Artificial Intelligence as Effective Digital Transformation Legal Means of Business, Management, Economy and Technology

Olga V. Sushkova[1], *Irina V*. Sazonova[2*], *Aleksandr V*. Tyulin[2], and *Marina S*. Ruzhentseva[3]

[1]Kutafin Moscow State Law University (MSAL), Department of Business and Corporate Law, Moscow, Russia

[2]Moscow University for Industry and Finance "Synergy", Department of Legal Disciplines, Moscow, Russia.

[3]Moscow Finance and law University (MFUA), Department Civil law disciplines, Moscow, Russia

Abstract. Currently, entrepreneurial and professional activities are being transformed towards digital business, management, economics and technology, which are viewed through the prism of four new technological areas: artificial intelligence, blockchain, cloud technologies and data analytics. Therefore, we will use multidisciplinary approaches that show how digital tools affect all areas of business processes, management and economics.

Purpose of the study: to determine the role and importance of artificial intelligence for building an effective model of business, management, economy and technology transformation, business and professional activities in the context of law and society digital transformation.

Methods: The methodological basis of this work was general scientific methods of cognition of legal phenomena, such as synthesis, the method of analogy, formal logic and others, as well as specific scientific methods for studying the category of artificial intelligence in the field of entrepreneurial and professional activity.

Results and novelty: To achieve the goals of using AI, it can be described as follows: the first step is to use big data, the second is to apply analytics, and the third is forecasting. AI is used to collect and store data for analysis and further forecasting. Companies in IT, marketing, finance, accounting and sales are using AI to become more competitive and efficient.

1 Introduction

Business digital transformation is a strategy that draws attention as companies face the challenge of continually improving their business processes and capabilities. This

---

* Corresponding author: zskjadro@gmail.com

transformation is driving new ways of working and interacting with customers, directly driving the creation of new business models.

It is necessary to pay attention to the increasingly manifested tendency to establish intersectoral links between family, corporate and entrepreneurial relations [1]. Digital transformation of business, management, economics and technology can not only make companies ready for the future and increase average net revenue, but also use technology to radically improve the company's performance (i.e., for organizational performance, company performance and its results). This digital transformation of business, management, economy and technology has already brought significant changes to business operations through improved customer service, payments, business models and new methods of online interaction. In other words, the use of technology increases value, but rather, its use is for improving the quality of customer service. As noted, Amazon could revolutionize business across a wide range of sectors, including supermarkets (retail chains), publishing and logistics. They did this by collecting and using information to improve the quality of customer service [2].

In foreign literature it has been constantly noted that digital transformation of business is a way of doing business and transforming it from traditional to digital [3]. We think this is more than just a transition from a shop window of "bricks and mortar" for shoppers to a "clicks and bricks" environment. Digital transformation permeates all spheres of economic activity, business through the introduction of advanced and often convergent technologies. Thus, the goal of digital transformation is to harness digital opportunities to transform the traditional enterprise into a leader in the digital economy. Most digitally advanced firms such as Google, Netflix, Uber and Airbnb have successfully developed and used their digitized, open and collaborative business models included into a unified ecosystem of producers and consumers. It is argued that digital business transformation is an ecosystem of innovative platforms in which "Uber, the world's largest taxi company, does not own vehicles and Facebook, the world's most popular media owner, does not create any content. At the same time, Alibaba, the most expensive retailer, has no inventory, and Airbnb, the world's largest housing provider, does not own real estate "[4]. In this digital world, subscription services are preferable to owning assets or goods with little inventory requirements or the cost associated with amortizing those assets.

Despite the fact that the digitalization of business, management, economy and technology seems to be quite wide, nevertheless, we will pay attention to all four currently existing technologies: artificial intelligence, blockchain, cloud technologies and data analytics. "The definition of the legal nature and trends in the performance of business obligations is currently the most controversial and fundamental issue that is important for the enforcement of contractual activities, especially in relation to business obligations" [5].

It seems that these technologies will change the business of the future. It should be noted that these technologies are already being reflected in existing business processes.

1. Organizations in all industries are investing in AI technologies to automate the value chain and customer service (for example, ILS ConsultantPlus launched a project to analyze caselaw, compile similar court decisions and calculate risks while declaration certain claims).

