

ANALYSIS

51 CONTACT TRACING APPLICATIONS

USING THE EU GUIDELINES

ANALYSIS OF 51 CONTACT TRACING APPS USING THE EU GUIDELINES



Digital Citizens
ROMANIA



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DISCLAIMER

This information and analysis do not constitute legal advice. It is recommended that specific professional advice is sought before acting on any of the information given.

Any references to this analysis will be done with the proper identification of the owner – Digital Citizens Romania, Think -Tank.

Contact tracing applications (CTAs) seek to inform and notify individuals that have been in contact with a person infected with COVID-19, enabling such individuals to self-quarantine, receive testing and, if required, obtain follow-up treatment. For these applications, regulators and government bodies have tried to define rules and policies that would govern over the use of such tracing applications, in an attempt to protect both privacy of citizens and the interest of public health entities.

EUROPEAN CONTEXT

THE EUROPEAN UNION (EU) has published the first set of [guidelines](#) on CTAs, including a EU toolbox, on the 16th of April 2020, aligning them with the General Data Protection Regulation (GDPR) and the ePrivacy Directive, highlighting the importance of a framework that protects personal data and limits unnecessary intrusiveness.

While the EU's framework provided minimum criteria, the deployment of such CTAs was done at national level, each Member State having the liberty to decide which technology to use and how to ultimately use it. In order to facilitate international EU mobility, the EU Member States have also agreed, on the 16th of June 2020, to an [interoperability solution](#) for mobile CTAs. The agreement particularly includes *“Commission will set up a gateway service, an interface to efficiently receive and pass on relevant information from national contact tracing apps and servers. This will minimise the amount of data exchanged and thus reduce users' data consumption”*.

Complimentary, the COUNCIL OF EUROPE took some specific steps as well, in order to guide the work of Member States in the wider European space. The first position was released on the 30 of March 2020, with the [Joint Declaration on the right to data protection in the context of the COVID-19 pandemic](#) – underlying the importance of respecting human rights, in a time when European countries were adopting lockdown measures, thus calling *“to ensure that the measures and related data processing are necessary and proportionate in relation to the legitimate purpose pursued and that they reflect, at all stages, a fair balance between all interests concerned, and the rights and freedoms at stake, as the European Convention on Human Rights (Article 8) and Convention 108 + (Articles 5 and 11) prescribe”*.

Later, on the 28th of April 2020, the Council of Europe released a new [Statement on Digital Contact Tracing](#), indicating specific elements that should be taken into account when deploying CTAs, relating to criteria such as: effectiveness, trust and voluntariness, impact assessment and privacy by design, purpose specification, data – sensitivity, quality and minimisation, automated-decision making, de-identification, security, interoperability, transparency, temporariness, and oversight and audit.

EU CRITERIA

Based on the [Communication from The Commission Guidance on Apps Supporting the Fight Against Covid 19 Pandemic in Relation To Data Protection \(2020/C 124 I/01\)](#) a set of 8 criteria can be identified in relation to CTAs:

1. They should be fully compliant with **EU data protection and privacy rules**.
2. They should be implemented in close coordination with and approved by, **public health authorities**.
3. They should be **installed voluntarily** and **dismantled** as soon as no longer needed.
4. They should be based on **Bluetooth proximity technology**; they do not enable tracking of people's locations.
5. They should be **based on anonymized data**: They can alert people who have been in proximity for a certain duration to an infected person to get tested or self-isolate, without revealing the identity of the people infected.
6. They should be **interoperable across the EU** so that citizens are protected even when they cross borders.
7. They should be **anchored in accepted epidemiological guidance**, and reflect best practice on cybersecurity, and accessibility.
8. They should be **secure and effective**.

USA CONTEXT

The United States of America (USA) engaged in a different effort to ensure support of citizens' personal data in the deployment of CTAs in the COVID-19 context. While there hasn't been an adopted legislation yet, there have been three attempts to introduce new bills. The first on 30 of April 2020 – the [COVID-19 Consumer Data Protection Act](#), introduced by Republican senators, the second on 14th of May – the [Public Health Emergency Privacy Act](#), introduced by Democratic representatives, and the last on the 1st of June – the [Exposure Notification Privacy Act \(ENPA\)](#), a bi-partisan bill introduced by Senators Maria Cantwell (D-WA) and Bill Cassidy (R-LA).

