

## RISK MANAGEMENT IN THE MODERN ERA: PROBLEMS AND SOLUTIONS

Butaboyev Makhammadjon Tuychiyevich  
Professor, Department of Economics,  
Fergana State Technical University, Fergana, Uzbekistan

Rakhmonazarov Pakhlovon Yigitaliyevich  
Lecturer, Department of Economics,  
Fergana State Technical University, Fergana, Uzbekistan

### Abstract

Risk management has become an essential aspect of strategic planning in various industries due to the increasing complexity and uncertainty in the modern world. This paper explores contemporary challenges in risk management, including financial risks, cybersecurity threats, environmental concerns, and operational uncertainties. Additionally, it evaluates effective solutions and strategies to mitigate these risks, such as the integration of advanced technologies, data-driven decision-making and adaptive risk assessment frameworks. The study highlights the importance of a proactive approach, continuous monitoring, and regulatory compliance to enhance resilience against potential risks. By adopting innovative strategies, organizations can ensure sustainability, stability, and long-term success in an unpredictable environment.

**Keywords:** Risk management, modern challenges, risk mitigation, cybersecurity, financial risks, adaptive strategies, data-driven decision-making, regulatory compliance, business resilience.

### Introduction

Digital technologies are penetrating all aspects of our lives, new industries are emerging, and employees are making careers, but the world is afraid of uncertainty.

Business entities operating in the Uzbek economy use the services of computer technologies. Three types of cyber threats associated with computer technologies, information risks, and technical and computer risks, are currently growing very rapidly. Economic losses resulting from risks to businesses, organizations, and companies worldwide are estimated at 6-8 trillion dollars.

Risk is business, business is risk. The market is competition, trade relations between sellers, buyers and marketing services. Companies use technology to develop competitive products. Skilled personnel are not enough. Ecosystems consist of: finance, currency, partners, suppliers and industry. The Internet is about people, information, and malware. ACT refers to the speed, reliability, quality, and ability to share and transmit information. In these processes, various risks are amplified. The digital world is full of uncertainty - and risks.

Risk can be identified, managed, assessed, mitigated, and insured, but risk cannot be eliminated. Risk and business are two sides of the same coin.



Cyber risks are targeted attacks by individuals (programmers) that cause economic damage to a company's operations. Cyber risk is a multifaceted area, each of which requires its strategy. The term "risk" has many meanings, and when a risk occurs, a company can lose or retain its income. Digital risk is an unexpected danger arising from an employee's inexperience, incomplete understanding of digital signals, information, and numbers, and insufficient computer literacy.

Information risk is that in many cases there is a huge flow of information and our knowledge is not enough. On the other hand, risks arise due to our dependence on highly complex information technologies. Currently in the world 48-50 zibytes There is information, we know 20 per cent of it, it is classified information, 80 per cent is unknown to us, and each citizen receives 250-260 mb/s of information. Of course, a person cannot fully absorb this information. Because there is not enough time. The flow of information is increasing by 30 per cent per year. Currently, humanity cannot fully separate information from numbers, so information security is considered the most dangerous threat.

Cyber risks include theft of money, intellectual property, trade secrets, and data privacy. As well as the compromise of data and passwords, the theft of information and its use for malicious purposes. Fraud, the falsification of personal information, and the questioning of a company's activities. Illegal interference in a company's operations puts pressure on its leaders and steals valuable information. Hackers destroy and falsify company data by hiring.

Currently, cyberattacks are developing and expanding, cyberattacks are considered consultants for information and communication technology specialists and interventionists, as a result of which organizations such as Yahoo, CONIYa, Ashley Madison, Rusmetal, and Sberbank are suffering economic losses. Settlements between Russian companies cooperating with European companies (depending on the willingness of the partner) are carried out in bitcoins. Bitcoin cryptocurrency, which is used to make fraudulent payments, can cause significant economic damage, even if it is not controlled by banks or financial institutions. Companies concerned about cyber risks have created an information matrix against cyberattacks and have achieved great success as a result.

Now the theft of information through hacking of the company's website has decreased by 50%. The company's communication policy has been transferred to a biometric system. As a result of this (biometric protection), Amazon, Akamai, Gazprom, and Rustal are facing DDoS attacks. Microsoft Windows system has developed its own Microsoft Risk project, the project works using biometric protection.

