



ON THE DIGITISATION OF THE ONE BELT, ONE ROAD PROJECT

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1. Opportunities for digitisation of the One Belt, One Road project

In chronological order, the evolution of the development of the strategic concept “*One Belt One Road*” reflects the process of its transformation. This strategic vision was initially presented in the People's Republic of China in 2010 as a proposal to merge the joint projects “Economic Belt of the Silk Road” and the “21st Century Maritime Silk Road”.

At its initial stage, the Belt and Road program was considered mainly a mechanism for the development of the western regions of China, including building up cross-border cooperation with the countries of Central Asia.

It later became the Belt and Road High Level International Cooperation Forum organized by the Chinese government. It consists of three parts: the opening ceremony of the forum, the round table summit and the summit.

Later, the strategic project "One Belt, One Road" combines two global strategic directions:

(i) *Economic Belt of the Silk Road.*

Within the framework of the Silk Road Economic Belt project, the creation of three trans-Eurasian economic corridors is being considered: northern (China - Central Asia - Russia - Europe), central (China - Central and Western Asia - Persian Gulf and Mediterranean Sea) and southern (China - South- East Asia - South Asia - Indian Ocean);

(ii) *21st Century Maritime Silk Road.*

The 21st Century Maritime Silk Road, or commonly just Maritime Silk Road (MSR), is the sea route part of the Belt and Road Initiative, which is a Chinese strategic initiative to increase investment and foster collaboration across the

historic Silk Road. The project builds on the maritime expedition routes of Admiral Zheng He. [1, pp.68-69]

The 21st Century Maritime Silk Road project includes the creation of two sea routes: one route leads from the coast of China through the South China Sea to the South Pacific region; the other involves connecting the coastal regions of China and Europe through the South China Sea and the Indian Ocean.

At present, China has signed cooperation agreements under the Belt and Road Initiative with 127 countries and 29 international organizations.

The new stage in the development of the strategic initiative “One Belt, One Road” - version 2.0 includes the following new moments:

Firstly, taking into account the problems that have arisen in the practical implementation of this initiative;

Secondly, there is an increased emphasis on the internal aspect of this initiative;

Thirdly, this is a comprehensive theoretical and methodological study of the initiative, contributing to its presentation as a concept that can become the basis to realize the “Chinese dream” of revival China as well as a model for the global economy and the system of international relations;

Fourthly, following the main trend of the world community in the formation and development of a digital society and economy, the model of the “*Digital Silk Road*” is being put forward. [2, p.71]

The accomplishments of Chinese tech giants such as Alibaba, Huawei and ZTE are enabling China to build a digital world along all the routes of the New Silk Road.

First of all, this is the development of Chinese e-commerce, which, according to the Ministry of Commerce of the PRC, already occupies about 40% of the global Internet commerce market.

The digital leader, China's largest Alibaba Group, has launched the eWTP, a global electronic trading platform that will connect SMEs along the Belt and Road route and simplify import and export procedures. Another major player in the digital Silk Road is the Chinese B2B platform DHgate, the main goal of which is to simplify e-commerce and its introduction into the businesses of several developing countries.

The Digital Silk Road project is a modern instrument of China and a logical continuation of the new industrial revolution and the implementation of

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the national strategy “Made in China - 2025” (the Chinese equivalent of German Industry 4.0), the successful implementation of which will allow China to establish itself as an innovative power. The implementation of this project by China opens up new opportunities for Russia, primarily in terms of bilateral trade and investment. The main thing is to get integrated into the aforementioned system on favorable terms for the country. [3]

Following the trends of the “fourth industrial revolution”, the core of which is the digital component, the “belt and road” receives the characteristics of the “digital silk road”. The overall strategy for the development of e-commerce includes the creation of platforms for cross-border e-commerce, as well as the development of the Chinese manufacturing industry based on the specialization of cloud logistics and Internet finance.

