

Companies ESG transformation in the conditions of economy digitalization: from ESG to ESGP

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Abstract. The experience of the pandemic has significantly changed the current processes, setting an accelerated pace of digitalization development. Almost all spheres of life have flowed into digital format: online services and work, distance learning and medicine, government digital services, etc. There is a rapid integration of real and virtual human life. In parallel with the growth of the volume of personal data collected, not only the number of useful services and products is growing, but also the number of leaks, cases of cyber fraud and data abuse. Today, fraudulent attacks on citizens have turned into a real national disaster. Personal data has become the new oil, and privacy has become a new global trend. The privacy factor is already taken into account both by investors when making decisions and by users of products and services. In the context of the digitalization of the economy and the focus on ESG transformation of companies, there has long been a need to strengthen the generally accepted approach to sustainable development with a new element. This element should be Privacy.

1 Introduction

1.1 Global trend for Sustainable Development: ESG transformation

The number of social and environmental problems in the world is growing much faster than countries have time to react and offer effective tools and means to solve them.

Increasingly, leaders in various fields are asking questions about what our world will be like in 10, 20 and 30 years? Will the economic system be humane and socially oriented? What will the introduction of new technologies lead to: will they lead to a global catastrophe? What will happen to the planet's natural resources if they are used with the same intensity? In what conditions will the next generations live?

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2 Materials and methods of research

The main idea of which boils down to the following: each generation of people should live and meet their needs in such a way as not to jeopardize the prerequisites and conditions for the life of future generations, became an attempt to answer the questions of concern.

The concept assumes that by ensuring this balance, the quality of human life will increase, and the negative impact on nature will decrease.

The proposed concept forced the governments of many developed countries to think about ways to achieve this balance, since it became obvious that the proposed model runs counter to the already established model of capitalism. In 2015, a working group of the UN General Assembly presented to the world 17 interrelated Sustainable Development Goals as a plan to achieve a better and more stable future for all (https://www.un.org/sustainabledevelopment/ru/).

3 Discussions

Taking into account the above, the question arises: what should be the new mechanism for increasing the social responsibility of companies? Isn't it time to move on to a new capitalist model, which the head of the World Economic Forum quite actively promoted some time ago, Klaus Schwab? He identified three models of capitalism (Table 1).

Table 1. Three models of capitalism.

Shareholder capitalism	State capitalism	Stakeholder capitalism
The pursuit of profit is considered the main goal of companies	The direction of economic development is determined by the state	Companies act as trustees of the company and take into account ESG factors in their strategic development
Dominates in developed countries	Predominates in developing countries	Transitional model

It should be noted that the theory of capitalism of all interested parties is almost 40 years old. In 1984, it was formulated by an American philosopher, professor of business administration at the Darden Business School of the University of Virginia (Darden School, University of Virginia) Robert Edward Freeman in his book, in which he tried to rethink the doctrine of the American economist, Nobel Laureate in Economics Milton Friedman, who argued that the only possible social responsibility of a company is to increase profits for shareholders. However, time has put everything in place, and now we are witnessing a systematic transition to Stakeholder capitalism, which is focused not only on profit growth, but also on obtaining social and environmental benefits.

ESG principles formulated in 2004 by UN Secretary-General Kofi Annan came to the aid of companies that previously focused exclusively on financial indicators.

In his report Who cares wins, Kofi Annan invited the heads of 50 of the world's most famous financial institutions to join the initiative and include ESG principles in their business development strategies. The report also mentioned that taking into account these three factors could have a positive impact on society and financial markets when making investment decisions (Figure 1).