ENPA aims to “give [] Americans control over their data [and] put [] public health officials in the driver’s seat of exposure notification development.”, including among its principles: voluntary participation and transparency, data restrictions, data deletion, data security, freedom of movement and nondiscrimination, and oversight.

As the USA will continue its internal debate on how to better regulate COVID-19 CTAs, the MIT Technology Review, offers an analysis of the pros and cons of such measures, including specific (USA) States that have already deployed such tools.

METHODOLOGY

This present analysis offers an overview on some of the existing CTAs, in relation to the EU criteria, as underlined in the [above section](#). The analysis was carried out mainly via the CTAs websites, their privacy policy, reviews from users, the [crowdsourced information on CTAs](#) and Digital Citizens' attempts to download the apps.

The analysis of the CTAs is subjective to the information available to us at the time of this analysis on 27th July 2020 and also our interpretation of the guidelines. Consequently, we have used the tick (☑) to indicate where the guidelines were met and simply placed a (-) where we could not find any information/clarity with respect to the specific guideline as well as where it is not applicable which applies to guideline six (6).

Application Name	Geographical Availability	Developer	Review based on EU Guidelines for tracing apps							
			1	2	3	4	5	6	7	8
1. SafePaths	USA	MIT	☑	☑	☑	-	☑	-	☑	☑
2. COVID Watch	USA	Stanford University	☑	☑	-	☑	☑	-	☑	☑
3. PACT	Worldwide	MIT and Lincoln Lab	☑	☑	☑	☑	☑	☑	☑	☑
4. CoEpi	Worldwide	CoEpi	☑	☑	☑	-	☑	-	-	☑
5. TraceTogether	Singapore	Singapore Tech. Agency	☑	-	☑	☑	☑	-	-	☑
6. COVID Symptom Tracker	USA	Massachusetts General Hospital, Harvard T.H. Chan School of Public Health, King's College London and Stanford University School of Medicine, Zoe Data Science	☑	☑	☑	☑	☑	-	☑	☑
7. How We Feel App	USA	The How We Feel Project	☑	☑	☑	☑	☑	-	☑	☑

8.	PocketCare+	USA	University of Buffalo	✓	-	✓	-	✓	--	✓	✓
9.	CovidSafe	USA	University of Washington	✓	✓	✓	-	✓	-	-	✓
10.	Rakning C-19	Iceland	Iceland's civil protection and emergency management team	✓	✓	✓	-	✓	✓	-	✓
11.	DP-3T	Worldwide	EPFL (Switzerland) + other academic and industry contributors	✓	✓	✓	✓	✓	✓	✓	✓
12.	Aarogya Setu	India	Government of India	✓	✓	✓	-	✓	-	-	✓
13.	TraceCovid	UAE	Department of Health Abu Dhabi	✓	✓	✓	✓	✓	-	✓	✓
14.	COVIDSafe	Australia	Government of Australia	✓	✓	✓	✓	✓	✓	✓	✓
15.	Ito	Germany	WirvsVirusHackaton2 020	✓	✓	✓	✓	✓	✓	✓	✓
16.	PEPP-PT	EU	European Non-profit Consortium	✓	✓	✓	✓	✓	✓	✓	✓
17.	COVID App	Germany	Enigma	✓	✓	✓	✓	✓	✓	✓	✓
18.	Guardian	Worldwide		✓	-	✓	✓	-	-	-	✓
19.	Pandora	Germany	WirvsVirusHackaton20 20	✓	-	✓	-	✓	-	✓	✓
20.	SafeTrace	Worldwide	Enigma and TCN coalition	✓	✓	✓	-	✓	✓	✓	✓
21.	FluPhone	UK	University of Cambridge	✓	-	✓	-	✓	-	-	✓
22.	Waze for COVID-19	USA	Singularity University	✓	✓	✓	-	✓	✓	✓	✓