Consequently, the project “One Belt, One Road - 2018”, “Digital Silk Road” is a symbiosis of the digital economy with the initiative "One Belt, One Road". The Digital Silk Road has already become an important component of the Belt and Road construction.

The “Internet +” strategy is aimed at the comprehensive and comprehensive use of information networks for the development of society. By 2025, Internet + should become an economic model and the main stimulus for socio-economic development and innovation. In fact, the essence of the “Internet +” concept is the digitalization of traditional production, as well as the development of new information technologies and models.

The inclusion of “Internet +” serves to integrate mobile and cloud technologies, as well as IoT technologies and process a large amount of information into modern production.

An important result of the inception of *joint ventures* for Russian participants is the possibility of Russian goods entering the Chinese markets. Alibaba, using the capabilities of the Ali Express platform, allows Russian small and medium-sized businesses to participate in foreign export expansion by simplifying the system of sales, purchases, logistics and payments (the main reason being to provide a competitive product)

For instance, while expanding its expansion into trade, Alibaba has been considering a joint venture with Russian partners since 2015. At the

Vladivostok Economic Forum in September 2018, an agreement was signed on the creation of a joint venture in the field of e-commerce, including Alibaba and Russian companies Megafon, Mail.ru Group (owner of the Pandao marketplace) and the Russian Direct Investment Fund (RDIF) with corresponding shares (48% - the owner of the JV Alibaba, 24% - Megafon, 15% - Mail.ru, 13% - RDIF). [2, p.68]

China is the world leader in the creation and operation of high-speed highways. Chinese companies are looking to leverage digital opportunities to deliver a suite of 3 PL services. (3PL, Third Party Logistic - providing comprehensive services from delivery and address storage to order management and tracking of goods)

Conclusion: The digitalization of the “Silk Road” is proceeding not only through electronic international trade and its logistic component, but also in a number of other areas, in particular, in the field of the Internet of Things and A.I. The accumulated skills and resources of these technologies in the PRC are also the basis for overseas expansion.

The implementation scheme presupposes the formation of just such advanced, “*smart enclaves*”. The influence of these enclaves (cities, zones, growth areas) on adjacent territories, both in China and on the trajectory of the entire Silk Road, will lead to the emergence of megacities and mega-agglomerations. Probable structure: mega-city - industrial ring - a branch of the “silk road”.

China considers an important area of activity on the routes of the Digital Silk Road, the introduction of elements of *artificial intelligence*. In mid-2017, China adopted a strategy to achieve leadership in artificial intelligence by 2030. A plan for the development of a new generation of artificial intelligence is being implemented, construction of four state-owned open innovative artificial intelligence platforms based on an automated “city brain”, medical imaging, intelligent sound and autopilot has begun.

The process of building the structure of the Digital Silk Road is also going through the cooperation of Chinese companies with *Russian banking organizations*, positioning themselves as developing Internet companies striving to create a full-fledged digital ecosystem. For example, Sberbank of the Russian Federation has been actively working on digital transformation in recent



years. In this regard, he has partnered with many key digital tool providers, including Huawei, which is helping him modernize IP networks.

The Russian company Yota Devices, which manufactures *Yota Phone smartphones*, sold another 25.1% of the shares of China Baoli in 2018. Prior to that, the Chinese corporation already owned 40% of the Russian company. As a result, China Baoli became the largest shareholder of the Russian company with a share of 65.1%.

An example of cooperation with Huawei is the activities of the *Russian corporation CROC* (an international IT company, one of the leaders in the Russian information technology market, implements projects in 42 countries around the world, creating a new digital ecosystem of society), which implements projects based on the developments of a Chinese partner to benefit Russian telecom operators, financial and transport companies, as well as a number of industrial enterprises. One of the last major joint projects with Huawei was the creation of a single multiservice network uniting 16 geographically distributed divisions from Kaliningrad to Sakhalin.