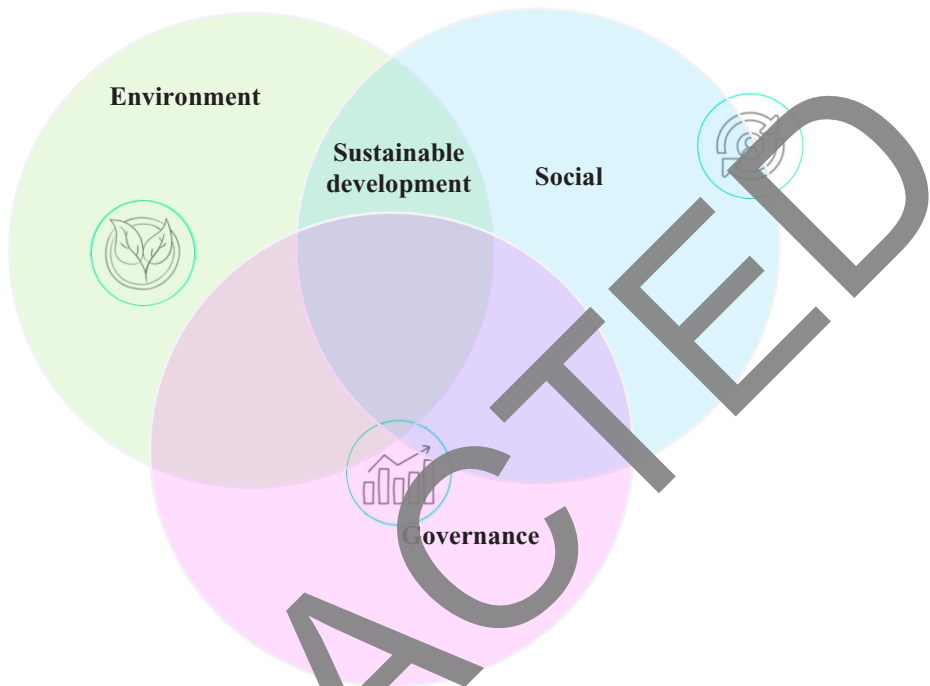


Fig. 1. ESG principles of sustainable development (as is).

The influence of ESG factors on investment decision-making is gradually increasing, recommendations are gradually being transformed into real requirements, and it is very likely that an international standard will appear soon (Table 2).

Table 2. ESG-factors affecting the investment attractiveness of the company (as is).

Environmental factors	Social factors	Management factors
• Ability to manage opportunities and risks associated with climate change • Reduction of the total carbon footprint • Report to stock exchanges and investors on ESG risk management • Waste management • Energy consumption	• Inclusion of ESG factors in voluntary or mandatory reporting requirements for public companies • Providing ESG information for participation in ratings and indexes • Public reporting for a wide range of stakeholders	• Inclusion of ESG factors in the strategy of sustainable development, the system of goals and KPIs • Achievement of ESG-factor goals is reflected in the management remuneration policy • Tracking ESG incidents • Establishing interaction between departments on issues of: ecology, fire safety, <u>labor</u> protection, social programs

3.1 ESG transformation in Russia: as is

Russia, like other countries, supports the ESG trend. While there are no uniform requirements for disclosure of ESG information in Russia, however, regulators have

recently begun an active movement in this direction. In May 2021, the first deputy chair of the Bank of Russia, Sergey Shvetsov, announced plans to develop a unified approach to assessing ESG risks in the financial market.

In August 2021, Russian Prime Minister Mikhail Mishustin signed an order approving a Memorandum on the financial policy of the State Development Corporation (VEB.RF) in the new edition. According to the Memorandum, VEB. The Russian Federation will give priority to projects that take into account ESG factors. The Corporation proceeds from the priority of achieving socially useful economic and social development goals, creating conditions for solving social problems of citizens and society. However, Russian companies still have a question related to the balance of ESG factors. A greater number of questions arise from large manufacturing enterprises. The world will not give up using, for example, thermal coal for quite a long time, and even a slight decrease in its production can have serious consequences for entire regions and individual industries, since about half of all cargo transported by Russian Railways is coal.

This unevenness is taken into account in industry estimates. The significance maps by sector highlight environmental factors for the energy sector, social factors for the services sector, and corporate governance factors for the financial sector.

Access to financing is influenced not only by the company's position in the ESG rating, but also by positive dynamics. For example, Aeroflot in 2021 managed to attract the first loan linked to the ESG rating. Sovcombank, which provided the loan, took into account the increase in the airline's ESG rating from B to BB, thanks to the results in the field of ecology and management of CO₂ greenhouse gas emissions.

Despite the positive dynamics of the development of the ESG agenda in the country, there are open issues that require further elaboration of sustainable development strategies by companies.

The Social factor as corporate social responsibility is well represented in Russia, for example, city-forming enterprises are responsible for the infrastructure being created, while it is not typical for Western companies.

The Environment factor as environmental protection is less developed and is presented mainly as compliance with regulatory requirements within the framework of current legislation.

The Governance factor as corporate governance is also presented rather fragmentally within the framework of legislative norms and internal requirements.

