/ NATIONAL COMMISSION C ON DATA PROTECTION

RESOLUTION/2020/251

I. Order

The National Data Protection Commission (CNPD) was contacted by the Secretary of State for the Environment and, subsequently, by the Portuguese Environment Agency, I.P. (hereinafter, APA) for the analysis of a technological solution that, in the context of the Covid-19 pandemic, would allow the identification of the "occupancy rate of the beaches with the highest pressure", to provide the population with information that allows it, without the need to travel, make the decision to choose a particular beach that guarantees the established social distance.

For this purpose, within the scope of a protocol previously signed between APA, the Directorate-General of the Maritime Authority, the National Institute for Rehabilitation, I.P., and the Blue Flag Association of Europe (ABAE) - Non-Governmental Environment Organization, the Vodafone Foundation financed the development of the system called Smart Crowd. In this headquarters and in the context of Covid-19, it is intended to obtain, from photographs taken of a set of beaches (about 70), a qualitative indication as to their occupancy rate.

As stated in one of the APA communications, "the Smart Crowd system makes it possible to provide real-time information on the density of people on a beach and consists of a camera powered by a solar panel with transmission via LTE. The images are collected periodically by a beach camera that can be installed on the buoy masts or on top of the beach support [...]. The collected images feed an autonomous intelligent analysis system, installed in each camera that processes the information autonomously (without any human intervention or availability). The intelligent system used to process the information performs a local analysis of the information to be processed based on machine learning technology. These systems use the images only for the time strictly necessary to calculate the occupancy rate and then send alphanumeric information (number of people and useful area), in an anonymous and aggregated format, to make the information available in the form of qualitative data. - low, high or full occupancy."

Process PRE/2020/4 1v.

As the CNPD requested information regarding the capture of images and their processing, it received an impact assessment

on privacy, prepared by the Vodafone Foundation, as well as the terms and conditions of the Praia em Direto app, which attributed a low risk to the system. As the CNPD was unaware of the grounds for such a conclusion, it requested additional information, in particular the elements that supported that conclusion, as well as the risk analysis arising from the treatment that consists of the collection and processing of the images, their respective transmission to the server and the processing subsequent. Following this, a document entitled "Fundação Vodafone_Complemento ao DPIA.pdf" was received, prepared by CeC - Comunicações e Computers, S.A.

II. appreciation

1. Processing of personal data and impact assessment

In the set of documents presented, in particular regarding the privacy impact assessment, there is no reference to essential elements of this type of assessment. In fact, with regard to a system that involves the systematic capture of images of people in a public space, Regulation (EU) 679/2016, of 27 April 2016 (General Regulation on Data Protection, henceforth RGPD), imposes carrying out a data protection impact assessment -cf. Article 35(3)(1) and (3)(c). This is because the capture of images by the cameras to be installed on the beaches implies the collection, processing and conservation of information relating to identifiable natural persons and, as such, corresponds to the processing of personal data, under the terms of paragraphs 1) and 2) of article 4. . of the GDPR. Thus, it is through the impact assessment that the controller must determine the degree of risk to the rights and interests of data subjects and consider the adoption of measures that allow their prevention or reduction. It should be noted that people who are on the beaches are especially exposed, so the capture of images is likely to generate misuse with direct repercussions on their private life.

However, Article 35(7) of the GDPR identifies a set of minimum elements that must be considered in this assessment, including the systematic description of the data processing operations, the purpose of the processing, the legitimacy of the person responsible to do

Process PRE/2020/4 2

/ NATIONAL COMMISSION

DATA PROTECTION

the treatment and the necessity and proportionality of the various operations in relation to the purpose. What happens in this specific case is that the assessment initially carried out on June 6, 2019 and completed on February 18, 2020, either indicates

as the object of treatment «name, email, telephone», or indicates «images of the beaches for treatment of density'. But almost all of the information contained in the evaluation refers to the processing of data from users of the Praia app live, not taking into account the processing carried out by the cameras. Thus, the totality of the personal data processed is not considered; for example, there is no reference to the location data which, obviously, is collected once the camera is installed on an identified beach, which information is always necessary for the purpose of the treatment.

In addition, following the CNPD's request for additional elements, a complementary assessment was presented that essentially focused on the adoption of technical measures to mitigate the identified risks related to information security regarding the processing of images, without considering the impact on human rights. of data subjects arising from such risks. Therefore, the impact assessment does not reveal the balance of rights and interests involved, nor the application of the principle of data minimization, especially in terms of the need and relevance of the data, as required by subparagraph c) of paragraph 1 of article 5 of the GDPR.