The new Digital Silk Road will geographically cross Russia and will include convenient services for shippers and freight carriers - a *single electronic seal* and fully electronic declaration using blockchain technology. The service has already been tested on the basis of IT platforms of the state system "Platon" and Russian Railways. Spored expert, the purpose of the electronic seal service is to create a single trusted space at the first stage with the EAEU countries, and in the future with partners such as China and India. [See for details: 4, p.52]

Countries entering Central Asia - Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, through which its routes pass, as well as Turkey and Serbia - expressed their readiness to incorporate the Digital Silk Road project.

For example, the Digital Silk Road project is coming to *Kyrgyzstan*. Through the territory of the republic, it is necessary to continue the technical network intended for the construction of the Digital Silk Road in 2 stages:

Firstly, the expansion of the network of fiber-optic transmission lines passing from China to Europe, through the territory of Kyrgyzstan;

Secondly, the joint construction of high-tech logistics centers with China and the development of

joint e-commerce.

Chinese companies will directly participate in the project. For example, Huawei supplies network equipment to Central Asian countries. The digital transformation needs of one country can be divided into four distinguishable levels: [4, p.53]

The *first level* - the development of ICT infrastructure and building the foundation for the digital economy;

The *second level* is security in both the physical world and in cyberspace, which is a guarantee of development;

The *third level* is to provide support to various industries in digital transformation;

At the *highest level*, it is the implementation of integrated management at the city and country levels with artificial intelligence.

The *Republic of Uzbekistan* has developed a "Strategy for the country's innovative development for 2019-2021" and a "road map" for its implementation.

Cooperation between the Republic of *Kazakhstan* and China is carried out through the development of cross-border electronic commerce on the territory of the Republic of Kazakhstan using the potential of the International Center for Cross-Border Cooperation (ICBC) "Khorogos". On the territory of the ICBC, a network control system will be introduced, which will allow the keeping of a complete record of the movement of goods and citizens, as well as improving the quality of logistics, provided on the basis of the "one window" principle. This will increase the transit potential of Kazakhstan and will facilitate the export of Kazakhstani products of small and medium-sized businesses to China through a cross-border e-commerce platform and deliver goods to end customers in the B2B (business - to - business) and B2C (business - to - consumer) formats. In addition, Kazakhstan will launch a global ICT talent training program "Seeds for the Future".

The global Chinese platforms Alibaba, Taobao and Ali Express are widely represented worldwide. At the level of Russian-Chinese relations, the task was set to bring bilateral trade to the level of 200 billion dollars by 2025, according to the forecast of the Russian-Asian Union of Industrialists and Entrepreneurs. That is, the average growth should be 10.4% per year, which is possible only through the introduction of new drivers, such as the qualitative development of trade



infrastructure. [3]

The accomplishments of Chinese tech giants such as Alibaba, Huawei and ZTE are enabling China to build a digital world alongside the entire New Silk Road route. Digital Leader, China's largest Alibaba Group, has launched an initiative to create the eWTP, a global electronic trading platform that will connect SMEs along the Belt and Road. Another major player in the digital Silk Road is the Chinese B2B platform DHgate, the main goal of which is to simplify e-commerce and its introduction into the business of a number of developing countries.

In the highest degree, this process is the natural course of development of the People's Republic of China. According to Tsvetkova N. N., "In the new integration project, China is actively using its competitive advantages, in particular, the fact that today it has become the largest supplier to the world market not only of household appliances, but also of network equipment." [4, pp.54-55]

At the end of 2020, China put forward 4 proposals that can help the logistic connection between the EAEU and the Chinese Belt and Road:

To carry out the construction of a logistics network of express trains by creating railway ports and foreign warehouses.

Build up a network of industrial or tech parks around ports and warehouses.

Create a technical support system for express trains.