However, Russian companies in the field of sustainable development have something to be proud of. Strategy Director, Vice President of Tinkoff Bank Neri Tollardo puts the modern Russian level of digital services related to financial literacy and charity as an example to other countries. He believes that the main problem is the PR sphere, since Russian companies often do not know how and where to tell them about what they have achieved.

A separate focus of attention requires the elaboration of the regulatory framework. In September 2021, Promsvyazbank announced plans to become a competence center in the field of ESG financing for defense enterprises and its participation in the development of relevant regulations and legal acts.

The integration of ESG factors into the investment decision-making process is a fait accompli. The transition from a focus on short-term profit making to business models that take into account long-term environmental, social and economic consequences is a key direction of transformation that defines new business rules and the main content of the Economic transition of our time. In addition, given the speed of change, the pace of this transformation will only intensify.

3.2 There is a rapid integration of real and virtual human life

Over the past 10 years, the number of Internet users has more than doubled. Now 62.5% of the world's population uses the Internet.

The number of users in 2021 increased by 192 million (4%) and amounts to 4.95 billion people (Figure 2).

Now the average user spends almost seven hours a day on the Internet, that is, more than 40% of his waking life.

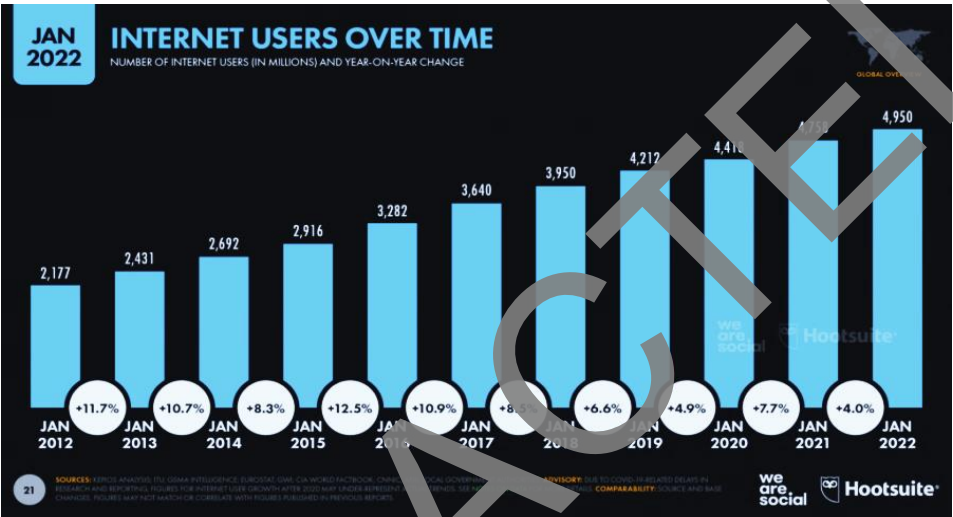


Fig. 2. Number of Internet users's year-on-year change (in millions).

According to We Are Social analysts, over the decade the number of social network users has increased 3.4 times (by 12%) (Figure 3).

Almost every fourth user aged 16 to 64 uses social networks for work. E-commerce trends: people are more likely to buy online.

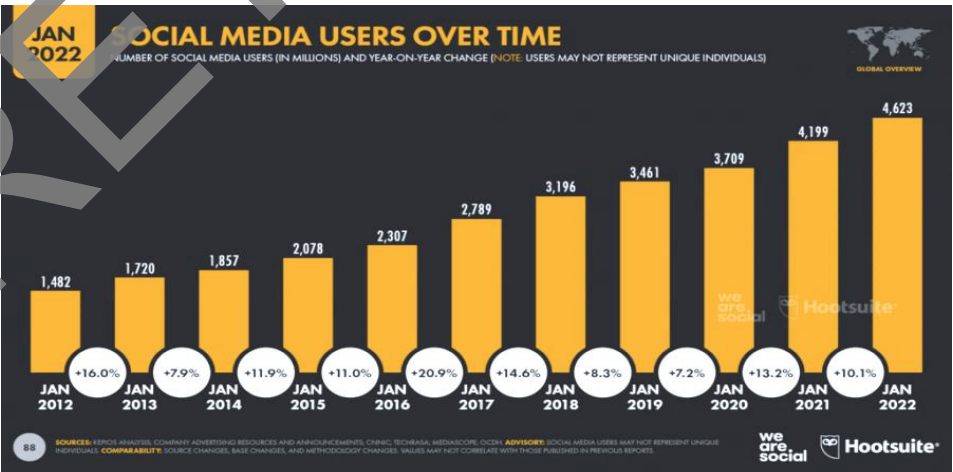


Fig. 3. Number of social media user's year-on-year change (in millions).