Biometric protection means that if an outsider wants to gain unauthorized access to a company's data, it will have to be done through a social network. This, of course, is not possible. In Uzbekistan, matrix protection is being created based on public-private partnerships to fully protect the data of enterprises, organizations and citizens from cyber threats. The purpose of the matrix is to identify and neutralize any type of risk. Is it the operator, the information and communication technology specialist, the board of directors or the information service? The matrix answers this question. However, many economic, financial, ecological, social and econometric models are at risk.

Currently, even risk algorithmization cannot stop risks. Although risk insurance is very beneficial, there are economic losses.



Today, digitization is being implemented in all sectors of industrial enterprises. For example, energy and power services are being programmed. Here, the digitization of workplaces in the processes of data collection, processing and transmission, the study of fraudsters who control computerization, and the integration of information networks can take place without operator control. In this case, there is a risk of using false information. As a result, the company will make the wrong decision and lose revenue, which will lead to bankruptcy. To prevent such situations, the company uses calculators that ensure information security.

Digital risk is a complex set of measures that cost a company a lot of money. The first step is to stop external pressure on the company's operations, which prevents hacking attacks, fake news and Trojan attacks.

The danger of such threats is that they come in all sorts of forms and are constantly changing, with new and harmful programs appearing every day.

### **Materials and Methods**

Every day, hundreds of unlicensed programs penetrate Russian industrial enterprises, break corporate codes, and antivirus programs, steal information from databases, and cause great damage. For example, valuable information of citizens stored in Sberbank was lost, and Sberbank paid compensation in the amount of 2.8 billion rubles. It should be noted that the current national Internet cannot fully protect the assets of state-owned enterprises, as well as the data of private companies. For this, it is necessary to rent and use cloud storage.

Today, we in Russia and Uzbekistan lag far behind Europe in ensuring information security. For example, every second computer used in Russian industrial enterprises has been subjected to a cyberattack (according to Kaspersky Lab), and 44 per cent of computers in Russia are out of service. The main goal of the digital economy is to fully satisfy the population's need for information. However, cyber risks remain when storing government data, commercial company data, and personal information. Since all economic and financial transactions are carried out via the Internet, the risk of data leakage, theft, and code hacking arises here, although economic losses are the main concern.

Cybersecurity (or computer security) is the practice and method of protecting computer systems, servers, and mobile applications from attacks. Network security is the attack on a computer network to destroy or steal malicious software and data. While the proposed design or model ensures the security of the proposed application, the proposed application is protected from criminals by neutralizing the virus hidden in the program. Information security is the complete security of information storage and transmission, how and where information is stored and transmitted. Of course, this is a matter of life and death for the enterprise. In this area, employee awareness, knowledge and experience are necessary, employees must not allow external cyber-attacks. Therefore, it is necessary to conduct training for employees in the enterprise and remind them of the rules and conditions of cybersecurity.

Uzbekistan is directing digital investments to ensure the cybersecurity of garment and textile enterprises and gas industry enterprises, as the protection of the shares and valuable assets of enterprises against cyberattacks, as well as the economic protection of the state, is considered.

Ensuring the cybersecurity of the Uzbek economy has several features and mainly consists of the following:



- financial and credit sector;
- state statistics system;
- accounting system of enterprises and organizations (regardless of ownership forms);
- automated electronic information system;
- integrates payment systems, information processing, storage and transmission (tax, finance, customs, currency and foreign economic activity).

In the digital economy (in the process of digitization), our knowledge is subject to moral obsolescence, as a result of which our knowledge partially loses its usefulness. The information society and the Internet economy were formed 10-30 years before the digital economy, and the third industrial revolution created the scientific, technical and economic basis for the digitization of socio-economic processes.

In the information society, the Internet has become the lifeblood of the economy. Over the past 10 years, a global Internet network has been created on our planet, and the relationship (dialogue) between man and machine (technology) has been formed and developed. Many people, even the entire society, have been amazed by the digital economy and reality. Because the laws and categories of traditional economics did not work in the new conditions or promoted completely contradictory ideas. In the conditions of the Internet economy, the geographical location between the producer and the consumer, the seller and the buyer disappeared. The time for delivering goods to the market was reduced, and it became possible to buy any product anywhere in the world, at any time. According to Metcalfe's law, the entire process and rules have changed their essence.