Create new infrastructure, for example, a 5G platform for artificial intelligence and refrigerated transport quarantine systems. [5]

The digitalization of the project has very significant projections that will have an impact on the global infrastructure. For example, according to Sajjad Hosain and Saddam Hossain, the project also includes the Digital Silk Road initiative to connect the world digitally, connecting 65 countries and an estimated 4.4 billion people, which account for over 63% of world population and 30% of total GDP. [6, p.124]

In conclusion

First, the Great Silk Road played an important role in the development of economic and cultural ties between peoples. The Russian Federation and all countries of Eurasia and Europe are interested in the project.

Second, cooperation with China within the framework of the One Belt, One Road project

promises Russia significant economic and trade prospects. Geographically, she is located between China on the one hand and the European Union - on the other. In this sense, Russia finds itself between two centers of economic power through high technologies - European and East Asian, which, in addition to China, includes Japan and the Republic of Korea.

Third, cooperation in global projects will create new opportunities for the Russian Federation to participate in global chains that create new values that are currently in too deficient.

2. Cooperation in the implementation of next-generation 5G networks

Experts believe that the new generation of 5G networks solve only 3 tasks:

First, significant speed increase, theoretically up to 20 Gbps. For example, an employee of the "Samsung IT Academy" in the company's official blog on Habra explains to readers the reason for the increase in speed in 5G networks as follows: "Everything is simple: we increase the frequency, reduce the wavelength – and the data transfer rate becomes many times higher. And the network as a whole is being unloaded.";

Second, significant increase in network capacity with the ability to connect many more devices to the Internet. For example, modern 4G networks cannot cope with the high load. At concerts, sports matches and other public events, the quality of communication drops noticeably, and the Internet disappears altogether. 5th generation networks solve capacity problems by delivering over 100x the network bandwidth;

Third, 5G technology can reduce latency to 1 ms. For example, if a car is traveling at a speed of 120 km / h and suddenly an emergency occurs, it will take a person about 700 ms to react. During this time, the car will travel about 30 meters, which can cost the driver's life. On 4G networks, due to the delay, the car would have driven about 2 meters before making a decision. For 5G networks, this distance would be reduced to 10-15 centimeters. [For technological aspects see in details 7]

According to experts' forecasts, the development of the "fifth generation" in Russia will continue. The average annual growth rate for the 5G market in the Russian Federation may reach 74%, exceeding the world average (34%). According to



the GSMA¹, by 2025 the number of 5G users in Russia will reach 80% of the population. Therefore, it is not surprising that the locomotive of the transition to new standards are telecom operators - structures that also actively stimulate the development of the fifth generation of startups. [8]

The Moscow government is closely cooperating with Beijing in various fields of economy, culture, education, development and improvement of urban transport, creation of “smart city”, as well as 5G technologies. New pilot zones will appear in Moscow City and Luzhniki.

Russian MTS and Chinese Huawei companies will develop 5G in Russia. The plan of the two companies is the introduction of 5G and IoT (Internet of Things) technologies and solutions in Russia on the existing infrastructure of MTS, the development of the operator's commercial LTE network to the 5G-ready level, the launch of test zones and pilot 5G networks for various uses, including infrastructure facilities.

One example for such activities on the part of operators is the 5G Center, launched by the Russian IT company MTS in October 2019. At the moment, the Center is working with nine startups, including two foreign ones. This list includes:

- Tsuru - 5G drone control solution;
- VoltBro - a telepresence system based on a domestic virtual reality helmet, a mobile platform and 5G data transmission;
- BID Technologies - a system for automatic quality control of serial industrial products using artificial intelligence technology;
- Visorcam is a service for transmitting sports broadcasts from the first person (an athlete or a judge) using cameras built into sports equipment;
- Ariellium is a cloud-based platform for developing, generating and delivering AR content;
- LoudPlay - a platform for streaming games and applications;
- RobotsCity (Netherlands) - a universal cloud platform for controlling robots;
- Null Real - a platform for accurately locating users indoors in augmented reality;
- Doubleme (UK) is a holographic communication system that works with AR.