6 out of 10 people (58.4%) buy something online every week. The total number of people shopping online is growing by 10% annually and has reached 3.78 billion. a person (Figure 4).

People have become more active in making purchases through mobile applications.

By 2024, the volume of the e-commerce market in Russia will reach 3.491 trillion rubles, i.e. 2.5 times compared to 1.292 trillion rubles in 2018. Morgan Stanley Bank contains this forecast in a study.



Fig. 4. Headlines for the adoption and use consumer goods e-commerce (B2C only).

Due to the pandemic, people appreciated the convenience of online shopping and many even managed to get used to it. After all, buying via the Internet is convenient. This allows you to save time, find the best offer by comparing prices and terms of purchase, learn more information about the product or service, as well as be aware of current trends and novelties.

People buy food, clothing, household goods and much more on the Internet. The absolute number of online grocery shoppers has increased by 10 % over the past six months.

In April 2021, the Russian authorities allowed the sale of over-the-counter medicines online, which can be ordered on marketplaces or in pharmacies with delivery.

Online shopping opportunities are constantly expanding and larger purchases have already become available to people. In 2021, 7% of Russian car showroom customers bought cars without leaving home, on the websites of official dealers. In addition to cars, Russians also buy other necessary things online, for example, electronic insurance policies.

But the biggest online purchases were apartments. For several years, it has been possible to buy or sell apartments remotely using an electronic digital signature, which is considered an analogue of a person's personal signature.

More and more financial services can also be purchased online.

3.3 So what's the problem?

Any operation on the Internet is impossible without providing personal data: credentials, residential address, mobile phone and e-mail numbers, bank card data and other things.

In parallel with the growth of the volume of data collected, not only the number of useful services and products is growing, but also the number of leaks, cases of cyber fraud and data abuse. The growing volumes of cyberbullying using personal data leave citizens one-on-one with social engineering technologies. In addition to fraud, the Internet is also a medium for the spread of other threats – cyberbullying, destructive youth communities, various behavioral management techniques and even consciousness. Unfortunately, the most vulnerable segments of the population – children, youth, the older generation – suffer from all this first of all.

A big problem is the increasing amount of information that people unknowingly share in open access on the Internet. Social networks have become, perhaps, the largest repository of personal data. Personal phone numbers and photos, location markers, interests, information about expensive purchases, photos of documents – all this is actively used by fraudsters to commit crimes using social engineering methods. Citizens, regardless of their position, become vulnerable to cybercriminals.

The indicated problem is confirmed by the following statistics (on the example of Russia).

1. Cybercrime in Russia is growing rapidly:

- cybercrime increased by 25 % in 2021 [Source of the Ministry of Internal Affairs of Russia];

- 73% of all online crimes are cyber fraud;

- 56% of online crimes are voluntary money transfers to attackers [Source: data from the analysis of fraudulent schemes in the global network Group-IB].

2. Low level of knowledge and skills of the country's population when handling personal data:

- 66% complain of a lack of knowledge and skills to protect their data (Source: NAFI Analytical Center);

- 84% of Russians feel powerless before the growing risk of losing control over their data on the Internet [HSE Institute for Statistical Research and Knowledge Economics].

3. Citizens' distrust of commercial and government services due to a lack of understanding of how personal data is processed and protected.

According to VCIOM and the Big Data Association:

- 37 % do not know why government agencies and companies collect their personal data;

- 23 % believe in the safety of personal data;

- 26 % believe that personal data is collected to take them under control.

It is difficult to find a balance between the security of the state and society, and the privacy of an individual, even in quiet times, not to mention the period of global crisis. People are already thinking about how technological development – including that caused by the pandemic – will affect our future lives.

The main problem has emerged – privacy no longer belongs to people. However, a significant part of the most important requirements for the development and operation of digital solutions should be related to ensuring privacy, namely proper processing, confidentiality and security of personal data [1-18].

