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"THE EVOLVING LANDSCAPE OF DIGITAL TECHNOLOGY AND DIGITAL TRANSFORMATION: A COMPELLING TREND"

Rakhimberdieva Ozoda
1st year Master's student at University of World Economy and Diplomacy Faculty of International Relations
orakhimberdieva@gmail.com

Annotation:
In today's technology-driven world, digital transformation has become a compelling trend that is reshaping businesses and industries. This article explores the evolving landscape of digital technology and its impact on organizations. It delves into the key drivers behind digital transformation, such as changing consumer expectations, disruptive technologies, and the need for agility and innovation. The article also discusses the challenges and opportunities that arise from digital transformation, and provides insights on how organizations can navigate this dynamic landscape to stay competitive and relevant in the digital age. Overall, this article aims to provide a comprehensive overview of the compelling trend of digital transformation and its implications for businesses.

Keywords: Global networks, GPS technology, IT infrastructure, Internet of Things (IoT), Covid-19 pandemic, digital transformation, artificial intelligence (AI), Customer Data Platforms, 5G.

Information technologies have entered our lives rapidly and have become its constituent parts. One of the most important megatrends of modern global development is the "acceleration" and "compression" of time. Information technologies have had a tremendous impact on the government system, the economy, and politics in general. "Digital state", "digital economy", "digital diplomacy", "digital culture" - these concepts have long been included in scientific and journalistic vocabulary. Digital technologies have changed the philosophy of life. Global change letters to numbers - this process will also affect the future.[1]

International relations have not remained aloof from digital technologies, both in instrumental and technical terms, and in the emergence of new methods of diplomacy in world politics. COVID-19 has accelerated digitalization on a global scale, not as an objective process, but as a technique for solving many practical problems.[2]

Global networks as one of the elements of digitalization and virtualization planetary scale, are gradually turning from an instrument of domestic and foreign policy into

[1] Александр Прохоров, Леонид Коник "Цифровая трансформация" Анализ, тренды, мировой опыт 2019. 115-130

[2] Семед Семедов Информационные технологии и их влияние на внутреннюю политику государства и международные отношения. 3-4 2022.

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participants (actors) in international relations with very attractive prospects. The image of the state, both within the country in the eyes of citizens of the state and among foreigners, largely depends on the effective work of state authorities in social networks. Social networks, as a tool of manipulation in the international arena and in political struggle in general, have a colossal influence on political processes in the world, primarily on elections to various government bodies, as was clearly demonstrated by the two latest US presidential election campaigns (2016 and 2020). The development and proliferation of social media has also impacted the functioning of large corporate teams, particularly in terms of expectations for speed and efficiency of interaction. Information wars, being, in fact, one of the oldest methods influence on participants in international relations have acquired a new meaning thanks to new technologies.[3] Virtualization as a global megatrend has transferred the entire burden of the struggle for people's minds to the blogosphere, to the Internet space. The information space, being one of the undivided ones today, is becoming the main arena for defending national interests of subjects of world politics. There is an information asymmetry in the world associated with the level of economic development, political and social processes in various countries and regions.

Information security and preservation of national identity. Today, the problems of creating, implementing, and using digital technologies are closely related to the national security of the state. Information technologies are the intellectual resources of the state, primarily human capital, which determine its competitiveness at the global level. An important issue is a comfortable environment for attracting, reproducing and developing intellectual human capital and involving it in business to create new products, services, goods. One of the main tasks of a modern state is the mobilization of human resources from the outside, the formation of its own intellectual capital in order to successfully compete on a global scale in the future. [4] Those who do not do this are left with the role of supplier of raw materials or organizer of physical production based on low-skilled workers. So, the development of information technology creates a new dimension of international politics, which does not replace traditional methods of diplomacy and politics, but only complements them. Solving the problem of human capital mobility requires a comprehensive strategic view, and in this sense, the development of transport infrastructure together with the spread of telecommunications and information technologies can become a catalyst for change and set the vector for advanced movement towards building the socio-economic system of the next decade.

The world we live in has been significantly changed by digital technologies. We are now more connected on a global scale, and our personal digital presence has made a vast amount of data about ourselves and others readily accessible. This has led to concerns about privacy, security, and identity. Industries have also undergone a revolution,

[3] https://www.linkedin.com/pulse/foreign-policy-era-digital-diplomacy-mahesh-senadeera
[4] Ravshan Hamdamovich Ayupov "Raqamli texnologiyalar: innovasiyalar va rivojlanish istiqbollari" 2020 55-78b

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resulting in numerous opportunities.[5] The business landscape has experienced significant disruptions due to digital technologies, leading to major shifts and advancements in various industries. A few examples of this include: The music industry and travel/tourism industry have been transformed by digital technologies, undermining the traditional monopolies and expanding opportunities for individuals. Companies like Airbnb and Uber have revolutionized accommodation and transportation, while advancements in GPS technology have made self-driving cars a reality. These changes not only affect how we access services, but also redefine the nature of these services and their availability.