2. Processing of personal data using cameras

The concrete processing of personal data using cameras on the beaches is carried out for the purpose of providing information on the occupancy rate of the beaches during the 2020 bathing season, with a view to ensuring control of the Covid-19 pandemic.

Taking into account the purpose thus defined, the basis for the lawfulness of the treatment can only be the need for the exercise of functions in the public interest of risk prevention and protection of public health, which in the context of access, occupation and use of beaches for the 2020 bathing season, is assigned to the APA by Decree-Law No.

í

May 25, maximum in article 13. Thus, it is in subparagraph e^ of paragraph 1 of article 6 of the GDPR that the present treatment fits1.

With regard to this treatment, the documentation does not describe the capacity of the camera or the resolution of the images. However, the examples of photographs sent seem to be of high quality, which, associated with the possible technical characteristics of the cameras (e.g., pan, tUt ezoom) - which the CNPD is unaware of, as they are not mentioned in the

documentation presented, is likely to allow the identification of the people. This possibility will also depend on the characteristics of each beach and the location where the camera will be installed, aspects that were not considered in the submitted assessment.

Considering that the treatment covers a significant part of the population that goes to the beaches during the bathing period and, from the outset, the impact that the collection of images of people exposed in a relaxed and playful environment can have on their privacy is not ruled out, it is important to adopt measures that reduce this effect.

Thus, the CNPD considers it essential that each of the cameras be installed and configured taking into account the specific circumstances of each beach in order to mitigate the risks of identifying the people covered by the cameras.

There is a local computer connected to the cameras, which saves the images and applies changes to the photographs taken in order to improve their luminosity and other characteristics using a Machine Learning algorithm, and submits them encrypted by HTTPS via the LTE/ 3G from Vodafone to the webservice available on a server located with the Amazon sub-contractor.

' Considering that the person responsible for the processing carried out using these cameras is the APA, the intervention of the Vodafone Foundation in the processing of information, for the purposes of the legal regime of data protection, is supported by article 4, paragraph 8), and 28 of the RGPD, and therefore the relationship between the two entities, with regard to the processing of personal data, must be subject to specific regulation, under the terms of paragraph 3 of article 28 of the RGPD.

Process PRE/2020/4 | 3 f

g: me:m

f ifjF

/ NATIONAL COMMISSION

DATA PROTECTION

It should be noted that there is no record of the time of conservation of the images on the local computer, with only reference to the time «strictly necessary for processing and sending the information».

The documentation provided refers, in this context, to «an ML algorithm (and others)», which run internally on the computer without resorting to external libraries or functions. However, it is not explained which algorithm to apply, nor what the others are. Now, the use of Artificial Intelligence, especially when it involves self-learning techniques, demands an effort of transparency precisely to create the indispensable trust in its use, especially in the context of the processing of personal data.

Although it is possible to admit that the algorithm has the sole purpose of adapting the characteristics of the photograph to the external environmental conditions (e.g., luminosity, wind), as is alleged, it is up to those who develop the system and use it to demonstrate that these technologies are not suitable for generate discriminatory treatment of people. Moreover, in this context, it is incomprehensible how one can refer to "others", without specifying what is at stake.

Likewise, the processing carried out on the server - which only accepts invocations from certain IP addresses, in turn also applies a Machine Learning algorithm, «trained through the variables that it collects, namely identifying the effective areas of and taking into account the useful variations of the same throughout the day resulting from the effect of the tides, so that the result returned is as reliable as possible. The machine learning algorithm is trained to learn over time with different occupancy patterns."

However, this explanation of the rationality of the algorithm, although relevant, does not demonstrate the existence of guarantees that it is sufficiently shielded in relation to the possible application of other factors susceptible of generating discrimination. And this is an issue that is not, and cannot be, ignored by those who use self-learning technologies.

Furthermore, nothing is clarified about how learning is carried out over time, and it seems essential, for this to occur, to confirm the acuity of learning (due to the quality of the conclusions) and to change the algorithm accordingly, which, unless demonstrated to the contrary , will always require human intervention.

AV. D. CARLOS I. 134 - Io I 1200-651 LISBON | WWW.CNPD.pt í Ted+351 213 928 400 | FAX: +351 213 976 832

Process PRE/2020/4 3v. f

Thus, the CNPD understands that the person responsible must be able to demonstrate that the machine learning algorithms are sufficiently shielded in relation to the possible application of other factors likely to generate discrimination.

