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## INNOVATIVE TRENDS OF THE AKMOLA REGION

**Abstract.** In the opinion of the authors, in the Akmola region, the innovative threads will allow the region to become a leader in all positions of innovation development, while the state support of innovation activity in the republic is aimed at developing the innovation potential; an increase in the share of high-tech products in the structure of gross domestic product. Stimulation of innovation activity by creating organizational and economic conditions, for which priorities of innovation development are necessary, ways of developing innovation infrastructure have been formed with the assistance of high-tech and knowledge-intensive industries, which will allow domestic innovations to enter foreign markets, establish international cooperation and attract additional investments in innovation activities with the reorientation of production to resource-saving technologies, Organic products. What more was done this study.

**Keywords:** innovations, trends, region, business, industry, investments, block chain, startups.

### INTRODUCTION

The program “Rukhani Zhagyr” is unique in that it affects all spheres of society. Increased spending on research and development (hereinafter referred to as R & D) should be the key to sustainable development in most countries of the world. In other words, if states want to have a technological foundation, they should spend it themselves and do everything possible so that private companies also invest more in research and development. We are not talking about fundamental research, launches of the next hadron collider. Clean air in megacities, high-speed Internet, artificial organs, new food products and revolutionary types of energy carriers - all of this humanity will not receive if it does not invest in innovative solutions.

However, to give money for development does not mean to be directly on the advanced technological revolution. Another very remarkable rating is the Global Innovation Rating immediately takes into account 80 indicators. Among them are the number of applications for registration of intellectual property rights and patents, a list of created and implemented mobile applications, the amount of expenditure on education and the number of scientific and technical publications. Moreover, in this ranking, by the way, of the previously mentioned world leaders in R & D spending, only Switzerland and Sweden are in the top five. This suggests that even world leaders with billions in investment in science and applied research cannot always boast a concrete result. There are not as many real innovations that change the face of industry and production as humankind would like.

### MAIN PART

Fresh ratings and analysis show how rapidly China is bursting into global innovation leaders.

The authorities of the Middle Kingdom in technology and solutions have proclaimed along with the struggle for the title of the first economy in the world. Back in 2016, R & D expenditures in this country exceeded 234 billion dollars. Overall, it was only 2.11% of the Chinese GDP, but in absolute terms, only Americans invest more than Americans do in science and technology. True, the Chinese have an indicator according to which even the United States cannot overtake the country: by the end of 2018, the number of

scientists and innovators in this country will exceed 6 million. This is absolutely the best indicator on the planet. It turns out that you can fight for leadership by increasing the volume of human capital.

By the way, Kazakhstan ranks 74th in the Global Innovation Index. We are noted by compilers as leaders of the region of Central and South Asia along with India and Iran.

Kazakhstan produces a high amount of foreign direct investment in the country, due to which technology transfer usually occurs. Investors, as practice shows, in our country are beginning to build new high-tech enterprises. Also in Kazakhstan, the number of students and teachers related to applied and fundamental science is growing.

The most relevant technologies for today, where opportunities are opening up, are artificial intelligence, augmented and virtual reality, the Internet of Things (IoT) and, of course, the block chain. Do not forget about the changes in the ways of communication with customers through chat bots and other marketing tools. The world expects that by 2025 the volume of the global market for virtual chat bots will be \$ 1.25 billion, the market for virtual and augmented reality will be 215 billion by 2021, and the size of the Internet of Things market will be 457 billion by 2020. E-commerce will also maintain growth trends. Only in Kazakhstan, the volume of this market for 2018 is estimated at 106 billion tenge.

