innovations, markets, or

business models that did not exist before. Entrepreneurial orientation is a structure that actively seeks to exploit and exploit every opportunity at the firm level. It also leads to the creation of an organizational culture, practices related to the learning process, and the identification of new opportunities and innovations. EO demonstrates the strategies within the mental framework as well as the entrepreneurial perspective reflected in the company's current processes.

Innovations are usually created in developed countries and then transferred to developing countries. However, in recent decades, innovation has proliferated in resource-poor settings, primarily in developing countries. Product innovation has been identified as an opportunity to create new markets for underserved customers in developing countries. Frugal innovation (FI) has become a new way to serve customers in developing countries. FI is defined in various ways and is understood as resource-constrained innovation and disruptive innovation. Profitable innovation also creates new markets and contributes to the commercial sustainability of products. Frugal innovation aims to develop low-cost yet effective products that meet the needs of consumers with limited purchasing power in resource-constrained developing countries. Innovation in high-quality, high-demand products that meet the needs of consumers with limited resources has created extraordinary demand in emerging markets. Frugal innovation is mainly developed in developing countries by local R&D departments of developed companies. A high degree of independence of R&D subsidiaries can facilitate the development of cost-effective innovations. Frugal innovations should satisfy the basic needs of resource-constrained consumers by offering improved value at an affordable price. Depending on whether companies focus on reducing costs or increasing value, we have identified two types of cost-effective innovations, namely, cost-efficient innovations and cost-effective innovations.

Therefore, the use of AI in business is crucial to improve productivity, competitiveness and decision-making, especially in the context of multinational enterprises. The integration of AI significantly enhances the ability of enterprises to navigate complex global environments through the use of advanced predictive analytics, task automation and data analytics. The implementation of AI in company operations can lead to significant economic bene-



fits. According to a McKinsey report, the use of AI is projected to add \$13 trillion to global economic activity by 2030. This is why it is important for IBs to have an AI strategy. With the combination of AI and data analytics, IBs can better predict market needs and reduce risks, optimize supply chain management, streamline logistics and increase the volume of cross-border transactions. AI-powered translation using natural language processing can significantly improve cross-cultural and cross-lingual communication and negotiations by offering real-time simultaneous translation, breaking down language barriers and facilitating stronger and more effective international partnerships. AI-powered machine translation has been noted for its potential to reduce language barriers in trade, particularly by helping online retailers increase exports. AI is also set to help reduce overall operational costs. Certainly, the conversation around AI has increased in 2023 with the advent and open access to Open AI Chat-GPT and other similar programs such as Microsoft's Bing and Google's Bard. This accessibility has generated widespread interest in the impact of AI on work and the business environment, pushing it into the mainstream. With AI's well-documented potential to transform cross-border trade and collaboration, its influence is extending to the government level in international trade negotiations. However, there is a significant knowledge gap regarding the application of AI in various aspects of public sector strategies, practices and activities. Academic research is increasingly discussing the different types of digital tools and AI techniques and how businesses can benefit from such solutions. In this regard, recent calls for academic research on AI within the IB have attracted considerable attention in early IB journals, including other related disciplines such as international management, general management and human resource management.

Conclusions and prospects for further research. Decisions regarding technology strategy and sophistication have had a major impact on the nature of cross-border market entry.

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With the ease of sharing information across borders and around the world, technology is enabling businesses to interact more globally, even at a lower cost. Technological advances such as AI can play a role in international market selection (IMS). IMS is defined as “the process of establishing criteria for selecting markets (countries), examining market potential, classifying them based on agreed criteria and selecting which markets to approach first and which are suitable for further development.” Artificial intelligence can provide MNCs with greater access to international markets and increased visibility of international opportunities. Thus, AI allows MNCs to effectively monitor new trends and opportunities in foreign markets without investing significant resources in local marketing subsidiaries. With AI-powered analytics and data visualization tools, MNCs can benefit from analyzing market trends and opportunities, gaining insights and recommendations on the current and future state of the foreign market.

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