

Fourth industrial revolution, new communication technologies and the human right to good administration

Abstract: This study aims to show how new technologies contribute to the introduction of many changes in the modern information society, including in the area of public administration. The challenge for Poland is to create a coherent digital infrastructure which allows handling administrative matters without visiting offices and in less time than before. This study will discuss the right to good administration, as one of the basic human rights, with reference to Polish and EU sources of law. Subsequently, the Polish programs will be presented. The goal of these programs is to create a digital economy and administration thanks to the new technologies such as blockchain. The last part of this article is case-study or e-administration in practice on the example of Estonia.

Keywords: fourth industrial revolution, digital transformation, right to good administration, third generation of human rights, e-administration, e-economy, digital society, information society, artificial intelligence, blockchain.

1. Introduction

One of the areas which are subject to dynamic changes during the fourth industrial revolution is public administration. The new communication technologies condition the pace of changes, offering the new opportunities to society. However, this is not a quick and easy process, because the public administration faces a number of challenges, mainly related to the implementation of many IT solutions, bureaucracy and technological debt, which has been maintained in these institutions for many years (integration of digital and physical systems). The priority for each state is aspiration to create the digital public services, which includes, next to e-medicine, also e-administration. Generally speaking, the goal of good (e-) administration is to create a system that serves citizens, giving them the possibility of dealing electronically with many official matters, which significantly saves time and energy, thus improving the quality of life of individuals.

2. The right to good administration

The right to good administration is one of the basic human rights attributed to the human being as a social entity and it belongs to the so-called third generation of human rights¹. Although, in the Polish legislation, this right does not result directly from the most important source of law, which is the Constitution of the Republic of Poland of 1997, there are some references which are well highlighted in the

¹ The third generation of human rights is “associated with the growing interdependence of states in the processes of world globalization. It includes: the right to peace, the right to development, the right to a safe environment, the right to use the common heritage of humanity <http://www.un.org/prawa-czlowieka/trzecia-generacja-praw-czlowieka/3205> .

definitions given by I. Lipowicz – good administration is based on the values contained in the constitution, it must be reliable, efficient and effective, operating according to the appropriate legal basis and in the forms provided for by law, observing the administrative procedure, and at the same time flexible and no-bureaucratic². This is the protection of the individual's rights against excessive interference, as well as the protection of the correctness, reliability and efficiency of administrative proceedings³.

The right to good administration therefore indirectly exists in the Code of Administrative Procedure. General principles can be mentioned here:

- ▶ the principle of legality – it is the acting on the basis of legal provisions;
- ▶ the principle of conducting proceedings in a way which raises the participants' confidence in the authority;
- ▶ the principle of informing the parties and other participants in the proceedings;
- ▶ the principle of active participation of parties in proceedings;
- ▶ the principle of persuasion – explaining to the parties the legitimacy of the premises followed by the public administration body in settling the matter;
- ▶ the principle of insight, speed and simplicity of conduct;
- ▶ the principle of possibility to use the settlement in contentious issues;

² Lipowicz I., *Prawo obywatela do dobrej administracji*, UKSW, Warszawa 2008: 4, <https://www.nik.gov.pl/plik/id,1555.pdf>;

compare with new classification of human rights Sitek M., *Prawa (potrzeby) człowieka w ponowoczesności*, Wyd. C.H. Beck, Warszawa 2016, pp. 212-214.

³ Sześciło D., Mednis A., Niziołek M., Jakubek-Lalik J., *Administracja i zarządzanie publiczne. Nauka o współczesnej administracji*, Wyd. Stowarzyszenie Absolwentów Wydziału Prawa i Administracji Uniwersytetu Warszawskiego, Warszawa 2014: 76; <http://rszarf.ips.uw.edu.pl/apub/podrecznik.pdf>.

- ▶ the principle of judicial review of decisions (review by the appeal bodies and the administrative courts).