There is not a lot of money in RK that needs to be put into circulation. We have a huge number of people who are able to invest in startups. Again, there is no knowledge: how and where to invest, where to look for projects, how to structure a deal, and so on. There are no core and smart investors who will not just invest money, but could take part in the development of a startup, sharing knowledge, experience, contacts. The MOST Business Incubator has been on the market for 8 years, and we are one of the first to start talking about startups, the importance of developing the investment climate and the startup ecosystem as a whole. Today, with state support, the international Astana Hub, the financial and technological hub of the Astana International Center, has opened. Conditions are created, the state supports, now we need to systematically implement our plans. Energy and the use of renewable energy sources, agriculture, mining, tourism, IT-technologies, medicine, education, construction and engineering - all of these areas are key to Akmola regional scientific and research activities. Research Technological Park ("Technopark"). For example, Led Systems LLP develops a business plan to modernize the lighting system of 17 educational facilities in the districts through a public-private partnership mechanism. Another participant Technopark, Kokshetau State University. Sh. Ualikhanov, allocated over 8 million tenge for the development and support of start-up projects.

"Industrial-agrarian" feature of the development of the Akmola region, in which large-scale agricultural production and industry are concentrated. With the support of the state, along with agriculture, the branches of machine building, the metallurgical and processing industries, the building materials industry, and tourism are developing in the region. Akmola region in development programs is assigned, an exceptional role in which the rate should be made on the further development of the agro-industrial complex and attracting investment in the processing industry.

As for the industry, by the end of last year, the enterprises of the region produced products worth 545.5 billion tenge. This is almost 90 billion tenge more than in 2016. In addition, the growth continues. In just five months of this year, the production volume amounted to 244.8 billion tenge, that is, in a relatively short period, it was possible to shift the development trends towards an increase in the share of the manufacturing industry. Its volume in weight increased from 72 to 80 percent. The merit of such rapid development of the manufacturing sector lies in the successful implementation of Industrialization Map projects in the region. In metallurgy, as specified in official documents, growth reserves are associated with the launch of three factories for the processing of technogenic mineral formations of Kazakhaltyn Technology JSC, where it is planned to produce up to 3.1 tons of Dore alloy (for 2018-2022). The growth should also be provoked by the construction of a mining and smelting complex based on the Masalskoe iron ore deposit with a capacity of 1 million tons of rolled metal per year. Completion of the complex is scheduled for 2022. The new outlines of the industrial sector of the region should be given a digitalization process. According to the Ministry of Industry and Development, work is already underway to formulate a plan to include eight projects in the process, implemented by such companies as JV SKZ Kazatomprom LLP, Altyntau Kokshetau JSC, GMK Kazakhaltyn JSC and RG LLP Gold ", "PO "Kokshe Cement" LLP, "Semizbay U" LLP, "Stepnogorsk Mining and Chemical Combine" LLP. The introduction of digital technologies will increase their competitiveness. Among them, a cement plant with a capacity of 2 million

tons of cement per year, three gold extracting factories for processing technogenic mineral formations at the Kazakhaltyn mines, a line for the production of casual shoes, an innovative project for the production of inactivated adsorbed culture rabies vaccine for farm animals. A similar positive trend is observed in the agrarian sector. All efforts on this front are devoted to ensuring the production of competitive products in demand in the markets.