Another Russian company, MegaFon, is counting on the full-scale deployment of 5G and,

among other things, is actively including young people in this. Last year, MegaFon held the first international 5G video call, as well as an eSports tournament using 5G and cloud gaming. The company opened a 5G test zone beyond the Urals and Russia's first 5G laboratory in St. Petersburg, where students of technical specialties and IT directions will study the operation of fifth-generation networks and develop new services.

The work on the creation of joint projects in the field of innovation is being carried out within the framework of the Beeline Innovation Lab. Beeline has its own 5G pilot zone in Skolkovo, where Russian startups can test their solutions. In October 2019, within the framework of the Digital Experience nomination of the GoTech 2019 technology start-up competition, Beeline chose two projects: the first startup, Cluster, is developing smart home systems, and the second is the FlyPenny mobile gratitude monetization service.

3. Cooperation in studying the experience of China in the implementation of the “smart city” project

The concept of a smart city is interpreted differently, and there is not a single pair of identical phrasing. For Eduard Lysenko - For Moscow, the “smart city” concept has for a long time already been not a theory, but a practice. Without the introduction of modern technological solutions, the management of a multi-million megacity becomes simply impossible. That is why digitalization affects all sectors of the urban economy and the social sphere of Moscow. [9]

According to Dorota Sikora-Fernandez and Danuta Stawasz – a “smart city” is a novel concept aimed at managing cities (urban areas) in a modern way, using the latest technical means offered by advanced technologies, according to the environmentally-friendly principles and while maintaining the tendency to save resources and achieve the expected results. [10, p.86]

Ultimately, the concept of a “smart city” focuses on improving the city management, the quality of life and doing business.

The smart city of “*Sino-Singapore Tianjin*” is being built 150 kilometers from the capital of China, Beijing, the result of joint cooperation between China and Singapore. The city being created realizes the intentions of the two states to combat

¹ The GSM Association is a trade organization that represents the interests of mobile operators around the world.



climate change, protect the environment and conserve resources.

The smart city is located 45 kilometers from the city of Tianjin, which has an excellent transport network, including, in addition to several express train lines, an airport from which international flights are carried out.

The smart city is a platform for innovation and the introduction of new technologies in the fields of ecology, energy conservation, emission reduction, green building economics and recycling.

The development of the *smart city indicator system* was carried out with the involvement of international experts. The system consists of four qualitative and 22 quantitative categories, which are further broken down into 51 key factors and 129 key components, 275 targets and 723 measures to control the implementation of implemented solutions.

The following are examples of indicators: [11]

1. *Economy*

The number of scientists and researchers per 10,000 people;

Assessment of the city's development for compliance with the regional economy.

2. *Ecology and environment*

Air quality level (SO₂, NO_x) in relation to the maximum permissible concentrations according to national requirements;

Level of surface water quality based on national requirements;

Assessment of noise in different functional areas;

Analysis of the impact on natural water bodies and wetlands;

Analysis of vegetation used for landscaping for its locality;

Assessment of the impact on the local natural environment.

3. *Resources*

– Assessment of water consumption for domestic and technical needs;

– Estimation of greenhouse gas emissions (in tons of CO₂); relative to Gross Domestic Product (in terms of million US dollars);

– Assessment of objects within the city, certified according to green standards;

– The area of publicly available green areas per capita;

– Estimation of daily water consumption per

capita;

– Estimation of daily waste generation per capita;

– Accessibility of public spaces (cultural objects, sports infrastructure available to everyone) within a radius of 500 m walking distance;

– Arrangement of a barrier-free environment;

– The level of cleaning of harmful and hazardous solid waste;

– The level of coverage of the city with municipal services;

– The share of energy obtained from renewable energy sources;

– Proportion of clean water used that is not from the city grid.