In Europe, more direct references about good administration can be found. According to R. Szarfenberg, the first initiative was the Judgment of the Court of Justice of the European Union of 1969, which states that “fundamental rights are an integral part of the general principles of the Community law”⁴. In 2000, the European Union adopted the EU Charter of Fundamental Rights, which describes the right to good administration as one of the fundamental rights of EU citizens (article 41). A year later, the European Parliament issued the resolution on the European Code of Good Administration. It detailed the recommendations contained in the above-mentioned article 41 of the EU Charter of Fundamental Rights. In 2007, the Committee of Ministers of the Council of Europe adopted a recommendation on good administration, in the form of general recommendations and the Code of Good Administration. In 2013, there is the resolution of the EU Parliament created, from the Commission’s recommendations, on legislation regarding administrative proceedings in the European Union. It consists of general principles relating to EU administrations which should be regulated by the regulation⁵.

⁴ Szarfenberg R., *Administracja publiczna. Prawo do dobrej administracji –narzędzie ochrony jednostki przed nadużyciem władztwa*, <http://rszarf.ips.uw.edu.pl/apub/04n.pdf>; compare Sitek B, Bauknecht A.W., *Multi-Level Administration and Local Self-Government in Poland* [w:] Oesten Baller, Janusz Orłowski (eds.), *3 Recht, Sicherheit und Verwaltung in internationaler Perspektive (Law, Security and Public Administration in an International Perspective). Administrative Traditions in Poland and Germany: Similarities and Differences*, Berliner Wissenschaftsverlag, Berlin 2015, ISBN 978-3-8305-3260-6 pp. 71-81

⁵ Szarfenberg R., *Administracja publiczna.... op.cit.*

All Member States belonging to the European Union should comply with the nine main principles relating to the administration. These are: the principle of the rule of law (legality), the principle of non-discrimination and equal treatment, the principle of proportionality, the principle of impartiality, the principle of consistency and legitimate expectations, the principle of respect for privacy, the principle of integrity and the principle of transparency as well as efficiency and utility. They all aim to ensure for every citizen: the right to have his or her matter handled impartially, fairly and within a reasonable time by the authorities and institutions of the Union; the right to personally present the case before making a decision unfavourable to the individual; the right to access case files respecting professional and commercial interests and secrets; the obligation on the administration to justify an administrative decision; the right to claim compensation for damage caused by the institutions or officials; the possibility of using a treaty language and receiving an answer in it⁶.

3. Towards digital public administration – blockchain⁷

On our national – Polish ground, an example of the implementation of the strategy for the digital development of the state and the economy is the program “From paper to digital Poland” implemented by several ministries: the Ministry of Digitization, the Ministry of Finance, the Ministry of Infrastructure and the Ministry of National Education. This program aims to

⁶ Ibidem.

⁷ See more: Such-Pyrgiel M., *Człowiek w dobie cyfrowej transformacji*, Wyd. Adam Marszałek, Toruń 2019, pp. 163-169.

develop and implement a number of benefits resulting from the digitization of the state and administration⁸:

- ▶ 24 hour unlimited access to public services regardless the pale of staying (including those with disabilities);
- ▶ shortening the time needed to deal with official matters and the ability to monitor their status online, without the need for personal or telephone contact with the office;
- ▶ easier search for the administrative services by consolidating the access points to them;
- ▶ creating the useful, understandable and intuitive public services – taking into account primarily the needs of the user, not the office;
- ▶ the centralization of implementations, it means – limiting the costs of implementing and maintaining the digital public services;
- ▶ the implementation a digital identity for all citizens.
- ▶ the mobile access to many digital services.