According to the Guilder curve, before the era of automation and computerization of economic and social processes, there were unknown risks. Due to the underdevelopment of our legislation, the large flow of information, and the obsolescence of personnel knowledge, the risks have acquired a hybrid nature. However, the (golden) age of the consumer, the buyer, begins, goods of various qualities, better than each other, enter the market and prices for them decrease (the Guilder curve is formed). Believe it or not, this is the logic of the development of the Internet. There is an electronic market for free goods, the highest quality goods are distributed for free on the Internet.

For example, this often happens at Facebook, Google, and Amazon, where such practices are increasing day by day. Harvard professor David Reed Metcalfe developed Metcalfe's law and studied the development of information technology in 3 periods:

1. Informing the general public, transmitting information through television on the principle of "one person for many people", informing the public about news.
2. One-to-many communication via email, telephone, and fax from feudal times to the present day.
3. GFN on groups through the Internet (Group Forming Network) provides information about the effectiveness of information delivery, and its risks, and encourages enterprises to avoid cyber risks.

According to David Reed's law, the more information and innovations are disseminated, the more effective the team will work. Here, instead of storing information on paper, storing information resources electronically reduces the risk of spreading false and fraudulent information and increases information efficiency. Currently, there are 700-800 million km of



fibre-optic communication between countries. Channels and lines have been laid, but false and slanderous information is also spreading in the information flow, and various viruses are emerging.

Electronic commerce is the second stage of the information society, as it is combined with the Internet, the seller and the buyer communicate with each other virtually (via email, mobile communication). This process is called the equivalent of telecommunications in the photonic law. From now on, all information stored on paper is stored on the Internet (computer, telephone, server).

In an industrial economy, labour productivity is decentralized, with robots performing the physical work of basic manufacturing. In a digital economy, the rapid and high-quality production of goods is secondary, and the main thing is the idea of what work is important and useful.

The decentralized Internet network is managed by a computer cluster, in which participating nodes have equal rights and operate as a network of nodes.

The traditional economy is centrally planned and subordinated to the centre. In a market economy, the market mechanism, the law of value, and competition decide. In a digital economy, they lose their essence. The price of a product is determined by the producer, then by private interests, and then by public interests.

The Fourth Industrial Revolution and the Sixth Technological Order have changed our understanding of the economy. Our ideas about society and man have become richer. The relationships between economic entities have changed.

The construction industry has changed dramatically, 3D-modeled houses are being built. In 2017, a 24 m<sup>2</sup> house was built in Russia in 38 hours. In China, plaster houses appeared on the streets and in neighbourhoods. Smart houses are being built in 4D models, there is no need to take into account 4D technology, all work will be automated and robotized.

The gap between workers with deep technical knowledge and those with superficial technical knowledge is widening. Gender inequality is increasing, men are becoming more advanced, and the sale of male professions is becoming more common. Digital literacy, information literacy, and digital competence will increase competition among employees and create a risk of unemployment because young people aged 20-40 entering the labour market are old specialists. 60-70 per cent of them need to upgrade their skills.

Risk is the possibility of a measurable, unexpected event that results in loss of income or compensation. For example, uncertainty, unusual force majeure, or a price decline may result in the loss of part of the expected profit. In this case, uncertainty or incomplete information, incomplete knowledge, or inexperience may lead to decision-making. Risk arises in a situation of uncertainty, resulting in increased costs, lost time, and reduced profits. Such situations are associated with the entrepreneur's inexperience and insufficient management competence. In an information society, big data technology, using WEB Mining, allows for a complete analysis of data, explores uncertainty, eliminates potential risks, and helps the firm achieve the expected results.



**Risk Management Methods:**

- risk prevention;
- risk neutralization;
- creation of risk funds and compensation for losses caused by risks;
- transfer risk to partners;
- risk transfer and sharing;
- financing risks, risk prevention;
- risk insurance.

**Risk assessment methods:**

- expert assessment of the damage caused by the risk;
- risk rating assessment.

Separate study of marketing risks, namely price risks, trade risks, and logistics risks.

**Effective risk assessment programs include:**

Risky Project

Welcome Risk

Perth Master

Microsoft Project.

Using these programs, you can group risks and create a register.

The most common factors that create risky situations in social and economic sectors and industries around the world are:

- Ransomware
- Phishing
- Scamming
- Cryptojacking
- Password attack
- Insider threat
- Spamming

In addition to these, programmers create several viruses to disable, corrupt, and send data.