2. Blockchain technology is currently being effectively used by retailers (for example, OR Group was one of the first in Russian retail to introduce blockchain into its business processes. The new technology is used to protect the personal data of customers who use installment payment plan and credits).

3. The sharp increase in the use of cloud technologies in business provides that this sector will grow and become a necessary element for building business processes [6].

4. The Fortune 1000 Business Report indicates that 91.6% of the listed companies invest in big data analytics, with 55% of companies investing more than $ 55 million. [7]

Companies seeking digital transformation must determine how best to integrate these digital technologies into their own business models, using a new and better way of doing business. Due to recent technological changes in legislation, both in Russia and abroad, companies need to rethink the importance of business digitalization technologies, and technologies that are key to success in the emerging digital economy. There has been a paradigm shift in business strategy with the advent of next-generation technologies that focus on providing data that contributes to understanding competitive advantages. What is artificial intelligence, blockchain, cloud computing, and data analytics, and how do they work?

How are new technologies transforming business? What opportunities and challenges do new technologies present?

To answer these questions, we will analyze the legal nature and attributes of new technologies that can change the future of business. First, to discover the stated topic, it is necessary to analyze in detail the means of digital business transformation and its applications in various industries. Secondly, it is necessary to analyze the development of AI technology and its types, as well as their legal regulation: machine learning (ML) and deep learning (DL). In addition, AI technologies cannot be explored independently of blockchain, cloud computing, and big data, as they as a whole represent a complete mechanism for digitalizing business processes in business and professional activities.

2 Results

2.1 Artificial Intelligence in Russian Law

April 24, 2020 The President of the Russian Federation signed Federal Law No. 123-FZ " Conducting an experiment to establish a special regulation in order to create the necessary conditions for the development and implementation of artificial intelligence technologies in the subject of the Russian Federation — the federal city of Moscow and amending Articles 6 and 10 of the Federal Law "Personal Data" (hereinafter — the Law on AI), which has some business solutions to better understand all the risks that currently cannot be excluded, AI can be used as an auxiliary technology [8].

The necessity of interaction between the state and business has been discussed for a long time [9]. State property is the object of civil, public and other legal relations, as well as, despite its special legal regime, the object of civil rights [10]. At present business subject has the opportunity for independently, but in accordance with the current legislation, determine the conditions for the digital transformation of business activities and the introduction of AI technology. Digital transformation of business and economy is defined as the use of technologies to radically increase the productivity of organizations, redefine and recreate value propositions using enterprise resource planning and management systems when establishing legal relations with counterparties and partners (a system of contractual structures, named and unnamed in the Civil Code of the Russian Federation (hereinafter referred to as the Civil Code of the Russian Federation) or using digital boundaries, such as smart devices, analytics for intra–, outside-and inter - business processes. In the foreign literature, the position is expressed that social networks, mobile communications, big data analytics, cloud technologies and the Internet of Things are the fundamental driving forces of the digital transformation of entrepreneurial activity [11]. However, these studies focused on technological aspects, rather than linking them to business value, firm performance, or strategic alignment.

Digital transformation is inextricably linked to the digital business strategy (for example, cross-functional integration, structural changes) and organizational capabilities

(for example, through the management bodies of a legal entity, taking into account their competencies, as well as the capabilities that are established by the Charter of the organization for the executive body of the legal entity). Therefore, the means of digital transformation of business and professional activities focus not only on the introduction of reliable technologies, but also on the formulation of a clear vision, the transformation of the business model, the development of dynamic capabilities and the understanding of partners and counterparties. In foreign legal systems, the digital transformation of business is understood in different ways. On the one hand, digital transformation permeates all operations and transactions carried out in the organization to control all business processes [12], on the other hand, business improvisation is focused only on the partners of the business entity, as well as on its digital products and services [13], and thirdly, digital transformation of business activity is a new business model for creating more powerful mechanisms for the effectiveness of entrepreneurship in the field of professional activity [14].

2.2 Digital transformation of business in various industries

The relevance of the development problem of the digital economy and the introduction of technologies remains actively discussed, as a single theoretical and methodological basis for the study of this area is only being formed and has not been fully developed [15].