3. Security measures

As for the security measures listed in the documentation, in the various components of the system, in particular with regard to the transmission of images (e.g., existence of a password on the cameras, physical connection between the camera and the local computer, encryption of the images and limitation !P's with access to the server that processes them, use of web services, double authentication on the server) seem to mitigate the identified risks in an acceptable way. The option of using an autonomous server to make information on the occupancy rate available to apps and institutional websites on the Internet also deserves to be welcomed.

4. The processing of personal data carried out by applications

There are at least two apps that receive information from this system and provide the "occupancy rate of the highest pressure beaches", the Praia info under the responsibility of APA and the Praia em Direto under the responsibility of Vodafone.

a) App " info Beach "

The information provided in the app does not contain personal data, but only a statistical indication of the occupation of each beach, presented with a solution similar to a traffic light, with the colors green, yellow and red, depending on the ratio between the available area and the number of people, with updates every 30 minutes.

However, there is processing of users' personal data. In fact, at the time of installing the application, although the registration of the holder is not required, permission is requested to access their location if they want to have the functionality of information regarding the proximity beaches, preferred beaches and direction of

Process PRE/2020/4 4

IS NATIONAL COMMISSION

DATA PROTECTION

route using Google/e Maps2. Personal location data are therefore collected, based on the consent of the holder.

It so happens that, according to what APA has publicly stated, in the strict context of the "Info Praia" app, the information is stored exclusively on the user's equipment, so APA will not, at this headquarters, process personal data subject to the GDPR

As the source code is not open, only through subsequent inspection will the CNPD be able to confirm this situation. In any case, the convenience of guaranteeing the transparency of information processing is always underlined, namely making it clear to users that the information resides on their equipment.

b) App "Live Beach"

In the information provided by Googie Piayè, it is mentioned that the "Praia em Direto" app has access to contacts, location (via GPS and network), memory card contents (v.gfotos, multimedia), as well as connection information data. WI-FI, connections, Bluetooth, network, activation automations and configuration of Googie services.

However, in compliance with the principle of data minimization (cf. subparagraph c) of paragraph 1 of article 5 of the RGPD) there is only justification for collecting the location and network connection data, requiring the user's explicit consent in relation to the location data.

Consequently, it is recalled here that it is up to the controller to ensure compliance with the GDPR, in particular the principle that limits the possibility of collecting the information necessary to pursue the stated purpose.

III. Conclusion

The use of cameras on about 70 national beaches, which take photographs to calculate their occupancy rate, aims to ensure control of the Covid-19 pandemic.

2 Note that when choosing services provided through Googie Maps, there is a processing of personal data that is not the responsibility of APA, but of Googie.

AV. D. CARLOS I, 134-Io I 1200-651 LISBON I WWW.CNPD.pt | Tel: +351 213 928 400 | FAX: +351 213 976 832

Process PRE/2020/4 4v.

Considering that what is at stake is the capture of images of people in a very high number who are in public space and in conditions of special exposure in a place intended to be lived in a relaxed way, the processing of personal data is only justified by the need to perform functions in the public interest of risk prevention and protection of public health, in charge, in the context of access, occupation and use of beaches for the 2020 bathing season, of AP A, pursuant to Decree-Law No. 24/2020 , of the 25th of May. Thus, treatment is limited in time to the 2020 bathing season, to control the Covid-19 pandemic.

1. Specifically, considering the degree of intrusion on privacy due to the breadth and extent of the processing of personal data, notwithstanding the terms of information processing and the measures already adopted, the CNPD considers it essential that the impact on privacy be mitigated. It is therefore imperative that the installation and configuration of each of the cameras takes into account the specific circumstances of each beach in order to mitigate the risks of identifying the people covered by the cameras.

In addition, the CNPD understands that the person responsible must be able to demonstrate that the machine learning algorithms used in the processing of information are sufficiently shielded in relation to the possible application of other factors likely to generate discrimination.

It is also recalled that the controller is responsible for providing the information provided for in Article 13 of the GDPR.

2. With regard to the processing of personal data carried out by the "Praia em Direto" app, the obligation to observe the rules and principles of data protection, in particular, the principles of data minimization and transparency is underlined.

Approved at the meeting of June 3, 2020

Filipa Calvão (President)