Trojan viruses usually spread via the Internet and settle on your computer, initially appearing to be useful software. However, they serve their creator.

Worm Viruses multiply very quickly. Viruses use e-mail or other rapid-spreading mechanisms. Viruses can be installed on your computer when you open an e-mail.

Disk Viruses can make your computer stop working as soon as you turn it on.

Mark Viruses usually damage, corrupt, and stop working in Microsoft Word or Excel documents.

Operative Memory-resident viruses. These viruses reside in your computer's operating memory and corrupt data. They use another virus to execute them. They remain in the computer's memory even if the virus that helped execute them is removed, which is why they are called operational viruses.

Bootkir viruses are the most dangerous and stealthy. Even antivirus programs do not recognize them, because these viruses present themselves as operating system files.



Time bomb Viruses are triggered randomly when the time comes. For example, on April 1 (April Fool's Day), March 8, or on holidays, they prepare a "gift" for you by deleting the data on your computer.

Variable Viruses replicate themselves and change their code. These viruses are not detected by antivirus programs. These viruses corrupt databases and corrupt their code. As a result, companies (firms) suffer losses.

In 2017, the World Economic Forum was held in Davos, where the annual report "Global Risks Report" was heard. During the preparation of the report, the views of 750 experts on 30 widespread global risks in the economy were studied and recommendations were made to assess risks in the development of the digital economy and use digital technologies such as Big Data, cloud technologies, the Internet of Things, and artificial intelligence technologies in their management. It was explained that the use of IT technologies, especially in the economy, e-business and e-commerce, environmental protection, risk management methods, and the rejection of market mechanisms from the traditional economy are very important. Although financial and economic risks are common and have been studied by economists, financiers, sociologists, mathematicians, probabilists, philosophers, and ecologists, their methodologies and worldviews have lost their relevance in the digital economy.

In the information society, fundamentally new terms, concepts, attitudes, and knowledge have been formed. Adam Smith, when he studied the essence of entrepreneurial profit, noted the need to reserve a fund for risk compensation (Hazard Fund). Later, financial and economic risks were divided into three types:

- The risk associated with the purchasing power of money;
- The risk associated with capital investments;
- Risk associated with business practices.

Risks related to the purchasing power of money include inflation, unemployment, and exchange rate risks. Credit risks, etc. are also studied. Risk factors are analyzed in the above cases, and the impact of factors on risk probability, risk occurrence, and risk losses are studied and assessed under conditions of uncertainty. Thus, during the production process, there was a violation of labour discipline among employees, loss of working time, conflict between employees and managers, payment of fines, and loss of expected profits at the enterprise.

Perfectionism - using a self-management system in the work process to prevent risk, MacDonalds created a new product, ideal service, ideal website, ideal system, ideal advertising and ideal Internet portal in the business and prevented the risk of losing the working time fund. The company developed the Rule of 72 in sales and effectively managed risk. MacDonald was one of the first to identify the "thief employee" among employees. If 1 hour of employee time is "stolen" in a company, how much does it cost? For example, if 1 employee occupies 3 m<sup>2</sup> of space, then we calculate the total area of the office and the rental price. An employee earning 3 million soums costs the company 3.2-3.5 million soums. Calculate how much an hour of an employee's time costs the company: 3.5 million soums for 25 working days a month. The employee is not fully fulfilling his duties and every hour the employee "steals" an average of 2.5 thousand soums from the company, he constantly repeats this.

If an employee works an average of 8 hours a day and takes breaks to smoke, talk to a partner, answer the phone, play online games, go to the toilet, etc., the employee "steals" 17 minutes of



the company's working time. How much working time do all employees steal? How can this situation be stopped? Digital technologies have found a solution. The company's programmer-operator created an "Electronic Calculator" that monitors the 8-hour workday of employees and establishes penalties for those who violate labour discipline. Employees are given an electronic daily log. This method is used by companies such as DJ Electric, DJ Matros, and Toyota. Modern market relations have changed radically under the influence of Internet networks and information technologies. E-business and e-commerce have completely revolutionized market mechanisms, developing large-scale and stable trade in virtual spaces, under the influence of the Internet. For example, we can see this in the examples of companies like Amazon and Alibaba.