The detailed streams of activity that are created under the influence of the digital revolution were highlighted in the program:

The Distributed Registers Stream – its priority is the preparation of state policy assumptions regarding the application of distributed register / blockchain technology and creation of an implementation program in this field;

The Artificial Intelligence Stream focuses on the activities from several areas: data-based economy, financing of the research and the market, education, ethics and human rights. The long-term goal

⁸ See more: Sitek M., Florek I., Sitek B., The informatisation of public administration om Poland from the point of view of industry and sustainable local development, *Regional Formation and Development Studies*, Vol 31, No 2 (2020), ISSN 2029-9370, pp. 157-167, <http://journals.ku.lt/index.php/RFDS/article/view/2107> .

is to build and further develop of strategies for the development of artificial intelligence in Poland, which would enable the creation of a basis for cooperation in this area of the public, private and academic sectors;

The Internet of Things Stream aims to introduce regulations which stimulate the market and facilitate cooperation between enterprises in the area of Internet of Things (IoT);

The E-education Stream supports the construction of a modern teaching system strategy which, by creating and spreading the IT tools which improve the effectiveness of the education process of children and adolescents as well as seniors and people with disabilities, will allow citizens to better respond to changes in the economy and the world around us.

The introduction of the citizen's digital identity system and the digitization of many state registers, such as the online access to land and mortgage registers, the register of penalty points for traffic offenses, the e-prescriptions, the e-sick leave and many others will significantly change the efficient functioning of state buddies and everyday life of the citizens⁹. It is also worth mentioning here the projects in the area of tax and reporting, which will reduce the level of tax abuse and the shadow economy.

The main technology changing the area of administration to its digital form is blockchain and the benefits of its use seem to be enormous. This system enables the parties for the securely exchange information, for the transmission with full encryption, which allows the secure identification of senders and recipients, and finally for the assurance of unchanging information. All these advantages caused lively discussion and plans to use Blockchain in the public

⁹ See more Sitek B., *The Contemporary Shape of Local Autonomy [w:] Sustainable Urbanism and Local Governance*, wyd. Kent Araştırmaları Enstitüsü, İdeal Kent Dergisi, ADAMOR Ltd. Şti., Karaman 2018, pp. 35-48. ISBN 978-605-68927-2-1.

administration, especially in tax reporting area. The systems based on block chains that facilitate the collection and payment of payroll taxes, the VAT settlement and the transfer pricing systems have recently been important topics. Of course, here too, it is important to emphasize not only the advantages, but also the difficulties which await in the process of implementing the above-mentioned solutions. As the authors of the report “Blockchain technology and its potential in taxes” from the consulting company Deloitte note: “apart from the necessary multi-level integration of systems, the changes in law, the amendments to laws on databases, intellectual property and legal identity would be necessary. However, the challenges arising from such implementation cannot be overlooked. In the long term, Blockchain can be a factor forcing the implementation of automated tax settlements in real time, affecting both small and large companies¹⁰”.

4. E-state and e-administration in practice – the example of Estonia

According to the network readiness index (NRI), which measures the readiness of individual countries to use the opportunities offered by information and communication technologies (ICT), developed by the World Economic Forum, in 2016, Poland took 42nd place (index value 4.5). Singapore has been in first place since two years, which took the place of Finland's leading until recently, but in both countries this indicator is at a very high level – it is 6. Estonia in this ranking takes 22 place, and its network readiness index is 5.4.

¹⁰ Deloitte, <https://www2.deloitte.com/pl/pl/pages/tax/articles/blockchain-technology.html> [access: 15.12.2018].

Why Estonia? Because it is one of the leaders in the use of modern technologies in the state administration. This country of nearly 1.5 million citizens has been intensively supporting the digitization and development of its e-statehood for over two decades. Despite the fact that in 1991 only over half of the country had tele-technical infrastructure allowing access to the telephone line, in 1997, over 97% of Estonian schools were connected to the Internet. And until 2002, most of the population had free access to wireless Internet. From the end of the 20th century, the intensive work began to digitize state offices and the services which are provided. Currently, every citizen of Estonia, after reaching the age of 15, receives an ID card with a chip which allows confirmation of identity in e-services provided by the state and commercial companies and from November 2018, the citizens of Estonia can also use Smart-ID software which allows submission a qualified digital signature on their smartphone. The digital ID cards also enabled, in 2005, the launch of the system for the Internet voting – e-voting, which was the first time in the world to be officially used in national elections that year. It is worth emphasizing that the percentage of citizens voting via the Internet is increasing every year; in 2005 it was only 1.9% of the total voters, in the parliamentary elections of 2015 already 30.5%, while in the 2017 in the local elections of 31.7%¹¹.

