WYŻSZA SZKOŁA GOSPODARKI EUROREGIONALNEJ IM. ALCIDE DE GASPERI W JÓZEFOWIE

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# DATA PROTECTION CHALLENGES DURING PANDEMIC: SMART PHONES AND OTHER APPLICATIONS DURING COVID-19

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**Abstract**

The Covid-19 pandemic has influenced the legal – cultural environment and the social conditions in which we live. Soon after the pandemic hit us, the EU and other states globally have faced technological challenges: new smart phone applications and contact tracing systems started to develop to halt the disease. These tools may be of concern from a data protection point of view. The dilemma is that technological developments are important in the fight against the epidemic, but on the other hand, mobile application technology poses an equal threat to the protection of citizens' data and privacy. This essay above is trying to provide some answers to this sensitive topic.

**Keyword:** *data protection, contact tracing systems, smart phone applications, Covid-19 and privacy, Coronavirus and data protection*

The Covid-19 pandemic has influenced the legal and cultural environment and the social conditions in which we live. It affected the relationship between state and citizen in almost every aspect: the epidemic measures impacted on the relationship between coercive measures and human rights: our medical self-determination, it affected the absolute limits of state action and coercion, and many other important human rights issues. As the Commission of the European Union stated in its Communication that the COVID-19 pandemic poses an unprecedented challenge to the health systems, lifestyles, economic stability and values of the Union and its Member States.[2]

As a result of the changes brought about by the crisis, hundreds of millions of people have been left with the only choice of trusting the systems that the state and market actors have suddenly imposed on them.[3] The EU pointed out that digital technologies and data have a valuable role to play in combating the

[2] *The COVID-19 pandemic has created unprecedented challenge for the Union and the Member States, their healthcare systems, way of life, economic stability and values* Guidance on Apps supporting the fight against COVID 19 pandemic in relation to data protection. 2020/C 124 I/01. p. 1. European Commission. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0417(08)

[3] See: Alan Butler & Enid Zhou, *Disease and Data in Society*: How the Pandemic Expanded Data

COVID-19 crisis.[4] As Christina Etteldorf's study points out, data protection authorities in Europe at national and EU (supranational) level were quick to recognize the crisis, but delayed in responding, perhaps because the authorities were also shocked by the crisis just as much as the citizens of EU were.[5]

The European Commission stressed that epidemiological measures depend heavily on the use of technical means. These tools may be of concerned from a data protection point of view. The dilemma is therefore that technological developments are important in the fight against the epidemic, but on the other hand, mobile application technology poses an equal threat to the protection of citizens' data and privacy.

Trust is a prerequisite for the development, acceptance, and use of various tracking applications by the public. This is true for the current Coronavirus crisis, but it is equally true for any other mobile application used during a similar pandemic. Citizens need to be assured that their fundamental rights will not be violated, that apps will only be used for specific purposes and not for mass surveillance, and that individuals can still control their data.[6]

## What are the problems to tackle?

The movements of people can be traced by smartphones. This is possible in both anonymized and non-anonymized forms (in Hungary, for example, the so called House Quarantine Application was introduced non-anonymized). Even in anonymized form, the information is highly valuable because it shows how contaminated and dangerous an area is when the owner of the phone enters it.

[4] Guidance on Apps supporting the fight against COVID 19 pandemic in relation to data protection. 2020/C 124 I/01. p. 1. European Commission. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0417(08)

[5] Christina Etteldorf, *EU Member State Data Protection Authorities Deal with Covid-19: An Overview*, 6 EUR. DATA PROT. L. REV. (2020). p. 279.

[6] Guidance on Apps supporting the fight against COVID 19 pandemic in relation to data protection. 2020/C 124 I/01. p. 1-2. European Commission. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0417(08)

Both within the EU and worldwide, national and regional authorities or developers have announced the deployment of applications with different functionalities to support the fight against the virus.[7]

So different mobile applications have been at the forefront of the fight against the virus very early on, both at national governmental and at European institutional level. This is most likely inspired by the early success of the South Korean virus tracking system.[8]

In its summary, NGO European Emergency Number Association (EENA) examined 108 types of coronavirus applications from 73 countries and grouped them into five broad categories.[9]

In the first category, apps developed for information purposes, which help to provide credible information about infection hotspots and key protection information.[10] The second group is information applications, which typically involve little data processing. The third category is apps developed for medical purposes, which typically support self-diagnosis with software. (These apps mainly request for the symptoms in detail and the chances of having encountered an infected person. This is primarily to relieve the burden on healthcare providers, as testing capacity is limited at all locations at the peak of the virus wave. Three such apps have been developed in France alone, and are popular in Canada and the American South).[11] The most important developments are contact ID apps, which will be discussed later. (These applications typically track the movements of infected persons, most of the data processing is done by these software, they usually have two purposes, one is to monitor quarantine rules by the authorities and the other is to contact search for covid

[7] Guidance on Apps supporting the fight against COVID 19 pandemic in relation to data protection. 2020/C 124 I/01. p. 1-2. European Commission. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0417(08)

[8] Christina Etteldorf, EU Member State Data Protection Authorities Deal with Covid-19: An Overview, 6 EUR. DATA PROT. L. REV. (2020). p. 266.

