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Pros and Cons of Digital Solutions for the Implementation of Freedom of Movement and Residence in the Schengen Area in the Era of the COVID-19 Pandemic

Abstract: The COVID-19 pandemic caused by the SARS-CoV-2 coronavirus, which emerged in Europe in January 2020, gave rise to restrictions by European Union Member States on freedom of movement and residence in the Schengen area. Individual actions by states mobilized the EU to take formal steps as well as to implement practical solutions to coordinate the efforts of all Member States. Digital solutions belong to the practical measures. Their implementation may bring potential benefits but is also associated with the possibility of potential risks. This article presents the basic assumptions of freedom of movement and residence in the Schengen area and their limitations by Member States justified by public health reasons. The characteristics of digital solutions for facilitating freedom of movement during the COVID-19 pandemic are then presented, taking into account their effectiveness. The paper concludes with a presentation of the benefits and potential risks associated with the implementation of selected digital solutions by the European Union.

Keywords: COVID-19, free movement, public health, Schengen area

Introduction

Freedom of movement and residence within the Schengen area is considered to be one of the greatest achievements of European integration and the right most appreciated by EU citizens.¹ Millions of Europeans and third-country nationals use

1 P. Buras, Europe's Fragile Freedoms Facing a Coronavirus Stress Test, "Stiftung Genshagen Paper Series: Acting European? The European Union and the Weimar Triangle in the Coronavirus

it every year to travel for tourism, business or other purposes. These journeys are not subject to identity checks or conditions of entry and stay. However, there are situations when the long-forgotten physical borders between countries and the associated border controls must return for a while, thereby limiting the possibility of exercising this freedom, which is in accordance with European Union law. COVID-19 and its aftermath has verified the EU's capabilities and concepts in this regard.

The aim of this article is to discuss the restrictions on freedom of movement and residence in the Schengen area in relation to the protection of public health and to identify modern digital solutions to improve the implementation of freedom of movement in the era of the COVID-19 pandemic. The article adopts the following research hypothesis: not all tools introduced by the EU are effective and bring tangible benefits. Digital solutions carry potential risks.

The article was written using dogmatic and descriptive methods. The first was used to identify and interpret the provisions of EU law regulating restrictions on freedom of movement and residence in the Schengen area justified on public health grounds. The descriptive method was used to depict the digital solutions designed to implement freedom of movement and residence in the Schengen area in the era of the COVID-19 pandemic.

1. Restrictions on Freedom of Movement and Residence in the Schengen Area Justified on Public Health Grounds

Freedom of movement and residence within the territories of the Member States does not operate unconditionally. Under the law of the European Union, it is subject to certain limitations. In the preamble to the Treaty on European Union (hereinafter TEU), the Member States, while expressing their intention to facilitate the free movement of persons, stipulated that this freedom is to be exercised with due regard for the security of the nationals of the Member States by establishing an area of freedom, security and justice in accordance with the provisions of the treaties.² Subsequently, in the substantive provisions of the TEU, in Article 3(2), the EU legislator indicates that the free movement of persons operates in conjunction with the application of certain instruments for the control of the EU's external borders, asylum, immigration, and the prevention and combating of crime.³ On the other hand, in Article 21(1) of the Treaty on the Functioning of the European Union (hereinafter

Crisis" 2020, no. 6, p. 2, http://www.stiftung-genshagen.de/uploads/media/Acting_European_No_6.pdf (accessed 20.04.2021).

2 Preamble of the TEU (Journal of Laws UE C 326 of 26.10.2012).

3 See T. Dubowski, *Granica polsko-rosyjska jako zewnętrzna granica Unii Europejskiej*, 'Białostockie Studia Prawnicze' 2011, no. 9, p. 78 and Art. 3(2) TEU (Journal of Laws UE C 326 of 26.10.2012).

TFEU), the EU legislator stresses that freedom of movement and residence within the territories of the Member States is to take into account the limitations and conditions laid down in the treaties and in the measures adopted to give them effect.⁴ As Paweł Szewczyk rightly observes, the treaties do not explicitly specify which provisions should be taken into account in this case.⁵ The right approach seems to be to adopt the limitations indicated for the broadly defined freedom of movement of persons, of which freedom of movement and residence within the territories of the Member States is a component. Those restrictions include grounds of public policy, public security and public health.⁶ Moreover, conditions concerning restrictions on the exercising of the right to move and reside freely within the territory of the Member States may be laid down by secondary legislation. The restrictions on freedom of movement and residence caused by a threat to public health are supplemented by Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States; however, in terms of the occurrence of threats to public health, the regulations are quite sparing. Pursuant to it, Member States have the right to restrict freedom of movement and residence on the grounds of a threat to public health.⁷ This is justified by the threat of epidemic diseases listed by the World Health Organization and the threat of other infectious diseases or contagious parasitic diseases if they are the subject of protection provisions for nationals of the host Member State. In addition, under the Directive, Member States may require a person with the right of movement and residence to undergo, free of charge, a medical examination within three months of arrival in order to certify that he or she does not suffer from any epidemic or contagious disease. However, the Directive stipulates that such examinations must not be carried out routinely. The requirement to carry out such examinations is to be based on legitimate grounds.⁸ When introducing restrictions due to the above premises, the state cannot justify them with economic objectives, e.g. to protect the domestic labour market. It seems that according to the principle of necessary requirements⁹ indicated by the Court of