4. *Society*

Share of used green vehicles;

The share of municipal housing;

Determination of the balance of jobs (relative to people living in the city);

Compliance with regional principles and policies;

Harmony of social and cultural life.

It is considered that “Smart City” is a system of city service resources that are used as efficiently as possible to provide maximum convenience for its residents. It requires close connection between smart city projects (street CCTV cameras, public services, smart transport systems and others) in a megalopolis.

For example, borrowing the Chinese experience in building smart cities, Moscow covers the following digital parameters: [12]

i. *City Wi-Fi and mobile internet*

There are many points with free Wi-Fi access in Moscow streets, parks and pedestrian areas, including over 2000 located inside the Garden Ring and in Moscow parks;

ii. *Smart transport*

Moscow's intelligent traffic control system is an important element in a “Smart City”. In Moscow, this system includes more than 2000 traffic lights, 3500 traffic detectors and 2000 CCTV cameras;

iii. *E-services*

Moscow was the first Russian region to launch a website where the public can pay various fees, attain city services, and that moved permits and documents to the cloud allowing users to receive several services in one package (6.4 million Muscovites use online public services, 222 services are available online, including socially important



ones, and over 165 million applications filed online during);

iv. Visit a doctor online

The Unified Medical Information Analysis System (UMIAS) was launched in Moscow in 2011. It can be used to find the closest medical center, arrange a doctor's visit or get sick leave papers. UMias works at 678 medical centers, unites 21500 doctors and 9.5 million patients as well as 359 million arrangements and provides for over 500000 transactions every day. About 700000 people use UMias to arrange to see a doctor every week.

v. City and active citizen

Muscovites can directly interact with the Moscow government and influence the city's life. The Active Citizen online referendum system allows citizens to give an opinion on various issues.

vi. Electronic school

The Moscow Electronic School project started in September 2016. The main elements include digital school records and online registration as well as an electronic library with textbooks and lesson scenarios.

vii. Video analytics

Moscow is one of the world's top ten cities in the number of CCTV cameras. There are over 146 thousand cameras installed in entrance halls, courtyards, public places and educational institutions. Recordings are used to solve 70 percent of violations and crimes.

viii. World recognition

It is fair to call Moscow a smart city, and this title is recognized by the global community. PricewaterhouseCoopers included Moscow in the top five megalopolises that are ready for innovation. The adopted document "Smart City - 2030", [13, pp.81-88] which regulates the implementation and adaptation of information and communal technologies in Moscow, was preceded by several city target programs. It is necessary to note two of them. The first, "Electronic Moscow" was implemented in the period from 2003 to 2011 and aimed at creating city-wide information systems for the subsequent application of information and communication technologies in the context of urban governance. The second, "Information City" was focused on the use of information and communication technologies in order to improve social security and safety, transparency of management.

4. Chinese experience in the development of the artificial intelligence industry - the basis for cooperation

Based on the concept of Andreas Kaplan and Michael Haenlein, Jinghan Zeng specifies that there are three types of artificial intelligence: narrow, general and super.

Narrow artificial intelligence, also called weak AI, refers to digital technologies with a narrow range of ability that is dedicated to specific tasks such as the iPhone virtual assistant Siri, drone robots and self-driving cars. It is the most basic generation of AI and performs below human level. The current state of AI development belongs to this narrow AI generation.

General AI, also called strong artificial intelligence, is a more advanced generation that has yet to be achieved; it will have cognitive abilities that can perform as well as human intelligence.

Super AI, which is still hypothetical - represents the most advanced generation of digital technology currently conceived; it will have strong self-awareness and be able to surpass human intelligence in all areas. [14, pp.15-25]

In terms of the level of development of artificial intelligence technologies, China is now in second place after the US, and in ten years it intends to become the undisputed world leader in this area.

It is believed that the main advantage of the PRC in the global race for dominance in the field of AI (in addition to the giant centralized financial investments in the industry) is the huge amount of data generated by Chinese users.