[9] European Emergency Number Association EENA. p. 7. https://eena.org/knowledge-hub/documents/covid-19-apps.

[10] These apps are popular in many South American countries, such as Colombia, Brazil and Bolivia, but are also found in South-East Asia, such as Indonesia and Vietnam. Emergency Number Association EENA p. 7-9 https://eena.org/knowledge-hub/documents/covid-19-apps

[11] European Emergency Number Association EENA. pp. 10-18. https://eena.org/knowledge-hub/documents/covid-19-apps/

positive infected persons). [12] There are also multifunctional apps[13] and other utilities. (These are applications that do not fall into the above category. Typical examples are: alerting individuals when on public transportation or shops, mask-wearing warnings, social distancing, showing you the nearest test center or extinguishing point, etc.)[14]

Another summary of the possible categories of functions of apps is given by the European Commission itself, when it states that its Guidelines applicable for voluntary apps supporting the fight against the Covid-19 pandemic that include one or more of the following functions: providing information to individuals about the covid 19 pandemic; providing questionnaires to individuals for health self-assessment and counseling (symptom check function); sending notifications to individuals who have been in the vicinity of an infected person for a certain period of time, informing them, for example, whether they should be placed in voluntary quarantine and where they can be tested (contact tracker and alert function); or provide a communication platform between patient and doctor in case of voluntary isolation or when further diagnosis and treatment advice is needed (through telemedicine).[15]

[12] From Israel to Ghana to Kenya, such developments are known and there are also such applications in Hungary. European Emergency Number Association EENA. pp. 19-26. https://eena.org/knowledge-hub/documents/covid-19-apps/

[13] These apps combine at least two previous apps: the information app, the medical app and the tracking app.

[14] European Emergency Number Association EENA.pp 29-30. https://eena.org/knowledge-hub/documents/covid-19-apps/

[15] Guidance on Apps supporting the fight against COVID 19 pandemic in relation to data protection. 2020/C 124 I/01. p. 1-2. European Commission. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0417(08)

## The European Commission and mobile apps during the Covid-19 outbreak

The European Commission has published no 2020/C 124 I/01 Guidelines on *Apps to support the fight against the COVID-19 pandemic in the context of data protection.*[16]

According to the Commission, among other things, that applications must be reliable and accountable: the person in charge ( data controller) must be identified. Without identifying the data controller, the means and ends of data processing cannot be verified. For applications, the controller can only be a national health authority.[17]

The Commission stressed that the different functions of the app (e.g. information, symptom monitoring, contact tracking and warning functions) should not be combined to allow the individual to give separate consent for each function. If proximity data (data generated from the exchange of signals between devices within an epidemiologically relevant distance from each other during an epidemiologically relevant period using low-power Bluetooth technology) is used, it should be stored on the user's device. Where such data need to be shared with health authorities, they should only be shared after confirmation that the person concerned has been infected with COVID-19 and on condition that the person concerned opts to share information. Applications developed in this way must be deactivated no later than when the pandemic is declared under control.[18]

The Comission emphasizes that the national data protection authorities should be fully involved and consulted in the development of the app. Given that the processing of data in the context of the app will constitute a large-scale processing of special category of data (health data), the Commission

[16] https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:52020XC0417(08)&from=EN

[17] 04/2020 Guidance on COVID19 p.1-3 https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:52020XC0417(08)&from=EN

[18] The deactivation should not be based on the removal of the application by the user. So, even if the person does not remove the app from their phone, it should still be deactivated. See Guidance 04/2020 on the use of location data and contact tracking devices in the context of COVID-19. p. 4.

draws attention to Article 35 of the General Data Protection Regulation on data protection impact assessment, which provides for the monitoring of the deployment of the app on a continuous basis.[19]

## Smart phone tracing applications in Hungary

The main focus in Europe has shifted to the privacy aspects of contact ID and location-based mobile applications. In Hungary, the development of the so called domestic *House Quarantine app* has also become a central issue. According to Hungarian Government Decree 181/2020 (4 May 2020), the app for the 14-day period of House Quarantine could be downloaded from https://hazikaranten.hu. If somebody opts for the application, the person ought to commit himself to install the app and use it in accordance with the Hungarian regulations. Violation of this rule, for example evading the personal check, constitutes an offence under Article 1(4)(b) of the Government Regulation.[20]

The House Quarantine app also has access to the camera, GPS and Bluetooth. During the remote check, the House Quarantine app compares the photo of the person concerned with the photo stored in its central register (this is used to issue official documents and identity cards). Regarding the features of the House Quarantine app, the Hungarian Data Protection Authority (NAIH) pointed out the somewhat worrying fact that on this high-profile issue *there was no prior consultation, the Hungarian Government only provided the House Quarantine app (HKR) background material to the Data Protection Authority after the promulgation of the above Government Decree.*[21]

[19] 04/2020 Guidance on COVID19 p.9 https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:52020XC0417(08)&from=EN

[20] Government Decree No 181/2020 (4 May) on the electronic control of official quarantine in relation to a human pandemic that threatens the safety of life and property.