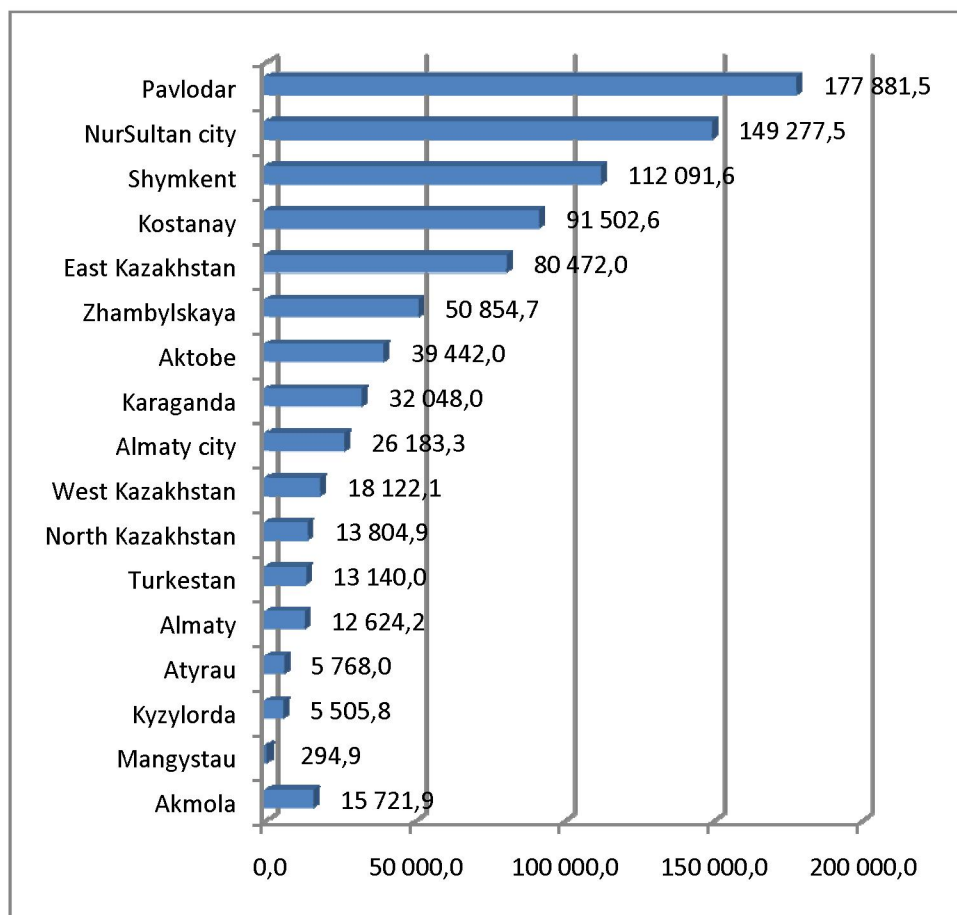


Figure 1 - The volume of innovative products (goods, services) (million tenge)

The leader in terms of innovative products is Pavlodar region 177881.5 million tenge, in the second place of the city of Nur-Sultan 149227.5 million tenge, and in the 3rd place of Shymkent 112091.6 million tenge. Akmola region provides the volume of innovative products for 15,721.9 million tenge, which is not even an average figure, but the region has great development prospects.

Akmola region is a unique region of its kind. Here both the industry and the agrarian sector are developing dynamically in the same way, and determining which industry is more important is the same as arguing over whether it is primarily an egg or a chicken.

At the end of last year, the gross agricultural output amounted to 383 billion tenge. In the first five months of this year, this figure was 52.1 billion tenge. The qualitative development of the industry is evidenced by the fact that the region significantly affects food security, fully providing not only itself, but also the capital with many kinds of food.

Today it is 12 items - flour, pasta and bread, poultry and eggs, horsemeat, beef, pork, potatoes, beets, tomatoes, cucumbers. In a short time, this list should include processed milk, dairy products, butter, cheese and cottage cheese, lamb, sausages, cabbage and carrots. Only this year, eight projects worth 7.5 billion tenge are being implemented in the region to provide a food belt around Astana.

For example, last year a macaroni workshop with a capacity of 150 tons of flour per day and 24 tons per day of pasta was commissioned in Arshalynskiy district. In LLP "Breeding economy" Zerenda "created a goat breeding farm for 5 thousand heads, focused on the production of goat milk products.

The development of the poultry industry has become a kind of trend in the region. Already operating enterprises in this sector are busy building up capacities, such as, for example, KazGer Kus LLP. Moreover, regularly the industry grows with new enterprises. Not so long ago, two new poultry farms with a total production capacity of 170 million eggs per year appeared in the region.