23. Contact Tracing	Worldwide	Piusworks LLC	✓	✓	✓	-	✓	-	✓	✓
24. Integrated into Smartphone OS	Worldwide	Apple, Google	✓	✓	✓	✓	✓	-	-	✓
25. NOVID20	Worldwide	NOVID 20	✓	-	✓	-	✓	-	✓	✓
26. NextTrace	USA	Fred Hutchinson Cancer Research Center	✓	-	✓	-	-	-	--	✓
27. Motus Science	Australia	Motus Science	✓	-	✓	-	✓	✓	✓	✓
28. Coronavirus Survey	USA	Weill Cornell Medicine	✓	✓	✓	✓	✓	-	-	✓
29. COVID Near You	USA	Boston Children's Hospital	✓	✓	✓	✓	✓	-	-	✓
30. CovApp	Germany	Charité, Data4Life	✓	✓	✓	✓	✓	✓	✓	✓
31. COVID-19 Symptom Tracker	USA	University of Alabama	✓	✓	✓	✓	✓	✓	✓	✓
32. Epi-Collect	Worldwide	MIT licensed open source project	✓	-	✓	-	-	-	-	✓
33. COVID-19 Mobility Data Network	Worldwide	HMS + Network of Infectious Disease Epidemiologists	✓	✓	✓	✓	✓	-	✓	✓
34. Corona Map	South Korea	Government South Korea: Ministry of the Interior and Safety	-	-	-	-	-	-	-	-
35. COVID-19 Mobility Insights	USA	Cuebiq	✓	-	✓	-	✓	✓	-	✓
36. Social Distancing Scoreboard	USA	Unacast	✓	-	✓	-	✓	✓	-	✓

37. Corona Data Scraper	Worldwide		-	-	-	-	-	-	-	-
38. Citymapper	Worldwide	Mobility Index	✓	-	-	-	✓	-	-	✓
39. EQ Works	Canada	EQ Works	✓	-	-	-	✓	-	-	✓
40. NSO Surveillance software	Israel	NSO Group	✓	-	-	-	✓	✓	-	✓
41. Virus Safe	Bulgaria	Scalefocus and the Bulgarian Ministry	✓	✓	-	-	✓		✓	✓
42. China Health Code System	China	Alipay, Hangzhou's Communist Party, Chinese national gov't	-	-	-	-	-	-	-	✓
43. Cov Tracer	Cyprus	Research Centre of Excellence on Information and Communication Technologies (RISE)	✓	-	✓	-	✓	✓	-	✓
44. eRouska	Czech	Ministry of Health	✓	✓	✓	✓	✓	✓	✓	✓
45. GH COVID-19 Tracker	Ghana	Ghana Health Services	✓	✓	✓	-	-	-	-	✓
46. Mask.ir	Iran	Network of academics, mostly from Sharif University of Technology	✓	-	✓	-	-	-	-	✓
47. MyTrace	Malaysia	Ministry of Science, Technology and Innovation	✓	-	✓		✓	-	-	✓
48. NHS COVID-19 App	UK	NHSX	✓	✓	✓	✓	✓	✓	-	✓
49. Hayat Eve Sığar	Turkey	Turkish Ministry of Health	✓	✓	-	-	-	-	-	✓

50. Private Tracer	Netherlands	Privacy Tracer foundation and Dutch Ministry of Health	✓	✓	✓	✓	✓	✓	-	✓
51. CovTrack	Romania	RISE	-	✓	✓	✓	✓	-	-	-

1. Only about 20% of CTAs met all the guidelines based on our independent assessment.
2. The CTAs analysed perform quite well with EU guidelines with respect to data protection and privacy (95%) and Security (95%). On the other hand, Most of the CTAs did not do quite well with respect to the guideline on Bluetooth proximity technology (44%) and interoperability across the EU (34%) even though this could be as a result of the geographical availability of the app currently and the stage of development.

Technologists are building a myriad of apps, services, and platforms for contact tracing. Some are active while some are still in development. Some services are being produced locally by experts, while others are a huge project with a global view. Overall, the situation is fast evolving.

There seems to be no standard approach being taken by developers and policymakers and as a result, we see very different levels of tracking and transparency across the CTAs.

Sentiments differ on whether these apps are just great ideas in theory that will not work or if it could appropriately complement the manual tracing efforts of health authorities. If it is - how many people will download and use them, how much of the population will they need to reach to be considered successful? who will they be sharing the data with? How will that information be used in the future? Are there strong regulations in place to prevent the abuse? During this analysis, we found that there were not always clear answers. While the EU has a strong regulatory framework on data protection, close monitoring of these developments is needed.

Ultimately, effective deployment of technology to support the transition from the pandemic will be dependent on widespread public trust and confidence in those interventions which must translate into broad adoption of these apps.