In manufacturing, where the main reason for digitalization is to reduce costs, cloud applications play an important role in internal management and communications. Manufacturers also use big data analytics to optimize the use of equipment, reduce the loss of materials and other resources, develop supply chain networks, and improve business efficiency. For example, the traditional car industry is trying to compete with innovative car manufacturers such as Tesla and Faraday Future. Any stable manufacturer now understands that it is vital to combine digital technology with traditional processes to stay ahead of their competitors. For example, Audi has gained huge advantages by applying digital transformation in sales, marketing and operations, which has allowed it to better meet local demand [16]. Steel mills use the capabilities of digital tools to increase production volumes by visualizing performance, optimizing operations, and obtaining information about the causes of failures [17]. The consumer goods industry has also made improvements through digital transformation, getting closer to consumers and forming long-term relationships that amount to redo business and increase satisfaction.

In Russia, mainly, the means of digital transformation are widely used in trade, in the banking sector and in the sphere of turnover of the results of intellectual activity. Retailers deserve special attention. In addition, a new type of contract has already appeared in the Russian civil legislation – on the provision of information (Article 783.1 of the Civil Code of the Russian Federation), which is planned to be used for working with big data [18]. Such retailer as "Magnit" has implemented 3D modeling of equipment in its business processes. The technology creates three-dimensional images of structures and various details: the location of the light source, the presence of glare and reflection, the correspondence of design elements to the design of the store, and many others.

2.3 Artificial Intelligence (AI)

The theory of AI has been developed for many years, since 1956. Several foreign authors have investigated the meaning of AI [19]. It can be defined as machines with intellectual abilities similar to those of humans [20]. This is a combination of computing technologies that allows you to make rational decisions in complex situations and contexts [21].

A machine with AI capabilities must have several basic components, including the ability to perform natural language processing (hereinafter referred to as NLP), extract data from massive databases, prove mathematical theories, automatic programming, solve critical problems, and diagnose diseases. In the field of entrepreneurship and professional activity, there is a position that AI will help businesses in their further development and allow them to achieve competitive advantages.

For example, Airbus used its AI system to study a production problem, calculate a huge amount of data, and develop a solution and recommendation [22]. Companies such as Bridgewater Associates are planning to use AI to automate key stages of their operations, while KPMG Australia is going to automate some of its audit services, and law firm Baker & Hostetler will use AI to increase the number of its legal requests.

3 Discussion

Although this study provides some understanding of the technology, based on the few positions that have been analyzed. The results show that while the four technologies have individual benefits, greater business value can be derived from leveraging their interconnectedness to accelerate business growth and productivity. In addition, new technologies are driving the development of transformative business models with new platforms that automate processes, align supply and demand, dynamically set prices, and make decisions in real time.

As for AI, we have considered positive business-oriented options for their use. However, there are widespread problems, such as ethics, privacy, and algorithmic bias [23]. The dangers of AI have already been highlighted by Elon Musk in the context of regulatory oversight and its safe use [24]. Because of these problems, customers tend to trust AI less, because they think that AI can't "feel" [25]. In addition, it is critical to ensure the accuracy, reproducibility, and reliability of AI algorithms, whether in self-driving cars or in the diagnosis of AI patients.

The blockchain technology is an accessible distributed database that records information about all transactions made by the system participants. In Russian jurisprudence, the blockchain is also considered as a way of fixing rights [26, 27]. The application of blockchain technology is exciting due to the decentralization of user data and the achievement of consensus through a public network of participants to ensure the accuracy of information [12].

4 Conclusion

Based on the conducted research, it was revealed that new technologies form a "block" for the future digital transformation of business, management, economy and technology. At present, an important question arises for the subjects of business and professional activity – through what legal means to establish the relationship between these technologies in order to get the maximum benefit. In fact, these innovative processes include: hybridization, integration, recombination, and convergence. Due to the fact that this is only an incipient stage, we conducted this study, which leads us to draw conclusions about the initial emergence of technologies and their impact on digital transformation through business use cases.

References

1. A.N. Levushkin. Laws of Russia: Experience, Analysis, Practice. **4**, 25-30 (2018)

2. D. Grewal., J. Hulland,, P.K. & Kopalle, Journal of the Academy of Marketing Science. 48, 1–8 (2020).

3. F.Li, The digital transformation of business models in the creative industries: A holistic framework and emerging trends. Technovation, 55. (2018)

4. T. Goodwin, The battle is for the customer interface, 23. (2015)

5. A.N. Levushkin. I.K. Kuzmina Modern lawyer, 2, 150 - 166. (2020).

6. T. O'Neal, The future of cloud computing in 2019. December 21, 2018. Retrieved from https://www.techradar.com/au/news/the-future-of-cloud-computing-in-2019. (2019).