Under the influence of the Internet of Things, Alibaba has created a global electronic marketplace and become the world's number one retailer. In terms of revenue from trading, the trading platform has mitigated the risks when each person carries out a variety of operations with different costs. In the digital economy, online commerce is carried out in the virtual spaces of digital sellers and digital consumers. Consumers are interested in commercial brands. They are learning online information broadly and deeply. As a result, relationships between manufacturers and consumers, sellers and buyers are becoming partnerships. Digital consumers buy and sell goods and services. One in six Americans buys and sells goods. Americans between the ages of 30 and 40 go online every day to shop. Thousands of different products are evaluated and purchased. They are also sold. In addition, online payments are increasingly being made. In this case, it develops in the "electronic marketplace" (S2S, V2V business models).

While the rapid development of new digital information technologies in the 21st century has led, on the one hand, to a large number of dismissals of old and middle-class professionals, on the other hand, the training of new professionals for the digital economy is lagging far behind the growth of information technologies. The digital economy requires employees to constantly work on themselves, improve their skills, and acquire new knowledge and professional competence. The development of information technologies is rapidly making digital professional knowledge obsolete, and since the digital economy is a creative labour economy, the risk of unemployment is a constant threat. According to the conclusion of experts from Bloomberg and Boston Consulting Group, by 2040, 50% of professions in the world will be obsolete due to the digital revolution (Industry 4.0). The risk of thousands of "soldiers" joining the army of the unemployed is looming. In 2020-2023, the dynamic changes in jobs in the sectors of the economy may be even more pronounced.





**Table 1. In annual %**

<b>Big data technology information</b>	<b>increase</b>	<b>shortening</b>
Mathematics and computer science	4.60	no
Management staff	1.39	no
Financial analysts	1.34	no
Trade and trade analytics	1.25	no
Office workers		6.06
<b>Internet of Things information</b>		
Administration and programmers	4.54	no
Design and engineering analyst	3.54	no
Technical service, repair and installation of technologies	no	8.0
Manufacturing technologies and 3D printing	no	3.60
Robotics and automation	2.1	no

According to the consulting group's specialists, robotization and automation will lead to a huge increase in unemployment. According to experts, on the one hand, the number of unemployed will increase, and on the other hand, the demand for professional personnel will increase.

New digital technologies are beginning to appear in all sectors and industries, smart cash registers, driverless cars, and flying drones have left drivers, pilots, cashiers, and accountants unemployed. What can we do with unnecessary people? The only way to get them to work is through retraining and professional training.

The risk of unemployment in the digital economy is growing rapidly, and many companies are going bankrupt. Unemployment manifests itself in various forms, including self-employment, employment, rental, temporary unemployment, permanent unemployment, and hidden unemployment. Monocenters have been opened in places where temporarily unemployed people are being retrained. They are offered legal advice and modern professions. For example, digital marketing specialist, designer, network lawyer, operator, even preparation for professions on the TOP-5 list, digital projects, project manager, etc. With the development of digital technologies, risks such as digital inequality, income inequality, and social inequality are emerging. For example, 10 per cent of US citizens (34 million) do not have access to 25 Mbps/3 Mbps (internet speed), while 39 per cent of rural residents (23 million) do not have access to the above services.

At the same time, the number of users of fibre-optic communication in the USA is 11 per cent, lagging behind Japan, South Korea, and Latvia. J. Biden created a stimulus fund of 1.9 trillion dollars for the USA and distributed it as follows: 16 million dollars for the development of ACT in agriculture, 59 million dollars for the digitization of small businesses, 123 million dollars for COVID-19 mitigation, dollars for the use of digital technologies in education, 176 million dollars for the transition of transport services to ecological standards, 56 million dollars for the use of artificial intelligence in healthcare, 105 million dollars for the digitization of government services, 360 million dollars for GDP per capita of 60 thousand dollars.

Although the United States is the most powerful country, the digital economy is unevenly



developed, many young people are not educated, the risk of unemployment is growing, and there are social problems: social infrastructure, problems in the labour market, family income, communication technologies, and the teaching of information technologies in schools are not at the required level. In the digital economy, professions, professional knowledge, professional competence, and digital literacy of people differ sharply, and the risk of unemployment increases.

To analyze the structural structure of the labour market in Uzbekistan and Russia, we used the methodology of the expert in this field, Yu. Rasmussen. In the socio-economic sphere, we studied all those who were engaged in work in three categories: getting their work, securing permanent work, and securing knowledge-based work.