Also, two poultry meat production enterprises were introduced - Capital Project LTD LLP with a production capacity of 20 thousand tons of poultry meat per year and Astrakhan Poultry LLP with a production capacity of 3 thousand tons of poultry meat per year. However, a significant reduction in the share of poultry meat imports is expected after the implementation of the megaproject - the construction of the Makinsk poultry farm. The cost of the project is 40 billion tenge. Co-financed by the European Bank for Reconstruction and Development. The capacity of the new poultry farm will reach 60 thousand tons of broiler meat annually.

Special attention in the region will be paid to the development of dairy farming. In addition, the expectations here are associated with the appearance in the Burabay district of a specialized non-tedious (reproductive) farm operating based on international digital standards for the management of dairy farms. The oblast akimat is confident that the implementation of this investment project "will contribute to solving a number of tasks related to the increase in milk production by loading industrial and family dairy farms and dairy processing enterprises in the region."

Akmola Regional Historical Museum of Local History has launched the exhibition project "Kasyrlar Amanaty", which will enable residents of the region to get acquainted with sacred objects, invaluable artifacts and cultural exhibits of the Kazakh people, stored in the funds of the Akmola Regional Local History Museum. The project started on March 12, 2019 in the Zhaksy district. The next stage of the project took place on March 26 in Esilsky district. Work continues on the project "Ishim: from source to mouth", collecting materials on the museum project "The History of Independent Kazakhstan in Museum Collections".

The main indicators of innovation activity of enterprises and organizations on technological innovations in Kazakhstan will be considered in Table 1.

Table 1 - The level of activity in the field of innovation, in %

Region	2016r.	2017r.	2018r.	Deviations 2018. by 2016.
Kostanay	14,5	11,2	11,3	-0,22
Mangystau	4	4,1	3,5	-0,13
Turkestan	5,9	6,6	5,3	-0,10
Shymkent	7,5	6,6	7,2	-0,04
Kyzylorda	11,7	11,2	11,4	-0,03
Atyrau	8	8,5	8	0,00
North Kazakhstan	10,6	11,3	11,2	0,06
Zhambylskaya	10,6	10,8	11,3	0,07
NurSultan	13,2	13,6	14,4	0,09
Akmola	6,8	7	7,5	0,10
Almaty	6,9	7,8	8,1	0,17
Karaganda	9,2	10,6	11,1	0,21
West Kazakhstan	4,1	3,6	5,3	0,29
East Kazakhstan	11,5	14,9	15,1	0,31
Aktobe	7	9,3	10,1	0,44
Almaty city	4,7	7,6	7,7	0,64
Pavlodar	4,8	6,5	8,7	0,81

The highest level of activity in the field of innovations is observed in Pavlodar region by 0.81%, in Almaty by 0.64% and in Aktobe region by 0.44%. The lowest innovative activity in the Kustanai region is a decline to minus 0.22%.

When developing the business sphere of Akmola region, it is necessary to pay special attention to tourism, as one of the most promising sectors of the regional economy. In this part, further development of tourism and transport and logistics infrastructure, as well as the implementation of public-private



partnership projects is required. Thus, the first republican youth educational camp opened in the Akmola region. A large-scale event is aimed at stimulating the creative and business activity of young people.

Employees of the Kokshetau History Museum within the framework of the project “Tugan Kalam-Kazynam” conduct interactive lessons for students of secondary schools and college students in Kokshetau. Center for the Protection and Use of Historical and Cultural Heritage for 2019-2021. 3 projects were adopted: “Kökshe zhiriniң ғылымымдеpi”, “Kazynaly Kazba - ult ndylygyy”, “Eskertkishter - ate marasy”.

Within the framework of the project “Auyl - ate besigi”, more than 60 events were held. For example, in the city of Kokshetau, the grandmothers club “Asyl namazynam” was opened. In Tselinograd district, the opening of the center of the family, the center of active longevity. In a number of districts, a marathon “Zhastardyk rukhani zhany-ruzholy” was held.