4 Art. 21(1) TFEU (Journal of Laws UE C 326 of 26.10.2012).

5 P. Szewczyk, Ograniczenia swobody przemieszczania się i pobytu obywateli UE uzasadnione względami porządku oraz bezpieczeństwa publicznego, *‘Studia Prawnicze. Rozprawy i Materiały’* 2016, vol. 19, no. 2, p. 187.

6 Art. 45(3) and Art. 52(1) TFEU (Journal of Laws UE C 326 of 26.10.2012).

7 Art. 27(1), Directive 2004/38 / EC.

8 *Ibidem*, Art. 29.

9 This principle applies directly to restrictions on the free movement of goods justified on valid grounds other than those set out in the Treaty. According to doctrinal considerations, it may apply in other cases, e.g. with regard to freedom of movement and residence. See M. Wiącek, Ograniczenia swobody przepływu osób w Unii Europejskiej – przypadek Romów we Francji w 2010 r., (in:) A. Frąckowiak-Adamska and A. Śledzińska-Simon (eds.), *Sytuacja prawna i społeczna Romów w Europie*, Wrocław 2011, pp. 56–57.

Justice of the European Union (CJEU) in the *Cassis de Dijon* case,¹⁰ a Member State, when imposing restrictions on the exercising of freedom of movement and residence, including on the grounds of a threat to public health, must take measures which are proportionate, non-discriminatory and necessary to protect the public interest, but which take account of the EU's interest in exercising that freedom. The burden of proof for compliance with those requirements lies with the Member State.¹¹

Until March 2020, the EU was only known to restrict freedom of movement and residence due to a need to ensure public order and security within the territory of Member States. For example, in recent years, Austria, Germany, France, Denmark, Sweden and Norway have maintained controls at the internal borders of the Schengen area in connection with the ongoing migration crisis in 2015–2016. Although the situation has improved significantly, these countries continue to maintain control at certain sections of the border, citing security concerns and terrorist threats.¹² We also witnessed the temporary closure of borders by France in 2015 due to a series of terrorist attacks, and the introduction of temporary controls at the internal borders of EU Member States in connection with the organization of political summits such as the G8, G20 or NATO and the organization of sports events such as Euro 2008 and Euro 2012.¹³

The COVID-19 pandemic is an unprecedented case of such a large-scale restriction on freedom of movement and residence in the Schengen area due to the premise of a public health threat in EU Member States. The first infection in Europe was reported on 24 January 2020 in France. Two months later, the European Union became the global epicentre of the disease, with a huge wave of cases first in Italy and then in Spain, France, the United Kingdom and the Benelux countries. By April 2020, the virus was present throughout Europe. The Member States of the Schengen zone, due to their right to restrict freedom in a public health emergency, individually began to implement restrictions. Various forms of controls were introduced at the internal borders of the Schengen zone. The restrictions consisted of reopening fewer border crossings; sanitary controls at border crossings, where travellers had to take their body temperature and fill in a card with their contact details and whereabouts

10 Judgment of the Court of 20 February 1979 in the case of *Rewe-Zentral AG v. Bundesmonopolverwaltung für Branntwein*. Reference for preliminary ruling: *Hessisches Finanzgericht*, C 120/78, p. 662.

11 Communication from the Commission, Guidelines concerning the exercise of the free movement of workers during COVID-19 outbreak 2020, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020XC0330%2803%29> (accessed 20.04.2021).

12 J. Szymańska, *Strefa Schengen w dobie pandemii Covid 19*, 'Biuletyn Polski Instytut Spraw Międzynarodowych' 2020, no. 62 (1994), pp.1–2.