3.4 ESG transformation: Privacy as a necessary element of sustainable development of companies

Privacy has become one of the most pressing issues of the global digital age. In 2021, the personal data of most people no longer belongs only to them.

There are countless trackers and information analyzers installed on the Internet on each site, the owners of which can know almost all user data up to a detailed digital fingerprint of the device. This data is collected and aggregated in Big Data, where it is analyzed, and then returned to the user with contextual advertising and personal offers

In Russia, the traffic of almost any user can be read by special services using special systems that telecom operators must install on their equipment according to the law *On sovereign Runet*, which provides for the creation of a national Internet traffic routing system, centralized management tools, etc., which came into force on November 1, 2019).

Hackers and scammers constantly arrange hacking and theft of people's data around the world, which they then use to sell exchange or commit fraudulent actions.

Thus, personal data becomes publicly available, and the problem with the privacy of users on the Internet becomes extremely relevant. A request for confidentiality, protection, and reliable control of personal information is being formed. This opens up prospects for new technical and strategic solutions created to restore and protect privacy [19-28].

Privacy becomes a topic of negotiations at the highest level, as well as a motive for making decisions concerning large groups of people and even entire states. Leading public figures, journalists, politicians, and representatives of the IT industry talk about various threats in the field of privacy. These discussions provoke an explosion in the popularity of certain products and a significant increase in investment in them. After the recommendation in one of Elon Musk's social networks to use the secure Signal messenger, the shares of Signal Advance Company increased in price by 1100 %.

Privacy is becoming the new gold.

Even a large and serious new market – Privacy Tech – stood out. More and more companies are developing their own privacy protection products, as well as optimizing existing solutions.

Crunchbase writes about 220 startups in the field of privacy and personal data protection (as of October 2021), investments in which have already exceeded US\$ 4.2 billion. The number of companies working in the field of Privacy Tech is growing rapidly. For the development of such projects in Europe and Russia, acceleration programs are open, in which novice teams are helped with positioning and promotion in the market.

For a long time, the market of privacy and confidentiality technologies remained only *Cryptomiser* for investors. The introduction in 2017–2019 of new European and American laws related to privacy (GDPR, CCPA, and LGPD) was the impetus for an exponential increase in investment. In 2020, when many stagnated or fell due to the pandemic, this market was actively growing.

The main boom is in the B2B segment, where companies providing corporate security services, ensuring the confidentiality of client data and compliance with European and other regulations are taking off. According to the latest 2021 Tech Vendor Report, the number of companies dealing exclusively with corporate privacy technologies increased by 15 % compared to the previous year. Interestingly, the B2C technology sector is catching up with the corporate privacy technology industry, and new Privacy Tech solutions of the B2B2C format are also emerging – that is, from one company through another to the end consumer.

The demand for privacy products is growing. People's concern about the security of their personal data and privacy leads to the fact that they are looking for new technical solutions. Users leave WhatsApp and switch to Signal for the sake of the security of their correspondence, install Brave and DuckDuckGo browsers for private surfing on the

network, use VPN, password generation and secure authentication applications, and are trained in various digital literacy services.

The future is definitely for privacy. People strive for confidentiality, trusting relationships with a limited circle without outsiders, and this aspiration is based on the basic human and civil rights that declare the protection of privacy [28-43].

Confidentiality is becoming one of the key values of products and services provided by companies.

The exponential growth that can now be observed in the Privacy Tech market will continue, because, most likely, the story of ensuring the privacy of our data is just beginning. And even such well-thought-out laws as GDPR, although they try to regulate data turnover, operate on a separate territory, and therefore cannot resist cross-border surveillance or data theft, which means that more and more technological projects that solve problems by technical means will come into play.

3.5 ESG transformation: from ESG to ESGP

Based on the above trends and statistical data, the authors of the article believe that the sustainable development strategy (ESG) is no longer self-sufficient today and needs to be supplemented by another important element that is predetermined by time and the changed world – Privacy. This is once again proved by the following facts:

1. GRI (Global Sustainability Reporting Initiative) has been considering Privacy as part of a set of principles for sustainable development of companies since 2016.

2. According to the results of a study by AlphaSense, it turned out that over the past 5 years.

3. An increasing number of people considers Privacy when making purchase decisions. According to a 2020 Pew Research Center study, 52% of adults surveyed decided not to use a product or service due to concerns about the confidentiality of personal information.