Continuing its works, the Estonian government launched the e-Tax system, which currently allows citizens and companies to cooperate fully online with tax offices and according to government information, over 95% of tax declarations are submitted via the Internet. The healthcare system was another area subject to digitization. Since 2008, the citizens of Estonia

¹¹ E-estonia.com, <https://e-estonia.com/> [access: 14.12.2018].

received access to a digital register of medical data, and now over 95% of data generated by doctors and health care units has been digitized. Now, each patient can check the medical history or the medical notes, he or she can download a digital prescription or view an x-ray image in the e-health system. The system is based on Blockchain technology, which ensures its security, data integrity and transparency (the patient gains access to the register of people who had the access into his or her medical data).

In 2014, the Estonian government introduced a new service – an e-resident card. It is an international digital identity, which, as we can read on the government website: “... can provide everyone and everywhere a chance to succeed as an entrepreneur. Similarly to citizens and residents of Estonia, the e-residents receive an electronic identity document issued by the government and full access to public e-services in Estonia. As a result, they can establish a trusted EU company with all the tools necessary to do business around the world. Then they can use their secure digital identity to manage their business completely online from anywhere on earth with the minimal costs and trouble.¹²” In addition, a solution was implemented in cooperation with Nasdaq, which operates the Estonian Stock Exchange, which, using an e-resident card, enables online voting at shareholders’ meetings. The Estonian government on the official site presents the e-resident card as an ideal solution just for representatives of the gig economy – freelancers and digital nomads. It is also a simple way for foreigners from outside the area to set up a company in the EU.

Also the area of culture and education is covered by the national digitization plan – a significant part of the national heritage has

¹² E-estonia.com, <https://e-estonia.com/> [access: 14.12.2018].

been digitized and it is available via the Internet, while in the area of teaching Estonia has very clearly focused on the development of ICT and access to e-learning. By 2020, all school materials will be available online through the e-school bag.

For secure communication and data exchange between all state registers, citizens/residents and the online service providers, a Blockchain-based X-Road/X-tee system is used. Estonia, due to its geographical and political location, also maintains backup copies of its registers outside the country, which gives it additional protection in the event of aggression and the seizure of its territory by a hostile state.

The example of Estonia shows how significantly the digital transformation can affect the daily lives of citizens and the work of state offices. It is also very important to have a comprehensive approach to the project of digitizing of the state and to build a solid strategy for these activities, so that the work and projects carried out in different areas and institutions can use a common data exchange platform and provide a coherent, user-friendly interface. At the same time, this example shows how digital transformation allows responding to political and military threats related to the geopolitical situation. Extracting all registers to digital form, providing online access in real time, well-designed architecture resistant to cyber attacks and data loss – all this allows to feel safe and if necessary continue the government's work and keep all registers abroad in the event of territorial aggression. It is important to emphasize that Estonia was the target of cyber attacks on government institutions in the past. The most serious incident occurred in 2007, when a series of cyber attacks caused a break in access to some public services and banks. However, this did not cause a breakdown of the transformation policy but only forced the pressure to increase the security in this respect.

At this point, I will briefly describe the impact of the digital revolution on public and political life. For many decades, the politicians wanting to gather information about social moods, the needs of voters and the opinions on a given topic could only rely on their feelings, beliefs, and very narrow surveys of public opinion. With the development of technology, especially telephony, the research began to be extended to larger population samples and larger geographical spaces. This gave significantly more reliable results but still the selection of the sample, the extent and honesty of the answers to the questions could leave much to be desired. It was a case until the time when the social media and the advanced data analytics entered the scene. Over the past few years, the world has changed dramatically – a significant part of society has and actively uses the social networking sites, the discussion groups, both local and national forums, expressing their opinions often directly and openly. People and companies dealing in the marketing and the sales of products and services found out very quickly about the opportunities it brings. As a result, the social networks and the search engines are slowly transforming from their basic function, which was connecting people and searching for data, towards very advanced and effective marketing and sales tools. And companies like Facebook and Google have built the billions dollars empires on this idea.