13 See P. Rosik, T. Komornicki, S. Goliszek and P. Duma, *Dostępność potencjałowa regionów w Europie – zasięg przestrzenny, długość podróży efekt granicy (EU-ROAD-ACC)*, Warsaw 2020, p. 31.

in order to be informed quickly if they came into contact with an infected person; travellers having to show a negative coronavirus test certificate; being banned from entering a Member State; and finally, closing all borders and having to undergo quarantine for several days after entering a Member State.¹⁴

In view of the situation, the measures taken by the states appeared to be justified, but the problem was that each of them basically acted individually, with different preventive measures. The manner in which they were introduced highlighted serious problems in the management of the Schengen area that had not previously been apparent. The restrictions that were introduced helped in the fight against the pandemic, but were imposed in an uncoordinated manner that affected even essential travel and the free movement of goods.¹⁵

It can be said that there was no uniform approach to the introduction of restrictions, which led to chaos, mutual tensions and, importantly, to the suspension by Member States of freedom of movement within the Schengen area. The problem was not just the various restrictions that were introduced, but the rapid pace of their implementation and modification. People travelling within the Schengen area lost track of the constantly changing rules and principles for crossing borders and staying in the Member States. Cross-border workers who live and work in two EU Member States were in an extremely difficult situation. People from the Polish-Czech or Polish-German border region had to face this kind of problem. The introduction of border controls made it very difficult for cross-border workers to move from their place of residence to their place of work and, if the borders were closed, forced them to choose between losing their earning opportunities and being separated from their families. Another problem was the obligation to undergo quarantine for several days after crossing the border or the obligation to perform regular coronavirus tests, which in turn entailed expense, limited availability and long waiting times for results.¹⁶ The European Commission reacted to the above problem by issuing guidelines on the free movement of workers during the COVID-19 epidemic as early as 30 March 2020, paying particular attention to cross-border workers.¹⁷ The proportionality of protection measures taken by Member States can also be questioned. For example, Hungary and Poland closed their borders to third-country nationals in March 2020 during the first wave of the pandemic in Europe.¹⁸

14 *Ibidem*, p. 32 and J. Szymańska, *Strefa Schengen*, *op. cit.*, pp. 1–2.

15 D. Schade, *Crisis-Proof Schengen and Freedom of Movement: Lessons from the Covid-19 Pandemic*, Hertie School, Jacques Delors Centre, Berlin 2021, p. 2.

16 See Polish cross-border workers stage protests against restrictions, 25 April 2020, <https://www.thefirstnews.com/article/polish-cross-border-workers-stage-protests-against-restrictions-12252> (accessed 20.04.2021).

17 Communication from the Commission, *Guidelines concerning*, *op. cit.*

18 See S. Robin-Olivier, *Free Movement of Workers in the Light of the COVID-19 Sanitary Crisis: From Restrictive Selection to Selective Mobility*, 'European Papers' 2020, vol. 5, no. 1, p. 615.

The problem of the application of various measures by Member States to limit the spread of the pandemic was recognized by the European Union from the very beginning. The need to coordinate them was taken for granted, but in many cases this proved impossible, despite the best efforts of the European Commission and the support of other entities.¹⁹ The organization has adopted a number of formal measures to coordinate its activities. At the EU level, a number of conclusions, recommendations, guidelines and communications have been developed to support the coordination efforts of the Member States and to guarantee freedom of movement within the Schengen area.²⁰ The EU has also decided to implement several digital solutions to help gradually restore freedom of movement and residence for EU Member States.

2. Selected Digital Solutions for the Implementation of Freedom of Movement of People in the Schengen Area During the COVID-19 Pandemic

The rapid spread of the virus required the EU institutions to take practical steps to slow down its transmission and protect the health and lives of EU citizens while allowing, as much as possible, the movement of people, goods and services in full compliance with health requirements. As a first step, the Re-open portal was launched on 15 June 2020, accessible on PC and mobile devices (since 14 December 2020, the portal is also available as a mobile application). The tool helps travellers and tourists

19 D. Schade, *Crisis-Proof Schengen*, *op. cit.*, p. 2.

20 See Commission Guidelines for border management measures to protect health and ensure the availability of goods and essential services (OJ C 86I, 16.03.2020, p. 1); Commission Guidelines concerning the exercise of the free movement of workers during COVID-19 outbreak (OJ C 102I, 30.03.2020, p.12); 'Joint European Roadmap towards lifting COVID-19 containment measures' of the President of the European Commission and the President of the European Council, Commission Guidance on free movement of health professionals and minimum harmonisation of training in relation to COVID-19 emergency measures (OJ C 156, 08.05.2020, p. 1); Commission Communication towards a phased and coordinated approach for restoring freedom of movement and lifting internal border controls (OJ C 169, 15.05.2020, p. 30); Commission Communication on the third assessment of the application of the temporary restriction on non-essential travel to the EU (COM(2020) 299 final); Commission Guidelines on seasonal workers in the EU in the context of the COVID-19 outbreak (OJ C 235I, 17.07.2020, p. 1); Commission Communication on the implementation of the Green Lanes under the Guidelines for border management measures to protect health and ensure the availability of goods and essential services (OJ C 96I, 24.03.2020, p. 1); Commission Guidelines on Facilitating Air Cargo Operations during COVID-19 outbreak (OJ C 100I, 27.03.2020, p. 1); Commission Guidelines on protection of health, repatriation and travel arrangements for seafarers, passengers and other persons on board ships (OJ C 119, 14.04.2020, p.1); and Council Recommendation (EU) 2020/1475 of 13 October 2020 on a coordinated approach to the restriction of free movement in response to the COVID-19 pandemic (OJ L 337, 14.10.2020, pp. 3–9).