4. Many large global companies have taken a trend towards privacy, telling their customers about measures to protect their data and privacy (Apple, MasterCard, Sberbank and others).

Companies are obliged to take into account the importance of the Privacy element and design their products and services, taking into account its significance (Cavoukian A. Privacy by design. – 2009).

Adhering to the concepts of Privacy by Design and Privacy by Default for companies' means protecting users' data and their right to privacy as a default setting.

The authors propose to strengthen the existing set of ESG factors with a new component – QPrivacyE (Table 3), which already influence both the investment attractiveness of the company and the choice of customers (Figure 5).

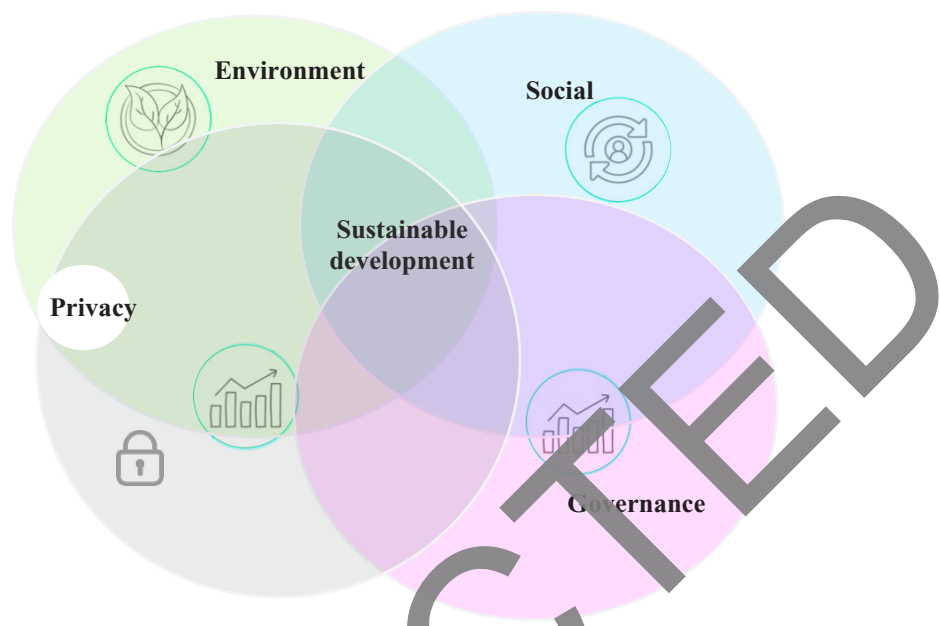


Fig. 5. ESGP principles of sustainable development (to be).

Table 3. ESGP–factors affecting the investment attractiveness of the company (to be).

Environmental factors	Social factors	Management factors	Privacy factors
• Ability to manage opportunities and risks associated with climate change • Reduction of the total carbon footprint • Report to stock exchanges and investors on ESG risk management • Waste management • Energy consumption	• Inclusion of ESG factors in voluntary or mandatory reporting requirements for public companies • Providing ESG information for participation in ratings and indexes • Public reporting for a wide range of stakeholders	• Inclusion of ESG factors in the strategy of sustainable development, the system of goals and KPIs • Achievement of ESG-factor goals is reflected in the management remuneration policy • Tracking ESG incidents • Establishing interaction between departments on issues of: ecology, fire safety, <u>labor</u> protection, social programs	• Inclusion of Privacy factors in the strategy of sustainable development, the system of goals and KPIs • Defining a strategy for the development of data turnover, taking into account the balance of the goals of the state, the rights of subjects and the interests of personal data operators. • Development of tools that allow the client to independently receive information about the processing of his personal data, manage the processing of personal data, including objecting to their processing. • Using the principles of Privacy by Design and Privacy by Default • Using approaches that ensure responsible management of personal data

It is difficult to find a balance between the security of the state and society, and the privacy of an individual, even in quiet times, not to mention the period of global crisis.

People are already thinking about how technological development – including that caused by the pandemic – will affect our future lives.

4 Conclusion

In order to restructure the approach of companies to strategic planning based on the Sustainable Development Goals, state support and the creation of the necessary conditions for this are also necessary:

1. To bring the issue of increasing the privacy culture of the population to the state level by forming a National program to improve the privacy culture of the population and entrepreneurs, with the involvement of business representatives in the working group.