Thus, in the Akmola region in the future, as part of this project, it is planned to create training centers for dairy farms, a single feed center and a separate production unit for managing the reproduction of the herd in dairy farming. Full digitalization of the technological process will allow introducing international standards for the management of dairy farms. These are the index of breeding value of breeding stock (TPI), herd reproduction management program (ALTA GPS), maintenance of breeding stock and breeding stock through the program DC 305 and others.

Representatives of the technology industry continue to actively discuss the blockchain, and organizations - to explore ways to benefit from its implementation. Companies are concerned about whether the block chain can improve the security and reliability of their supply chains and financial transactions. Right now, they are deciding whether this technology is right for them, whether they have the right infrastructure, systems and services for its operation. Next year will be a turning point in the practical development of this technology. Today we come to the understanding that block chain is an effective tool where the distribution and integrity of data are essential.

## CONCLUSION

The main measures are: stimulating innovation by creating organizational and economic conditions; prioritizing innovation development; the formation and development of innovation infrastructure; increasing the overall innovation activity in the country, including the promotion of the development of high-tech and knowledge-intensive industries; promotion of domestic innovation in foreign markets; international cooperation and attracting investment in the field of innovation, including the acquisition of innovative technologies; reorientation of production to resource-saving technologies, the production of environmentally friendly products; creating conditions for innovation; information support and promotion of innovative achievements; creation of conditions for the exchange of information and experience between the subjects of innovation in the development and implementation of innovative projects.

All projects will be implemented using modern production technologies and processing of agricultural products based on high-performance equipment from leading manufacturers from Germany, Holland, Israel, and Russia.

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## АКМОЛА ОБЛЫСЫНЫҢ ИННОВАЦИЯЛЫҚ ТРЕНДСІ

**Аннотация.** Авторлардың пікірінше, Ақмола облысында инновациялық өңірлер инновациялық дамудың барлық позицияларында көшбасшы болуға мүмкіндік береді, ал республикада инновациялық қызметті мемлекеттік қолдау инновациялық әлеуетті дамытуға бағытталған; жалпы ішкі өнім құрылымында жоғары технологиялы өнімдердің үлесін арттыру. Инновациялық дамудың басымдықтары қажет ұйымдастырушылық және экономикалық жағдайларды жасау арқылы инновациялық қызметті ынталандыру, отандық инновацияларды сыртқы нарықтарға шығаруға, халықаралық ынтымақтастықты орнатуға және инновациялық қызметке қосымша инвестицияларды тартуға мүмкіндік беретін жоғары технологиялық және білімге негізделген өндірістердің көмегімен инновациялық инфрақұрылымды дамыту жолдары құрылды өндірісті ресурс үнемдейтін технологияларға қайта бағыттау арқылы, Органикалық өнімдер. Бұл зерттеу немен аяқталды.

**Түйін сөздер:** инновациялар, үрдістер, аймақ, бизнес, индустрия, инвестициялар, блокчейн, стартаптар.

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**ИННОВАЦИОННЫЕ ТРЕНДЫ АКМОЛИНСКОЙ ОБЛАСТИ**

**Аннотация.** Инновационные тренды, по мнению авторов, в Акмолинской области позволяют региону стать лидером по всем позициям инновационного развития, при этом Государственная поддержка инновационной деятельности в республике направлена на развитие инновационного потенциала; увеличение доли высокотехнологичной продукции в структуре валового внутреннего продукта. Стимулирование инновационной деятельности путем создания организационных и экономических условий, для чего необходимо определены приоритеты инновационного развития, сформированы пути развития инновационной инфраструктуры при содействии высокотехнологичных и наукоемких производств, что позволит отечественным инновациям выйти на внешние рынки, наладить международное сотрудничество и привлечь дополнительные инвестиции в сферу инновационной деятельности с переориентацией производства на ресурсосберегающие технологии, производство экологически чистых продуктов. О чем более подробно было сделано данное исследование.

**Ключевые слова:** инновации, тренды, регион, бизнес, промышленность, инвестиции, блокчейн, стартапы.

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