to travel safely within the Union in accordance with the applicable health regulations. The portal provides the basic and most up-to-date information on safety, travel, crossing internal borders, quarantine and testing for coronavirus in each Member State, Iceland, Liechtenstein, Norway and Switzerland. The information on the portal is pre-screened by the European Centre for Disease Prevention and Control and the Member States, and published in the 24 official languages of the EU.²¹

Other digital solutions being implemented to support coronavirus containment and thereby enable people's freedom of movement for work and tourism, in parallel with the Re-open portal, are national contact-tracing and alerting apps. The mechanism of an app is its installation on a smartphone device. Once it is launched, the app uses Bluetooth-based physical proximity data to detect other devices equipped with the same app in the vicinity. A person on the app who tests positive for COVID-19 alerts other app users that they have been within 2 metres of an infected person for a minimum of 15 minutes. At that point, those at risk of becoming infected can take necessary steps such as self-isolation and coronavirus testing to break the chain of infection. To integrate national contact-tracing and alerting apps, the European Commission has created an EU-wide system to ensure interoperability - the so-called 'network gateway'. The implementation of this solution allows the users to move around the European Union with a single app.

On 17 March 2021 the European Commission proposed the implementation of a new digital solution in the EU area, the Digital Green Certificate (also known as the COVID Certificate or Green Certificate), which in the era of the ongoing pandemic is expected to facilitate movement and stays in the Member States. The project will be fully implemented on 1 July 2021, and France is expected to be the first country to test the Digital COVID-19 Travel Certificate through the application.²² The certificate is to be issued free of charge on paper or digitally, in English or in the official language of the issuing Member State. The document will be issued at the request of the person concerned by national treatment providers, e.g. primary care providers or vaccination centres. Each citizen will also be able to download the certificate personally from a selected national application (including a mobile device) dedicated to civic affairs or health issues (e.g. in Poland, the Internet Patient Account (IKP) and the mObywatel app). An individual will be able to obtain one of three types of certificate. Each of them will contain the date of issue; data confirming the identity of the person, including their name, surname and date of birth; a QR code; information on the certificate issuer; and a unique certificate identifier. The

21 Official website of the European Commission, https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/travel-during-coronavirus-pandemic_pl (accessed 25.04.2021).

22 France Becomes First EU Country to Start Testing Digital COVID-19 Travel Certificate Through App, 21 April 2021, <https://www.schengenvisainfo.com/news/france-becomes-first-eu-country-to-start-testing-digital-covid-19-travel-certificate-through-app/> (accessed 02.06.2021).

first of these types of certificate is the vaccine receipt certificate, which, in addition to the above data, indicates the name of the disease to which the vaccination applies; the name of the vaccine received; the name of its manufacturer and the serial numbers of the dose(s); the date the vaccination was received; and the name of the country in which the vaccination was administered. This certificate is valid for one year. The certificate will not be available until 14 days after receiving a single dose or the second dose of a vaccine. The second type is the SARS-CoV-2 coronavirus negative test certificate, which includes information about the test performed (the type of test, name of test, name of test manufacturer), the date and time the sample was collected for testing, information about the place that performed the test, the test result and an indication of the country where the test was performed. This type of certificate is valid for 48 hours. At this stage, PCR tests are recognized. The last type of certificate is the COVID-19 recovery certificate, which indicates the date of a first positive test result and the name of the country where the test was performed. Recovery status is obtained 11 days after the test and is valid for 180 days. These types of certificates are not travel documents and do not replace the current requirement for travel documents in the form of an ID card or passport. Their possession exempts individuals from quarantine or the obligation to undergo additional tests. On the other hand, the absence of such a document when crossing a border will result in an obligation to fully comply with the prevailing pandemic restrictions. The certificates will be recognized by all Member States, as well as Iceland, Norway and Liechtenstein, and will be readable through a specially designed EU COVID Certificate System to which countries will subscribe. The certificate will be presented to the border authorities when travelling. By scanning the QR code on the certificate using the EU COVID Certificate app, the officer will read the identity of the certificate holder and check its authenticity and validity.²³

The digital solutions proposed by the European Union to enable freedom of movement and residence in the Schengen area have been accepted by EU Member States. Their implementation gives hope for a quick return to pre-pandemic times. However, apart from the benefits that seem to be obvious, they carry potential threats.