First, special training or professional development is not required to perform their work, because the labour process is the same. For example, sales, driving, transportation, intercity transportation, cultivation, etc. Ordinary labour does not require this creative search, for example, a turner, a welder, a builder, a medical professional, a manager, etc.

The third category: knowledge-based work or work that requires knowledge, requiring a higher education diploma. This category includes scientists, architects, managers, doctors, and others who have creative thinking, creativity, professional virtues, personality, and professional competence.

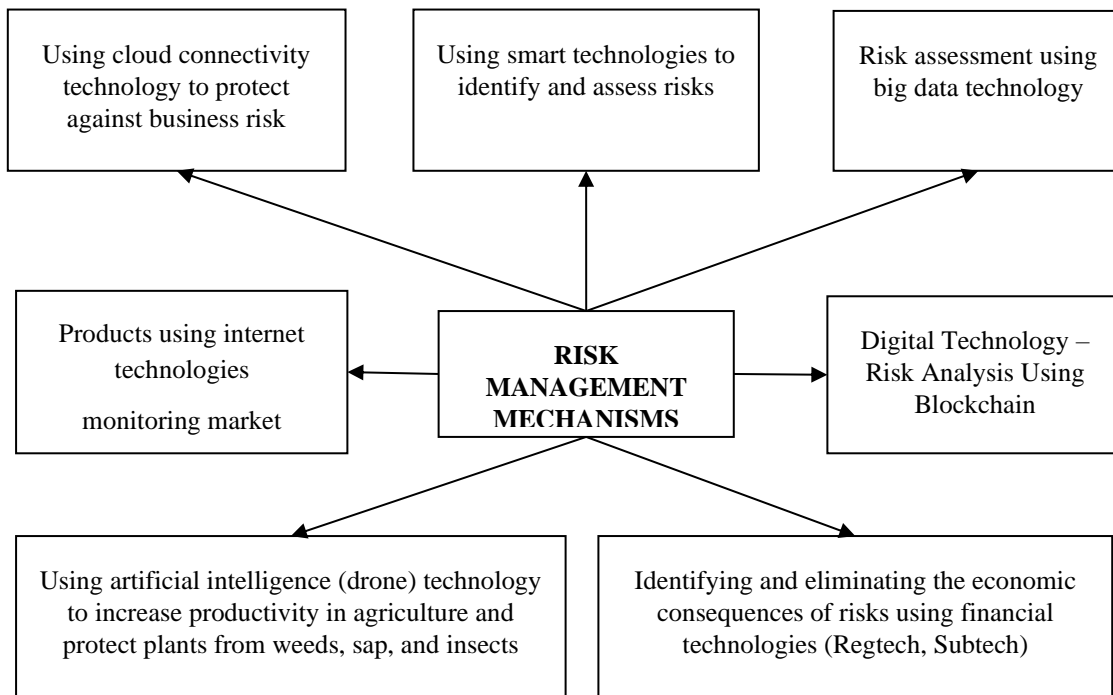
Russia and Uzbekistan are beginning the process of transition to a digital economy. Internet access has its characteristics in the regions, in urban and rural areas, and large cities.

In Russia, 80 per cent of the working-age population lacks digital literacy and professional competence, while in Uzbekistan, almost 91 per cent of the 21.8 million people with the ability to work lack competence, and measures are being taken to train them for the profession, retraining them, and improve their technical knowledge. Currently, 35-37 per cent of the Russian population is engaged in low-skilled labour. 17-18 per cent of the population is engaged in creative labour with high knowledge capacity, while in Uzbekistan, on average, more than 41 per cent of the population works in low-skilled jobs, and this profession is in high demand in the labour market. The education system in Uzbekistan lags behind the needs of the times, and it is necessary to retrain almost 90 per cent of teachers and increase their professional competence.

It is known that currently there are 10,700 schools in Uzbekistan, of which 1,630 are under reconstruction, 176 schools are built from scratch, 2,000 schools do not have gyms, and 640 schools do not have libraries. It is planned to build 500 schools equipped with modern digital technologies in 2023. Currently, 504 thousand teachers work in schools, 290 thousand of whom do not have higher education. Based on this, our state is investing 55 trillion soums (11.7 billion dollars) in reforming the education system to prevent the risk of illiteracy. 120 thousand new student positions will be created and the quality of education will be improved. This will improve the quality of education and use the EYLEVL system in schools and higher education.