The finance and payments sectors have also seen substantial developments, shifting from online banking to mobile payment options and the emergence of cryptocurrencies, challenging the concept of traditional currency. The demand for more extensive and secure data storage and sharing systems has grown alongside the advancement of digital technologies.[6] This has led to the rise of large data centers and complex IT infrastructure, with services like Dropbox and Google Suites representing cloud-based storage and data sharing. While cloud-based data management poses risks, such as reliability and security concerns, it also offers the advantage of interconnectedness between systems and platforms. This allows businesses to adopt the best platforms for specific services, reducing the need for a single-source solution for every operational system. As digital technologies become more integrated into everyday life, there is a growing trend of digitizing personal data, from shopping preferences and social interactions to location tracking. This data is used to enhance various aspects of life, from predicting health risks to assessing population mobility patterns.[7]

From government agencies to urban planners, health organizations, insurance companies, marketers, and researchers, the use of digital technologies has provided a wealth of valuable information and data for analysis and planning across various industries and aspects of life. However, concerns about the collection and use of this data also loom. Intelligent systems and automation have been replacing human tasks for centuries, from physical to intellectual efforts. In today's world, however, machines and systems not only take over physical tasks but also intellectual ones, such as automated stock trading, online advertising auctions, and customer service interactions handled by chat bots. The growth of artificial intelligence is enabling machines to take on tasks requiring intellectual and even emotional intelligence. The Internet of Things (IoT) refers to the digital connectivity of everyday objects in our lives, a term that encompasses the widespread internet access of ordinary items. It's crucial to consider the human impact of advancing digital technologies, although conclusive research on the individual impact is still in its early stages and may present conflicting evidence. Nonetheless, significant trends in this area deserve attention.

[5] 이 주 영. 디지털 외교 시대 정부의 글로벌 커뮤니케이션 2018 년 8 월 서울대학교 대학원 행정학과 정책학 15-23

[6] https://www.diplomacy.edu/topics/digital-foreign-policy/

[7] Lee. S.-G. Trimi. S and Kim. C. The impact of cultural differences on technology adoption. Journal of World Business, 48(1), 20–29.\ (2013).

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As technology continues to advance, creating seamless user experiences that remove obstacles and challenges, the concern arises about the potential loss of learning opportunities. If technology simplifies everything for us, how can we ensure that we continue to intellectually develop and not become overly reliant on machines?

The abundance of online content and the competition for our attention may have an impact on our attention spans, leading to differing opinions on the decline of human attention spans. The impact may also be influenced by context. While we willingly share personal information online, often without realizing it, there is also a growing awareness of the need for personal security and data protection. The use of algorithms by platforms like social networks and search engines to control the content we see can create a narrow view of the world, reinforcing our existing beliefs and potentially leading to isolationism and the formation of closed niche communities, despite the initial concept of global connectivity and social integration.

Although digital technologies have numerous positive impacts on human development and individuals, it's important to remain mindful of the challenges and changes they also bring. Recent technological advancements have enabled companies to swiftly gather, analyze, and transmit data, playing a crucial role in the success of digital transformation. Innovations such as artificial intelligence, mobile technologies, and cloud computing are indispensable tools for leaders aiming to enhance their business strategy and align it with the evolving expectations of customers. Over the past twenty years, companies that harnessed these technologies for commercial purposes were able to quickly establish dominance in the market. Furthermore, prominent digital leaders like Amazon, Uber, Booking, and Airbnb have significantly revolutionized the public perception of certain products and services. The onset of the global pandemic forced businesses to rapidly adopt digital tools in order to survive, even though many of these technologies were available prior to the pandemic. Stringent health regulations left organizations with no option but to implement these digital solutions. Now, the post-pandemic era has demonstrated the effectiveness of these digital initiatives in enhancing business performance, regardless of the restrictions imposed by the Covid-19 pandemic.[8]

[8] https://intellisoft.io/key-trends-shaping-digital-transformation-you-shouldnt-miss-in-2022-2023/