2. To develop a bill that allows you to determine the golden mean between "unlimited freedom" and "total control" on the Internet, since it cannot be the territory of unlimited freedom.

3. Identify key priorities for the development of data turnover and formulate the concept of a data management system in the country.

4. Define a strategy for the development of data turnover, taking into account the balance of the goals of the state, the rights of subjects and the interests of personal data operators.

5. Develop tools that allow a citizen to independently receive information about the processing of his personal data, manage the processing of personal data, including objecting to their processing.

6. Drastic measures are required at the state level to strengthen measures of responsibility for leaks of personal data and violations of the principles of their processing.

The sphere of personal data protection has a very high potential of public-private partnership in the development of legal, organizational and technical solutions.

Taking into account today's realities, it can be concluded that the digitalization of the economy, the development of e-commerce and the development of cybercrime go hand in hand. In addition, the key task in this topic is to reverse this trend. This requires a radical revision of the approach to ensuring privacy through the joint efforts of the state and companies, bringing it to the forefront.

References

1. A. P. Antonenko, Bulletin of the S.Y. Witte Moscow University. Series 2: Legal Sciences **3(29)**, 5–8 (2021) DOI: 10.21777/2587–9472–2021–3–5–8
2. K. G. Bunevich, T. A. Gorbacheva, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **1(40)**, 52–60 (2022) DOI: 10.21777/2587–554X–2022–1–52–60
3. E. N. Gavrilova, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **2(33)**, 48–54 (2020) DOI: 10.21777/2587–554X–2020–2–48–54
4. E. N. Gavrilova, K. L. Danaeva, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **1(36)**, 7–14 (2021) DOI: 10.21777/2587–554X–2021–1–7–14
5. E. N. Gavrilova, A. S. Demjanjuk, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **2(45)**, 25–32 (2023) DOI: 10.21777/2587–554X–2023–2–25–32
6. E. N. Gavrilova, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **4(31)**, 81–86 (2019) DOI: 10.21777/2587–554X–2019–4–81–86

7. T. A. Gorbacheva, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **3(38)**, 13–21 (2021) DOI: 10.21777/2587–554X–2021–3–13–21
8. M. A. Davydovsky, Educational Resources and Technologies **4(29)**, 34–41 (2019) DOI: 10.21777/2500–2112–2019–4–34–41
9. A. P. Dzyuba, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **1(36)**, 52–63 (2021) DOI: 10.21777/2587–554X–2021–1–52–63
10. I. N. Kamyshnikov, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **1(44)**, 61–68 (2023) DOI: 10.21777/2587–554X–2023–1–61–68
11. O. M. Kozunova, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **4(39)**, 7–13 (2021) DOI: 10.21777/2587–554X–2021–4–7–13
12. A. G. Koryakov, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **3(18)**, 3–9 (2016) DOI: 10.21777/2307–6135–2016–3–3–9
13. A. G. Koryakov, S. G. Basalov, V. G. Mikhailov, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **3(18)**, 10–15 (2016) DOI: 10.21777/2307–6135–2016–3–10–15
14. R. M. Kubova, V. I. Kubov, A. L. Bozhenko, Educational Resources and Technologies **3(24)**, 56–62 (2018) DOI: 10.21777/2500–2112–2018–3–56–62
15. I. N. Kuksin, Bulletin of the S.Y. Witte Moscow University. Series 2: Legal Sciences **1(23)**, 6–12 (2020) DOI: 10.21777/2587–9472–2020–1–6–12
16. M. Y. Makovetsky, D. V. Rudakov, Econ. Manage **1(36)**, 79–86 (2021) DOI: 10.21777/2587–554X–2021–1–79–86
17. B. V. Salikhov, A. V. Semenov, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **3(30)**, 7–14 (2019) DOI: 10.21777/2587–554X–2019–3–7–14
18. A. S. Slabospitsky, A. S. Slabospitskaya, Bulletin of the Witte Moscow University. Series 2: Legal Sciences **2(32)**, 19–25 (2022) DOI: 10.21777/2587–9472–2022–2–19–25
19. S. Zhiltsov et al., Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **3(26)**, 54–66 (2018) DOI: 10.21777/2587–554X–2018–3–54–66
20. I. S. Zonn, N. S. Orlovsky, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **3(30)**, 48–66 (2019) DOI: 10.21777/2587–554X–2019–3–48–66
21. A. V. Tebekin, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **2(45)**, 7–13 (2023) DOI: 10.21777/2587–554X–2023–2–7–13
22. O. S. Tyunyakova, Bulletin of the S.Y. Witte Moscow University. Series 2: Legal Sciences **1(10)**, 11–15 (2017) DOI: 10.21777/2587–9472–2017–1–11–15
23. O. T. Zagorov, Bulletin of the S.Y. Witte Moscow University. Series 2: Legal Sciences **3(34)**, 5–11 (2022) DOI: 10.21777/2587–9472–2022–3–5–11
24. A. Zh. Zubets, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **3(30)**, 28–34 (2019) DOI: 10.21777/2587–554X–2019–3–28–34
25. I. A. Zueva, Bulletin of the S.Y. Witte Moscow University. Series 1: Economics and Management **4(23)**, 27–36 (2017) DOI: 10.21777/2587–9472–2017–4–27–36
26. A. Soltangazinov et al., Revista Espacios **38(34)**, 35 (2017) <https://www.revistaespacios.com/a17v38n34/a17v38n34p35.pdf>