The weakest point, according to the Chinese authorities, is the level of human capital development. To improve its quality, the PRC stimulates international scientific and technological exchanges, primarily with the United States, and also pays special attention to the training of local personnel.

The PRC's *official priorities* for the development of artificial intelligence include:

i. Development of high technologies and industrial production (See: State program "Made in China - 2025");

ii. Active implementation of the Internet + initiative;

iii. Artificial intelligence is considered as a priority area of the state strategy (See: "Guiding opinions of the State Council of the PRC on the



active implementation of the Internet + initiative”);
iv. To accelerate the use of information and communication technologies for the development of smart industry;

v. *Development of artificial intelligence of a new generation.*

China's Next Generation Artificial Intelligence Development Program sets *three strategic goals* for the country:

First, by 2020, China's AI should be on par with similar industries in major developed countries. At the same time, spending on the AI industry itself should amount to \$ 22.5 billion, and on the development of related industries - more than \$ 150 billion;

Second, by 2025 it is necessary to achieve leading positions in some specific areas of AI. The fundamental industry will accumulate \$ 60 billion, related - \$ 745 billion;

Third, by 2030, China is to become the main global center for innovation in AI, by which time investments in the fundamental industry will amount to \$ 150 billion, in related industries - \$ 1.5 trillion. [15]

To achieve these *strategic objectives*, it is necessary:

a. To stimulate the development of intelligent products: connected cars, intelligent robots and unmanned aerial vehicles, face and voice recognition systems, machine analysis of medical images;

b. A breakthrough in key fundamental technologies, primarily in the development of chips and neural networks, as well as open-source platforms;

c. Key artificial intelligence technologies need to be widely implemented in production processes.

Four main factors for the development of artificial intelligence are launched, which include: the largest amount of data in the world; development and creation of algorithms; trade ecosystem; and related industries in China. It should be emphasized that artificial intelligence in China is dominated by three technology giants: Baidu, Alibaba and Tencent (private non-profit companies that are closely associated with the government).

The fundamental technologies should become the main direction of development of AI in China. The PRC is highly dependent on imports from foreign chips and microcircuits, mainly

American ones. In the country itself, only 16% of those consumed are produced. At the same time, annual imports amount to \$ 200 billion, which exceeds even Chinese oil imports.

To ensure the training of qualified personnel and attraction of highly qualified specialists from abroad, China has taken a tremendous leap forward in registering intellectual property for AI development. In five years, the number of Chinese AI patents has grown tenfold: in 2018, the country filed 30,000 AI patent applications - 2.5 times more than the United States.

Encouraging local companies to merge and take over foreign partners. In 2008, the State Council of the People's Republic of China published a large-scale program “Thousand Talents”, according to which high-class foreign scientists who were ready to move to China were given large grants (up to 1 million yuan) for their own research and development without unnecessary bureaucratic formalities.

The *New framework* for the development of artificial intelligence standards is presented in six categories:

- concepts and reference architecture;
- platforms and support (smart sensors, chips, cloud computing, big data);
- key technologies (face recognition, voice recognition, computer vision, augmented reality, etc.);
- products and services (intelligent robots, autonomous drones, self-driving cars);
- applications (smart manufacturing, smart logistics, smart cities, etc.); and
- safety and ethics are cross-cutting in all categories.

In light of the above, two conclusions can be drawn, namely:

First conclusion, the digitalization of the global economy and the rapid development of application areas such as machine learning, powered by big data have given China the opportunity to make a technological breakthrough in AI. In this aspect, the ultimate strategic goal is to make China a world leader in the fundamental field of AI and related industries fully achievable.

As a second conclusion, in the supplying of chips and microelectronic components, without which it is impossible to develop not only AI products, but also the entire digital infrastructure, China relies on foreign partners, and those, in turn,



create products based on American technologies.

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