Positive and negative aspects are closely related to the technological development, which is why it is so important to be able to use the potential of digital transformation in a way that brings the most benefits to society. Unfortunately, as the recent years show, very often access to the opportunities which are given to us by the digital world is used contrary to the original intention of the creators or they misuse their ideas for quick enrichment.

The wide access to the Internet and the very dynamic development of social networks have caused that most of us use these media very intensively and send a lot of information about their personal and professional life. Seemingly irrelevant data, for example: about the books we have read, the films we recommend, what we think about the latest world events, etc., when all this information is aggregated and analyzed, it can be used to build our personal psychological profile. This was confirmed by the research of a Polish scientist – dr. Michał Kosiński from Stanford University, the creator of the algorithm, which on the basis of our traces left in cyberspace (e.g. entries, likes and comments on Facebook) allows to determine our personality model as well as the political and sexual preferences, our faith, skin colour, gender, addiction, level of life satisfaction, etc. The scientist proved that “there are significant psychological connections between the personalities of users, their preferences of websites and the features of Facebook profiles (...)” and “(...) that the personality of a specific person can be determined by the characteristics of his or her Facebook profile, and that the computer does it better than a human”¹³. The issue of using artificial intelligence and mass influencing on voters by sending a person-specific message became loud during the last presidential election in the US, when it was revealed that Cambridge Analytica had used Kosinski’s algorithm on a huge number of Facebook users whose data was obtained in an illegal way.

On the one hand, thanks to algorithms, the politicians and the supporting them companies can learn about our psychological portrait and influence our decisions through micro-targeting, it means through the actions and messages personalized to

¹³ Gazeta.pl, <http://weekend.gazeta.pl/weekend/1,152121,21287773,po-zwyciestwie-trumpa-i-brexicie-michal-kosinski-zaczal-odbierac.html> [access: 14.12.2018].

a specific recipient, and thus influence and manipulate our election decisions, adjusting the election message. On the other hand, these technologies can have a positive impact. Understanding the needs and problems of society in a given region can enable politicians and local governments to satisfy and solve them¹⁴.

5. Conclusion

The fourth technological revolution is a fact, and the digital state and economy are the direction of development of modern societies. All aspects of social life are subject to the transformation, from the family relationships, education and professional work to the ways of spending free time, dealing with the administrative matters and the politics. And although these areas have changed under the influence of revolutionary and technological modification over the past few centuries, it is worth emphasizing that the current dynamics of these changes and their scope is a major novelty. The best scenario for action is appropriate design and stimulation of development directions and the extent of future changes in every area of social life.

The topic of future research and the interests of scientific studies should be the analysis of the digital society, the digital economy and the digital public services as well as their effectiveness, adequacy and security. In the future, it will be possible to find out if these changes will create a climate for the right to good administration. Over the next few years, we will be able to assess whether new technologies,

¹⁴ See more: Matuszewski P, *Cyberplemiona. Analiza zachowań użytkowników Facebooka w trakcie kampanii parlamentarnej*. Wyd. PWN, Warszawa 2018; compare D. Jemielniak, *Socjologia Internetu*, Wyd. Naukowe Scholar, Warszawa 2019, pp. 128-131; compare Jemielniak D., Przegalińska A., *Collaborative society*, MIT Press Ltd, Massachusetts 2020.

especially blockchain or artificial intelligence, have contributed to positive changes in the quality of human life, including the reduction of time needed to handle public matters. These changes will have to be looked at in a multifaceted manner and it should be checked whether their beneficiary is both a person, an entrepreneur and the state offices themselves.

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