27. S. Kazizova et al., J. Advanced Res. L. & Econ. **8**, 78 (2017) DOI: 10.14505/jarle.v8.1(23).09
28. R. Bugubaeva et al., Public Policy and Administration **18(2)**, 299–313 (2019) DOI: <https://doi.org/10.13165/VPA-19-18-2-09>
29. B. Mataeva et al., Espacios **39(11)**, 31–44 (2018) <https://es.revistaespacios.com/a18v39n11/a18v39n11p31.pdf>
30. A. Tazhbayeva et al., Journal of Environmental Management and Tourism **14(3)**, 767–777 (2023) DOI: 10.14505/jemt.14.3(67).16
31. A. Irmak et al., International Journal of Energy Economics and Policy **13(4)**, 46–60 (2023) DOI: <https://doi.org/10.32479/ijeep.14366>
32. B Korgan et al., Journal of Environmental Management and Tourism **13(1)**, 135–142 (2022) DOI: [https://doi.org/10.14505/jemt.v13.1\(57\).12](https://doi.org/10.14505/jemt.v13.1(57).12)
33. Z. M. Turdiyeva et al., Actual Problems of Economics **169(7)**, 106–111 (2015) https://www.researchgate.net/publication/298712309_State_regulation_of_biofuel_use_in_agriculture_of_the_Republic_of_Kazakhstan
34. Z. Turdieva, World Applied Sciences Journal **27** (Education, Law, Economics, Language and Communication), 414–418 (2013) DOI: 10.5829/idosi.wasj.2013.27.elelc.85
35. G. D. Amanova et al., Rivista di Studi sulla Sostenibilit  **13(1)**, 65–81 (2023) DOI: 10.3280/RISS2023-001-S1005
36. A. U. Abdrakhmanova et al., Journal of Environmental Management and Tourism **8(1)**, 155–167 (2017) DOI: 10.14505/jemt.v8.1(17).16
37. Amanova, G., et al. Methodological aspects of depreciation accounting and analysis of the use of the depreciation policy. Journal of Advanced Research in Law and Economics, 2016, 7(3), pp. 483–493 DOI: 10.14505/jarle.v7.3(17).03
38. B. Akimova et al., International Journal of Energy Economics and Policy **10(2)**, 374–381 (2020) DOI: 10.32479/ijeep.8669
39. N. V. Rudyk et al., Lecture Notes in Networks and Systems **245**, 167–174 (2022) DOI:10.1007/978-3-030-77000-6_20
40. N. Toyva et al., E3S Web of Conferences **159**, 04022 (2020) DOI: <https://doi.org/10.1051/e3sconf/202015904022>
41. B. Ruzieva, A. Nurgaliyeva, et al., Entrepreneurship and Sustainability Issues **7(3)**, 2407–2418 (2020) DOI: <https://doi.org/10.55908/sdgs.v11i2.318>
42. A. Nurgaliyeva, A. Mazina, et al., International Journal of Energy Economics and Policy **12(5)**, 491–497 (2022) DOI: <https://doi.org/10.32479/ijeep.13437>
43. L. Sembiyeva et al., Montenegrin Journal of Economics **19(4)**, 187–198 (2023) DOI: 10.14254/1800-5845/2023.19-4.16