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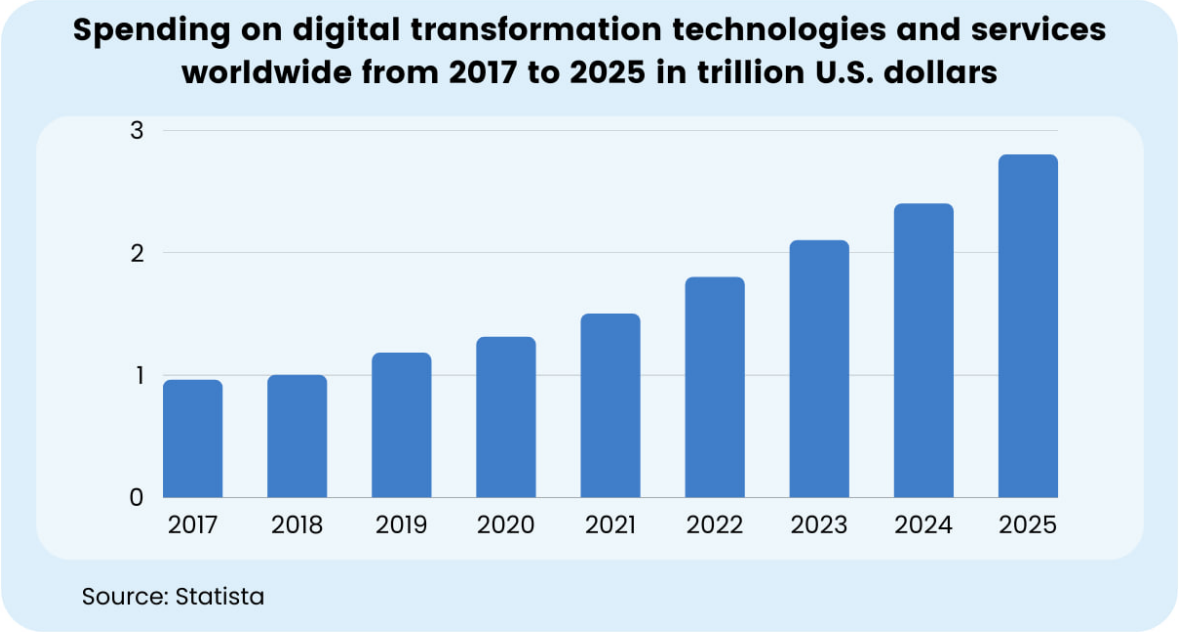

The future of digital transformation: Statistics and forecasts for 2024

Various modern companies across industries such as ecommerce, travel, real estate, and fintech have long been embracing digital transformation by integrating digital technologies into their strategies. Now, smaller enterprises and startups can also expand the digital transformation market size and business value through the use of business innovation platforms and low-code solutions. Market research data clearly illustrates how digital transformation has emerged as a global trend, enhancing organizational culture with a focus on continuous improvement. In 2021, the latest data reveals that a total of 1.5 trillion USD was invested in global digital transformation efforts. Furthermore, these investments show no signs of slowing down, with digital innovation spending projected to have a compound annual growth rate (CAGR) of 19.1% over the next four years. As a result, the cumulative global spending on digital transformation is expected to reach a staggering 6.8 trillion USD by the upcoming year.[9] By 2026, global spending on digital transformation technologies and services is expected to reach $3.4 trillion USD, highlighting the crucial role of digital transformation in maintaining business competitiveness.

Denmark is recognized as the most digitally competitive country due to its early and effective adoption of digital technologies, setting a strong foundation for future growth and innovation. Cloud technology is a favored strategy for digital transformation, enhancing business agility and scalability on a global scale.

The market for workplace transformation is experiencing significant growth, with companies reinventing workspaces and integrating digital tools to boost productivity and employee satisfaction. The investment in artificial intelligence (AI) has increased,

[9] https://stratoflow.com/future-of-digital-transformation/

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with over 40% of businesses dedicating over 5% of their digital budgets to AI in 2018 and over half of businesses maintaining similar levels, with 63% planning to increase their AI funding in the next three years. Digitally transformed entities are expected to contribute more than half of the global GDP by 2023, representing a massive $53.3 trillion, with around 65% of the world's GDP forecasted to be digitized by the same year.[10] Digital skills are becoming increasingly important, with 6-12% of job vacancies in various countries requiring these competencies, particularly in AI, data analytics, and cybersecurity. IDC's 2024 predictions for digital business focus on the rise of augmented intelligence (GenAI), emphasizing personalized experiences, automation, and data-driven decision-making across various sectors.

What is Digital Transformation?

Digital transformation refers to the utilization of digital technology across all areas of business to enhance the operations of a company.