23 Official website of the European Commission, https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en; Paszport covidowy w aplikacji mObywatel. Od wakacji łatwiej będzie podróżować po UE, 21 May 2021, <https://www.telepolis.pl/wiadomosci/aplikacje/mobywatel-paszport-covidowy-podroze-po-ue-wakacje-2021> (accessed 20.05.2021).

3. Benefits of Implementing Selected Digital Solutions

Europeans find the Re-open portal useful for people who need to move to and stay in other Member States.²⁴ The successive waves of infections have shown how difficult it is to move around Europe when each country imposes its own sanitary restrictions. New information is constantly appearing in the media and on social networks, which becomes outdated quite quickly. The implementation of the tool provides the latest data on the epidemiological situation in individual countries and the rules of crossing internal EU borders. It seems that, despite the introduction of the Digital Green Certificate, portal will continue to fulfill its role. As statistics show, a large number of Europeans have not yet been vaccinated.²⁵ Among this social group, some people will choose never to receive the vaccine due to health aspects or their own beliefs. When travelling within the Schengen area, they will need to be aware of the current epidemiological situation in the countries. The portal is administered by the EU, which further strengthens the credibility and timeliness of its content. However, the content is not exhaustive, but it is important that it contains links to more detailed information. A definite disadvantage in the assessment of this tool is the minimum standard of accessibility for people with disabilities. The functioning of the portal does not entail serious risks; it can only make travelling difficult if the data is not up to date. However, so far, the data is supplemented on an ongoing basis.

Epidemic monitoring, which aims to limit the spread of the virus, mainly uses traditional contact-tracing methods. These involve identifying people who may have had contact with an infected person and providing information about the potential for infection, the need to undertake self-isolation and the provision of necessary care.²⁶ The idea of implementing contact-tracing and alerting apps also seemed to be a useful solution to complement the traditional methods mentioned. A definite benefit of this type of solution, highlighted by the Council of Europe, is the speed of transmission of information about the potential possibility of infection;²⁷ in the case of the spread of the virus, its new and more infectious variants are of great importance. Applications for contact tracing and alerting can be considered a tool to support the work of national sanitary services (using traditional methods of contact tracing). In Poland, especially during the second wave of infections, these services were becoming less and less efficient in quickly providing information to people

24 Chaos na wewnętrznych granicach, Witryna internetowa Filary Biznesu, 4 November 2020, , <https://filarybiznesu.pl/chaos-na-wewnetrznych-granicach-ue/a6909> (accessed 25.04.2010).

25 Szczepienia przeciwko koronawirusowi w Polsce, Europie i na świecie – Zestawienie, <https://www.euractiv.pl/section/zdrowie/news/pandemia-szczepienia-koronawirus-polska-europa-swiat-covid19-porownanie/> (accessed 25.04.2021).

26 Council of Europe, Digital solutions to fight Covid 19: 2020 Data protection report, October 2020, p. 25.

27 *Ibidem*.

who could potentially be infected. The application is a faster alternative tool to the information from the appropriate services to warn about the potential threat.

Another benefit of the solution is its reach. The national application works not only within the Member State, but thanks to the network gateway created by the European Commission, it enables the exchange of information between applications of other EU Member States. Therefore it can be useful when travelling and staying in other Member States that have adopted this solution. The benefits of the app were highlighted by Internal Market Commissioner Thierry Breton and Commissioner for Health and Food Safety Stella Kyriakides, among others. The latter stated that 'At a time when we are relaunching social and economic life, digital technologies are very useful to alert our citizens to the risk of infection, and to break the chains of infection.'²⁸ She also pointed out a crucial aspect of the success of the adopted solution, namely the number of users. In order for the app to fulfill its function, it must be used by approximately 60% of the population.²⁹ Despite positive opinions about the importance and benefits of this solution, it did not gain complete acceptance among EU Member States. The apps have been implemented in 22 countries, including 17 countries opting for decentralized architecture³⁰ (Austria, Belgium, Croatia, Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Italy, Latvia, Malta, Netherlands, Poland, Portugal, Slovenia, Spain) and five states in a centralized architecture³¹ (Bulgaria, Cyprus, France, Slovakia, Hungary). However, five countries have decided not to implement this type of solution (Greece, Luxembourg, Lithuania, Romania, Sweden).³²

Apps have not gained recognition among Europeans, as illustrated by publicly available data. In Germany, for example, the Corona-Warn-App (as of May 2021) had been downloaded by over 33% of citizens (28 million people),³³ which should be considered a good result in comparison with Poland, where the STOP COVID ProteGo Safe app (as of April 2021) was downloaded by fewer than 5% of citizens

28 European Commission Press Release, Coronavirus: Member States agree on an interoperability solution for mobile tracing and warning apps, Brussels, 16 June 2020, p. 1.