[21] NAIH/2020/3796/3

## VirusRadar

Hungarian case NAIH/2020/3796 shows that the other lines of IT developments (in Hungary) were the so called *contact surveys*. The so called: VírusRadar app was developed in Hungary by two foreign companies, NextSense and Biztributor Kft. by the supervision of the Hungarian ministry in charge of technology (ITM). There are no up-to-date data on the *success* of VírusRadar app in Hungary. According to September 2020 data, more than 75,000 people had downloaded the app. There are about 5.5 million smart mobile phones in Hungary.[22]

The aim of VirsuRadar application is to map the spread of the infection, protect health and prevent the spread of the epidemic. VirusRadar has access to Bluetooth. Only some Android devices require extra permission to use geolocation, as the app requires access to Bluetooth Low Energy.[23] The data transmitted by the app. is stored encrypted by the Government IT Development Agency for 30 days. ( In its submission to the Hungarian Data Protection Authority, the Hungarian Civil Liberties Union – TASZ – criticized the lack of an impact assessment before the introduction of VirusRadar. A subsequent investigation by the Hungarian Data Protection Authoritiy, NAIH/2020/6433, pointed out that an impact assessment had been partially carried out, which the Hungarian Civil Liberites Union (TASZ) was not informed of despite repeated requests, and that the impact assessment needed to be extended for professional reasons).

There is no up-to-date data on how many people have downloaded the VirusRadar app, but in the absence of a specific government campaign, it appears that this number is approximately hundreds of thousands, i.e. 1-2% of the population. According to Oxford University's research on coronavirus, this proportion would need to be around 60% to be epidemiologically effective.[24]

[22] See: https://koronavirus.gov.hu/cikkek/itm-mar-tobb-mint-75-ezren-toltottek-le-virusradar-alkalmazast

[23] ]https://www.kormany.hu/hu/innovacios-es-technologiai-miniszterium/hirek/koronavirus-schanda-az-uj-virusradar-mobilos-alkalmazas-jelentosen-hozzajarul-a-jarvany-elleni-vedekezeshez

[24] *Digital contact tracing can slow or even stop coronavirus transmission and ease us out of lockdown*. See: https://www.research.ox.ac.uk/article/2020-04-16-digital-contact-tracing-can-slow-or-even-stop-coronavirus-transmission-and-ease-us-out-of-lockdown

Several countries in Asia have developed contact tracking apps (such as ViruRadar) mandatory, and India is the only democracy that requires its citizens to use the software.

It should be noticed that Hungary, which has enshrined in its constitution the principle of citizens' obligations as opposed to citizens' rights, took no steps to make the app mandatory, not even to promoted for the smart phone app, (although the use of the app might have been relatively easily justified by relying on arguments based on public interest to halt the public to be infected by coronavirus epidemic).[25]

Incentives were not introduced in Hungary either, for example, the House Quarantine app became popular and relatively widespread only, because by using the app, and therefore people could avoid the police having to ring their homes. [26]

Development of applications across Europe were initiated approximately at the same time. For example, the Deutsche Telekom developed the German tracking app together with SAP. The German Health Minister published a call in September 2020 asking everyone to download and use the so-called Corona Warn app.[27] In September 2020, ABC News published a summary of app development in European countries, which points out that in Finland and Ireland, one third of the population has downloaded the local contact tracker app, in Germany twenty-two percent of the population, while in France it is just under four percent.[28]

Several contact research applications have had to be suspended for short or long periods due to privacy concerns. For example, apps in Norway and the UK have been found to be non-compliant with data protection standards.[29]

[25] See: Opinion of the Venice Commission Opinion no. 618/2011 on the shift of emphasis in the Fundamental Law from the obligations of the state towards individual citizens to the obligations of individuals towards the community; http://www.venice.coe.int/ docs/2011/CDL-AD(2011)016-e.pdf, p. 57.

[26] https://www.szabadeuropa.hu/a/virusradar-kontaktkutatas-koronavirus-covid-applikacio/30861076.html

[27] https://www.szabadeuropa.hu/a/a-koronav%C3%ADrus-app-haszn%C3%A1lat%C3%A1t-s%C3%BCrgeti-a-n%C3%A9met-korm%C3%A1ny/30854158.html.

[28] https://abcnews.go.com/Health/wireStory/europe-faces-2nd-wave-virus-tracing-apps-lack-73162549

[29] https://www.szabadeuropa.hu/a/virusradar-kontaktkutatas-koronavirus-covid-applikacio/30861076.html

Director of European Data Protection Board (EDPB) stresses that these apps are only effective if they are widely used, all voluntary downloads should be encouraged, whether through a promotional campaign or technical assistance for minors. At the same time, results can only be expected on a voluntary basis and no one should be penalized for not using the app.[30]

In summary, the international fight against Covid-19 marks a new era in the development and distribution of contact tracing mobile applications. It is still questionable how the fate of these technologies will evolve in the Post – Covid era, when necessity and proportionality balancing test is used in outweighing rights and obligations. The prediction of this current analysis that privacy restrictions will require a strict scrutiny that will not make it possible to further develop contact tracing systems globally.

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