According to the latest statistics on digital transformation, the worldwide expenditure on digital transformation is projected to exceed $3.4 trillion by 2026. This substantial figure reflects the potential of digital transformation to revolutionize business processes, prompting an increasing number of global businesses to invest in modern tools and technologies. Digital transformation also represents a significant cultural shift for companies, prompting them to challenge the status quo, embrace experimentation, and overcome the fear of failure. It involves altering traditional mindsets and business practices, in addition to adopting new approaches.[11]

[10] Е. Зиновьевой и С. Шитькова “Цифровые международные отношения” 2022. 70-80

[11] https://www.un.org/en/un75/impact-digital-technologies

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It is important to recognize that digital transformation is not merely an option; it is imperative for any company striving to survive and thrive amidst intense competition. To ensure the success of this process, it is essential to clearly understand the reasons, methods, and timing for initiating the transformation of your organization.[12]

Digital transformation plays a crucial role in improving collaboration, software monetization, operational efficiency, and data-driven insights within a company. It ensures effective communication, eliminates redundancies, and encourages idea-sharing among teams, resulting in improved productivity and accountability. Additionally, it enables software monetization, increases operational efficiency by automating tasks, and facilitates the adoption of agile methodologies, leading to faster data sharing and improved cooperation. Furthermore, it allows for the collection, storage, and analysis of data faster which leads to more actionable insights. Organizations should pay attention to digital transformation trends to gain a competitive advantage in the evolving landscape of 2023.

According to the latest information from Gartner, low code/no code platforms are expected to account for more than 65% of software development by 2024. This should not come as a surprise given the many benefits of these platforms, such as being accessible to almost anyone regardless of technical skills, lower development costs, and faster automation features for creating software solutions. This approach also allows businesses to streamline their development processes and involve individuals with little to no technical background. In line with digitalization facts, the McKinsey report reveals that many organizations are transitioning to the cloud, aiming to allocate 80% of their budget to cloud services by 2024 due to its accessibility, scalability, and security. The many benefits of such migration include improved accessibility, security, scalability, and efficiency for businesses working remotely. Regarding the use of 5G, it is no longer just a futuristic concept and instead is set to serve 40% of the globe by 2024. This technology will revolutionize how content and services are delivered, providing incredibly fast performance, lower latency, and higher density. 5G technology will also facilitate the use of IoT devices, supporting a large number of connected devices per unit of area. It is seen as a future-proof technology that can provide a competitive advantage for organizations.

Customer Data Platforms (CDP): Customer data is highly valued by companies, and Customer Data Platforms (CDPs) are used to collect and integrate this data into a unified database for more accessible and insightful analysis. This centralized information allows for targeted marketing and personalized experiences. The focus on cybersecurity is a critical aspect of digital transformation, as companies handle large volumes of data, which must be safeguarded. Modern technologies, such as AI and ML, are utilized to build robust algorithms to address cyber threats. Furthermore, automation is an

[12] Александр Прохоров, Леонид Коник “Цифровая трансформация” Анализ, тренды, мировой опыт 2019. 115-130

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essential element of digital transformation, enhancing productivity and efficiency. Artificial Intelligence (AI) and Machine Learning (ML) assist businesses in making data-driven decisions and predicting future trends. These technologies also facilitate 24/7 client support through chatbots, contributing to enhanced customer service.[13]

Utilizing AI can lead to increased independence and adaptability, as AI algorithms can learn to make decisions, place orders, and analyze consumer requests. It is important to take advantage of these constantly evolving technologies now. Anything as a Service (XaaS) is gaining popularity, encompassing the delivery of a variety of tools and technologies online.[14] It includes SaaS, PaaS, and IaaS, and has many benefits such as cost-effectiveness and scalability. Blockchain technology is being used by 81 out of 100 public companies and offers exceptional security. It can also be used for authenticity checks in educational facilities. The Internet of Things (IoT) is becoming more prevalent, with the number of connected IoT devices set to increase significantly by 2025. IoT devices provide access to customer behavior and needs and allow for remote operations.

In conclusion, the evolving landscape of digital technology and digital transformation represents a compelling trend with far-reaching implications for international relations. This transformative shift has brought about significant changes in diplomatic engagements, military strategies, and economic exchanges on the global stage. As digital technologies continue to reshape the international arena, it is imperative for policymakers, businesses, and researchers to remain vigilant and proactive in navigating the potential challenges and opportunities presented by this digital era. By understanding and harnessing the power of digital innovation, and working collaboratively to address ethical considerations, we can strive to ensure that the evolving digital landscape drives unity, progress, and prosperity in the world of international relations. As we move forward, it is crucial to embrace this trend thoughtfully, ensuring that digital technologies contribute to a more connected and cooperative global community.

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