29 K. Szymielewicz, A. Obem and T. Zieliński, Jak Polska walczy z koronawirusem i dlaczego aplikacja nas przed nim nie ochroni?, <https://panoptykon.org/protego-safe-ryzyka> (accessed 20.05.2021).

30 This provides only for the processing of anonymous identifiers and the exchange of data, without involving the administration.

31 This enables the collection of data allowing for the unambiguous identification of individuals and the transfer of this data to the relevant administrative authorities (e.g. the sanitary administration, but also the police).

32 Council of Europe, Digital solutions, *op. cit.*, pp. 27–28.

33 Anzahl der Downloads der Corona-Warn-App über den Apple App Store und den Google Play Store in Deutschland von Juni 2020 bis Mai 2021, <https://de.statista.com/statistik/daten/studie/1125951/umfrage/downloads-der-corona-warn-app/> (accessed 03.06.2021).

(1.9 million).³⁴ It is difficult to estimate how many people in Europe currently use the app. Installing an app is not equivalent to using it and responding to warnings. The reasons for the low popularity of the use of apps will be discussed in the next part of the article devoted to threats resulting from digital solutions.

In the case of the Digital Green Certificate project, the Member States were initially very sceptical about the idea, which also caused uncertainty among Europeans, but in fact it is already a known solution and, in addition, is compliant with the law. For many years a similar tool has been used without which one cannot enter several countries in the world: the International Vaccination Booklet (the so-called yellow booklet). It is used to document vaccination against yellow fever, which, according to WHO health regulations, is a mandatory vaccination required for entry into parts of African and South American countries. The booklet is now an official document recognized around the world, and is obtained at the point where the vaccination is performed. Recommended vaccinations can also be recorded in this document.³⁵

The benefits of implementing the Digital Green Certificate are obvious. The certificates will make the rules for crossing internal borders of the Schengen area uniform in all Member States, which is definitely a great convenience for travellers in Europe. Although border controls will not disappear, it can be predicted that the verification of travellers on the basis of the certificate will significantly streamline border traffic and thus reduce the waiting time to cross the border. What is more, the possibility of travelling for tourist purposes will return, which will bring measurable economic benefits, especially for countries whose main industry is tourism. Moving and staying in other Member States and returning to one's own country will not require tests or a quarantine period of several days. Cross-border workers will not have problems with getting to work and returning home to their families.

It can also be predicted that the introduction of the certificate will change the attitude of those hesitant or sceptical about receiving the vaccine, especially those who are keen on travelling. Although it will be possible to travel without the certificate, not having it will be a kind of complication in achieving travel goals, which will perhaps change the decision.

34 Odpowiedź na interpelację nr 22103 w sprawie aplikacji STOP COVID, <https://www.sejm.gov.pl/sejm9.nsf/InterpelacjaTresc.xsp?key=C2KJDB>, Warsaw, 28.04.2021 (accessed 28.05.2021).

35 P. Orlikowski, Paszport covidowy budzi kontrowersje, a 'żółta książeczka' istnieje od lat. Prawnik wyjaśnia, 7 March 2021, <https://www.money.pl/gospodarka/paszport-covidowy-budzi-kontrowersje-a-zolta-ksiazeczka-istnieje-od-lat-prawnik-wyjasnia-6613836302682688a.html> (accessed 28.05.2021).

4. Potential Risks of Selected Digital Solutions

Digital solutions adopted within the EU carry the risk of potential threats. The implementation of the Digital Green Certificate and applications to trace and alert from infectious contacts has not been free from individuals' concerns about violations of privacy rights.³⁶ As rightly noticed by Zygmunt Niewiadomski and Marek Zirk-Sadowski, the effects of digitization may be particularly severe for citizens, and one of the most serious threats is the far-reaching restriction of privacy. The authors emphasize that the greater the degree of public threat, the more often the public authority uses measures restricting the private sphere of the citizen. This is because digitization offers greater opportunities for action, also for those who pose a security risk, so there is never-ending action in this area.³⁷

In the case of apps, it is worth quoting the statement of the Commissioner for Health and Food Safety, Kyriakides, who said that their operation would respect data security, fundamental rights and the protection of individual privacy. To this end, the European Commission has developed a set of rules that must be strictly applied before the apps are made available. According to these principles, the installation and use of apps should be voluntary. The scope of the data collected is minimal, necessary for the provision of the service and does not allow the identification of specific individuals. The data is protected by state-of-the-art technologies, including encryption. Moreover, the European Commission does not allow the use of such data to determine the location or track the movement of people. The apps should be created using Bluetooth technology and the data obtained through them cannot be stored for more than 14 days. The Commissioner further assures that the apps will be turned off once the pandemic is over. She also confirms that health data is sensitive and its processing must follow strict rules. She points out that the aggregated statistical data collected does not allow the identification of individuals but only serves the purpose of contact tracing, and therefore the General Data Protection Regulation does not apply to it.³⁸ The above position was confirmed by the Polish Ministry of Digitization,