7. NewVantage Partners. Big data and AI Executive Survey 2019. January 01, 2019. Retrieved January 30, 2020 from http://newvantage.com/wp-content/uploads/2018/12/Big-Data-Executive-Survey-2019-Findings-122718.pdf. (2019).

8. O.V. Sushkova, Bulletin of the O. E. Kutafin University, 7, 69.70. (2020). DOI: 10.17803/2311-5998.2020.71.7.068-075

9. A.N. Levushkin, Journal of Business and Corporate Law, 3, 15. (2016)

10. A.A.. Vlasov, A.N. Levushkin, T.E. Rakhmatullin, L.E. Rakhmatullina. Journal: "Opcion". **19**, 721-736 (2019)

11. I.M. Sebastian, J.W. Ross, C. Beath, M. Mocker, K.G. Moloney, Quarterly Executive, 16(3), 197–213 (2017).

12. V. Kumar, D. Ramachandran, B. & Kumar, Influence of new-age technologies on marketing: A research agenda. Journal of Business Research, (2020). https://doi.org/10.1016/j.jbusres.2020.01.007.

13. T.H. Davenport, A. & Spanyi, Digital transformation should start with customers, (2019). https://sloanreview. mit.edu/article/digital-transformation-should-start-with-customers/.

14. O.V. Sushkova. Advances in Economics, Business and Management Research, 156, 630-635. (2020) https://doi.org/10.2991/aebmr.k.201205.107

15. I.V. Ershova, Certain types of economic activity in the digital economy. Digital Economy: Conceptual foundations of Legal regulation of business in Russia: monograph / ed. by A. Laptev, O.A. Tarasenko. (Prospekt, Moscow, 2021). P.250. DOI 10.31085/9785392328604-2020-488

16. C. Dremel, J. Wulf, M.M. Herterich, J.C. Waizmann, W. & Brenner, How Audi AG established big data analytics in its digital transformation// MIS Quarterly Executive, 16(2), 81–100. (2017)

17. B. Hartmann, W.P. King, S. & Narayanan, Digital manufacturing: The revolution will be virtualized. (2015). https://www.mckinsey.com/business-functions/operations/our-insights/ digital-manufacturing-the-revolution-will-be-virtualized.

18. A.V. Mikhailov, Prospects for the development of legislation on business activity. Digital Economy: Conceptual foundations of Legal regulation of business in Russia: monograph / ed. by A. Laptev, O.A. Tarasenko. (Prospekt, Moscow, 2021). P.59. DOI 10.31085/9785392328604-2020-488

19. N. J. Nilsson, Principles of artificial intelligence. Los Altos, CA: Morgan Kaufmann, pp.345. (2014)

20. T. McGettigan, Artificial intelligence: Is Watson the real thing? (2016). Available at SSRN: https://ssrn.com/abstract=2826047 or http://dx.doi.org/10.2139/ssrn.2826047.

21. L. Tredinnick, Artificial intelligence and professional roles //Business Information Review, 34(1), 37–41. (2017)

22. S. Ransbotham, D.Kiron, M.& Reeves, Shaping business with artificial intelligence. Closing the Gap Between Ambition and Action// MIT Sloan Management Review,

(2017) from https://sloanreview.mit.edu/projects/reshaping-business-with-artificial-intelligence/?gclid=Cj0

23. K. Larson, Data privacy and AI ethics stepped to the fore in 2018. (2019). https://medium.com/@Smalltofeds/data-privacy-and-ai-ethics-stepped-to-the-fore-in-2018-4e0207f28210.

24. C. Metz, Mark Zuckerberg, Elon musk and the feud over killer robots. (2018). https://www.nytimes.com/2018/06/09/technology/elon-musk-mark-zuckerbergartificialintelligence.html.

25. K. Gray, AI can be a troublesome teammate. Harvard Business Review, July 20. (2017). https://hbr.org/2017/07/ai-can-be-a-troublesome-teammate.

26. Yu. S. Kharitonova, Law and Economics, 1, 15-21. (2018).

27. V. A. Laptev, Legal Science and Practice: Bulletin of the Nizhny Novgorod Academy of the Ministry of Internal Affairs of Russia, 2(42), 199-204. (2018).