**Table 2. Risk management mechanisms**



In these countries, if the majority of the population does not work in high-level intellectual positions the quality of education in schools and universities is not improved, and sufficient funds are not spent, there will be no competition in the labour market. The risk of unemployment will increase. Therefore, eliminating or managing risks becomes a pressing issue for the digital economy.

While blockchain is an exciting and complex technology, it also offers huge opportunities for the food industry. For example, Canadian companies in the beer distribution industry are tapping into Walmart's global food supply chain to analyze and securely store information related to product origin, environmental friendliness, and food safety. At the same time, data analytics opens up new insights for farmers and food processing industries. Big data uses technologies for collecting and processing large amounts of data to analyze the risk of data breaches.

In the digital economy, the cheapest and most valuable resource we have is information. The more information you have, the more profitable your business will be and the more you will win. Out of 194 countries in the world, 137 have secure information systems, while the remaining 57 have compromised information systems. It currently takes 207 days to detect a data breach and 70 days to recover it. In 2021, data breaches cost the world \$6 trillion. The world is making the use of digital technologies a priority to manage the risks of such damage to the economy.

Monitoring risks in agriculture is very complex because land is the main factor in agriculture, and production is seasonal, therefore, the role of natural factors in agricultural risks is great. For example, digital technologies are being used to identify, assess and manage agricultural risks in agriculture.



In the Republic of China, cotton is grown on 20 million hectares of land, and the ability to go to places that people cannot see, to see things that cannot be observed from the ground, to protect against pests (insects), to apply mineral fertilizers, herbicides, to irrigate the land, and to provide real-time information (technology) to artificial intelligence. The risk of crop loss is eliminated.

Environmental pollution. Emissions of CO<sub>2</sub> gases into the atmosphere, the increase in various diseases among the population, the shortage of highly qualified doctors, the low quality of infrastructure and technologies, the shortage of qualified specialists, etc., create agroecological risks. The specifics of agrarian and ecological risks are that agrarian-ecological, economic-social, hygienic-sanitary and infrastructural risks are intertwined. A comprehensive study of agrarian-ecological risks is necessary.

In Uzbekistan, matrix protection is being created based on public-private partnerships to fully protect the information of enterprises, organizations, and citizens from cyber threats.

The purpose of the matrix is to estimate and neutralize any risk.

Even risk algorithmization has not been able to stop risks so far. Even though risk insurance is very profitable, there are economic losses.

The matrix becomes the basis of the 21st-century economy.

Big data + special computers + cloud computing technology = has a higher memory than artificial intelligence. Machine intelligence combines 1 trillion cells, and neurons. Machine intelligence has the ability to prevent any type of risk, assess the resulting damage and eliminate the risk.

Big data is based on these powerful computing technologies, and Nvidia's processing power is close to quantum computing. Here, special computers identify and collect human faces, data, language translation, and biometric data.

The diagnosis of the risk matrix is not about managing risks, but about assessing and preventing damage to objects that are at risk or pose a risk. Risks, sources of risk, arise in the internal and external environment of the enterprise. External causes cause global risks. There can be man-made disasters and natural disasters. Internal risks arising from the company's interactions with other business entities (suppliers of raw materials, competitors, banks, insurance, taxes, etc.). Risk matrix diagnostics is not about managing risks, but about assessing and preventing damage to objects that are at risk or pose a risk. If a primitive society observed significant changes in its lifestyle every 10,000 years, then the specified range gradually narrowed to 1,000, 100 years, and 1 year (see Figure 2). Researchers predict that by 2038-2050, society will enter a point of technological singularity, where changes occur every minute.

### Conclusions

In the modern economy, various programs have been used to manage risks. Including the risk management program *tretrisk*, *velcom risk*, *Microsoft risk*, but the results were not as expected. Later, artificial intelligence programs were used. Although 33 billion neuron cells were paid in artificial intelligence, high results were not achieved in managing 30 different global risks. That is, the global economy lost 7-8 trillion dollars from risk in 2022. Later, world scientists created machine intelligence from the integration of BIK data + special quantum computers + cloud computing, and its memory consists of 1 trillion neural networks, and great achievements are



being made in risk management. For example, great achievements are being made in the US and European countries, Japan, and the Chinese economy. Machine intelligence identifies and eliminates the causes of risks in advance. It completely neutralizes risks, minimizing the damage caused by risks in the economy. In developed countries, enterprise managers are being trained in risk management based on the requirements of machine intelligence.

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