36 See Aplikacja 'Kwarantanna domowa' budzi wątpliwości obywateli. Rzecznik pisze do premiera, 13 November 2020, <https://www.rpo.gov.pl/pl/content/rpo-do-premiera-aplikacja-kwarantanna-domowa-budzi-watpliwosci> (accessed 29.04.2021).

37 Z. Niewiadomski and M. Zirk-Sadowski, *Prawo wobec wyzwań epoki cyfryzacji*, (in:) J. Gajewski, W. Paprocki and J. Pieriegud (eds.), *Cyfryzacja gospodarki i społeczeństwa szanse i wyzwania dla sektorów infrastrukturalnych*, Gdańsk 2016, pp. 205–209.

38 Official website of the European Commission, <https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/travel-during-coronavirus-pandemic/how-tracing-and-warning-apps-can-help-during-pandemi.pl> (accessed 26.04.2021) and Art. 9 Regulation (EU) No 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 04.05.2016, pp. 1–88).

which assured that the information held on the devices is anonymous, encoded and stored in the phone only for a period of two weeks.³⁹

However, these assurances did not encourage mass adoption of the app. The idea failed for several reasons. Firstly, the EU Member States did not agree on a single path for implementing the app. They did not adopt a unified digital architecture and some states decided not to implement the tool, which definitely hindered interoperability. Moreover, not all countries that declared implementation of the project have registered in the common system. Secondly, it seems that the main reason for shying away from this solution by the majority of the public is a fear for the security and privacy of users and the fear of intervention by the sanitary administration and quarantine obligations. Moreover, digital experts point out that the application may report numerous false alarms, due to the fact that the Bluetooth signal reaches through walls. This means that the devices are communicating while their users are not actually in contact with each other. Therefore false messages may appear, which will needlessly limit the freedom of individuals. It should also be emphasized that the implementation of this type of solution may suppress the vigilance of citizens and lead to disregard for the main recommendations in terms of maintaining social distance and hygiene rules or limiting social contacts.⁴⁰

As Alessandra Spadaro rightly points out, epidemics are a threat not only to human health but also to human rights,⁴¹ and in this situation all human rights are at stake.⁴² Fernando Dias Simões points out that there is a deep connection between these two aspects, because under human rights law, states have a duty to protect public health by struggling to control a pandemic, but they also have a duty to protect other fundamental human rights. Measures taken by states such as forced quarantine or travel restrictions can violate the rights to bodily integrity, to privacy, to freedom from inhuman or degrading treatment, to freedom from discrimination and to freedom of movement.⁴³

As has already been emphasized, the Digital Green Certificate project raised a lot of emotions in its initial stage because of the protection of human rights. There were some voices asking if the certificates are really safe and whether the solutions used will protect the privacy of individuals, or if they pose a threat of far-reaching

39 ProteGOSafe – pobierz, zainstaluj, przetestuj, 29.04.2020, <https://www.gov.pl/web/cyfryzacja/protego-safe--pobierz-zainstaluj-przetestuj> (accessed 26.04.2020).

40 ProteGOSafe: instalować czy nie?, 3 August 2021, <https://panoptykon.org/czy-instalowac-protego-safe> (accessed 27.04.2021).

41 A. Spadaro, Covid 19: Testing the Limits of Human Rights, 'European Journal of Risk Regulation' 2020, vol. 11, no. 2, pp. 317–318.

42 K. Bennoune, 'Lest We Should Sleep': COVID-19 and Human Rights, 'American Journal of International Law' 2020, vol. 114, no. 4, p. 666.

43 F.D. Simões, COVID-19 and International Freedom of Movement: A Stranded Human Right? Hong Kong 2021, p. 5.

surveillance by the authorities issuing the documents. The European Commission assures EU citizens that they can feel safe: the document will contain a limited amount of information, and will not be able to be stored in the target Member States. Neither is a central EU-level database for the collection and storage of the documents envisaged. Processing and access will only be possible for selected entities, the list of which will be publicly available, allowing citizens to exercise their data protection rights under the General Data Protection Regulation. In addition, although the COVID certificate has security features confirming its authenticity, it cannot be ruled out that there will be attempts to counterfeit it. At this point, it is difficult to say how the project will be implemented in practice and whether the privacy of certificate holders will be violated. The project is only in the implementation phase, so the coming months will show whether it has fulfilled its role and whether assurances about its security were true.

The EU assures that the proposed digital solutions do not risk discrimination. As Cecilia Rodriguez rightly sees, the implementation of such a tool sounds interesting at first glance. However, after deeper reflection, the question arises as to whether its use will not divide society, deepen inequalities, increase social exclusion and discriminate against certain social groups.⁴⁴ Information in the package leaflets of vaccines licensed in the EU indicates that there is a group of people who should not be vaccinated or who should take precautions when it is given. These include people who are allergic to the active substance or any of the other ingredients of the vaccine; who have a problem with blood clotting or bruising or are taking blood-thinning medicines; whose immune system is not working properly; pregnant or breast-feeding women; and children.⁴⁵ There is also a group of people who do not want to be vaccinated, which is their right. Vaccination for COVID-19 is not currently mandatory. Even if such compulsion is introduced, some in the legal community argue that it will be incompatible with the right to human dignity; the introduction of compulsory vaccination stands in opposition to this right and the right to health protection or the prohibition on subjecting individuals to scientific experiments, including medical ones, without their free consent. There are views that advocate that, under the current circumstances, submitting to COVID-19 vaccination is participation in a medical experiment.⁴⁶

44 C. Rodriguez, Covid-19 Passports and Travel: Free, Non-Discriminatory and 'Non-fakeable?', 16 May 2021, <https://www.forbes.com/sites/ceciliarodriguez/2021/05/16/covid-19-passports-and-travel-free-non-discriminatory-and-non-fakeable/?sh=2b8128e0581c> (accessed 15.06.2021).

45 Who should and shouldn't get the COVID-19 vaccine?, <https://yalehealth.yale.edu/yale-covid-19-vaccine-program/who-should-and-shouldnt-get-covid-19-vaccine> (accessed 17.06.2021).

46 Czy można przymusić do szczepienia przeciwko COVID-19, 13 January 2021, <https://www.rp.pl/Zdrowie/301129912-Czy-mozna-przymusic-do-szczepienia-przeciwko-COVID-19.html> (accessed 17.06.2021).

The groups of people indicated above who wish to cross a border will have to use a certificate stating a negative result of a test for coronavirus. At the moment the tests performed on their own are paid for privately. Even if there is a formal decision on reimbursement, it will take a logistical effort for the tests to be performed whenever a trip needs to occur. These people will be able to move without a certificate but with the full knowledge that they will be complying with existing restrictions in Member States, including quarantine and testing. The EU must ensure that those who are not certified have free access to coronavirus testing. This is especially important for economically vulnerable groups who need free and quick access to tests.

A potential threat is also the question of whether, in a situation where the pandemic will persist for many years, the EU will not go a step further in the future and decide to extend the scope of the certificates, following the example of solutions introduced, for example, in Israel and the United States and as is already the case in some EU Member States such as Denmark, Germany or Hungary. In these countries, access to public places such as restaurants, theatres, cinemas, hotels, sports and recreation centres or participation in major cultural and sporting events is already based on them. If this happens, unvaccinated people may become second-class citizens who would be excluded from many areas of social life.

Conclusions

Freedom of movement and residence in the Schengen area is one of the most important achievements of the European Union. The 2018 Eurobarometer survey shows that 88% of respondents identify the Schengen area as one of the EU's main achievements, and nearly three out of four respondents believe that it is not worth participating in the EU without freedom of movement.⁴⁷ The absence of internal borders, and therefore of border controls, has for many years been part of the European reality, creating facilities for tourism, trade, provision of services, education and work. The outbreak of the pandemic made it clear that the European Union was not prepared for this type of threat, which essentially prevented the exercise of freedom due to individual, albeit legally permissible, restrictions introduced by Member States. The pandemic also highlighted previously unseen problems in Schengen governance that prompted the EU to discuss undertaking necessary reforms. It has also introduced formal and digital solutions to coordinate Member States' individual efforts to curb virus transmission and restore freedom of movement. The research hypotheses presented in the introduction of this article have been confirmed. So far, the implemented digital solutions which were proposed by the EU are paying dividends. The biggest is the Digital Green Certificate; the

47 D. Schade, *Crisis-Proof Schengen*, *op. cit.*, p. 2.

implementation of the project is expected to ultimately result in the rapid opening of the internal borders of the Schengen area. Nevertheless, already today we can see potential threats resulting from the adopted digital solutions. These include threats related to human rights, such as the limitation of privacy, fear of surveillance by the authorities issuing documents, risk of discrimination, risk of division in society and exclusion of individuals from many areas of social life. Due to the fact that the project is in the preliminary stage of implementation, it is difficult at this point to predict all the negative effects resulting from it. A final assessment will be possible in a few months, when the project will come into force in all EU Member States.

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