

## Policy Position

# Contact tracing apps in Europe

When one is better than many

16 June 2020

**Maarja Kask**, Policy Fellow

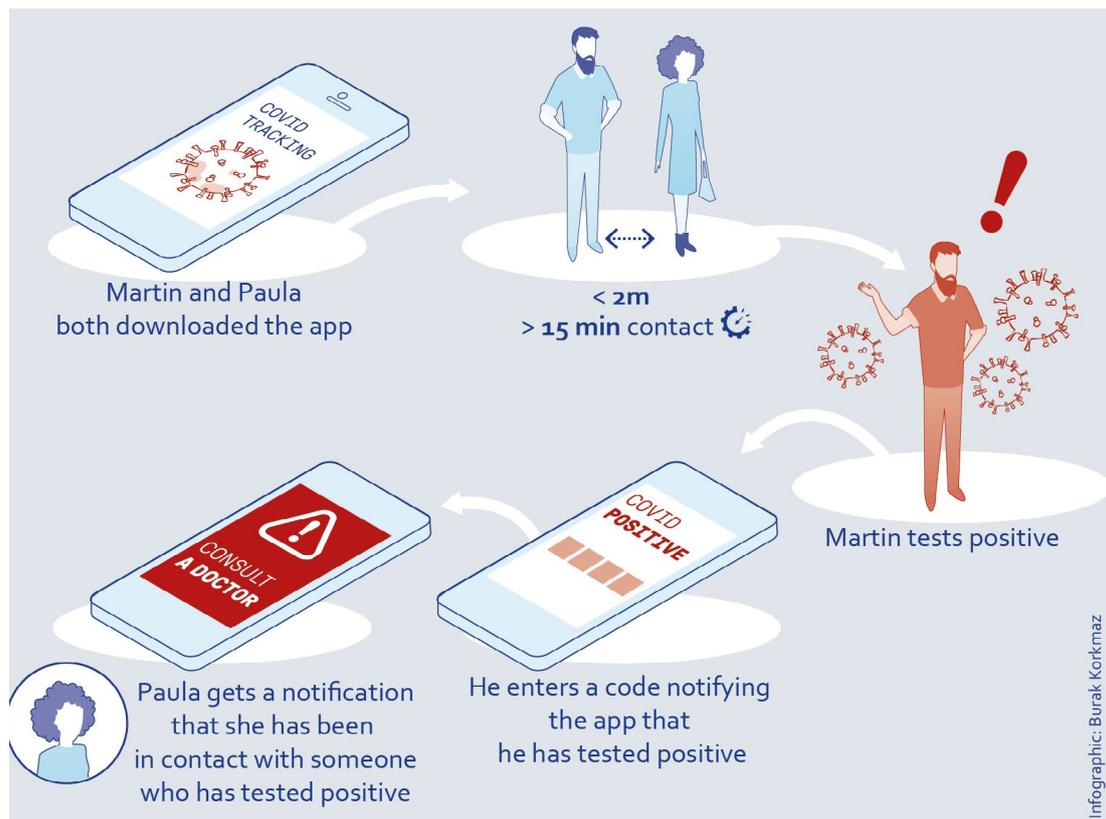
#CoronaApp  
#ContactTracing  
#Coronavirus

One of the issues brought forth by the COVID-19 crisis is the need to track the infection chains in order to stop the disease from spreading. One of the simplest ways this can be done is via a smartphone app. However, this can bring about several privacy issues. Furthermore, unless a common protocol is taken up all over Europe allowing apps from different member states to be able to seamlessly communicate with each other, the discrepancies would render the national apps ineffective. The member states need to decide on a single app protocol throughout Europe and the European Commission should strongly back its uptake.

The European Union needs a common protocol for contact tracing apps to tackle the spread of the novel coronavirus most effectively. In order to have the individual apps of all member states work well across Europe, the member states need to agree on the common uptake of a specific protocol. The European Commission is in a position to advocate for and support companies and member states in this task as the regulator of the Digital Single Market, as well as through its eHealth Network. The Commission's eHealth Digital Service Infrastructure (eHDSI) is specifically set up to [facilitate cross-border exchange of health data](#), and is thus perfectly positioned to work on the common uptake of a contact tracing app protocol. So far, some of the member states have decided for different protocols, while the European Commission has released a recommendation that gives no clear indication as to which protocol represents best practice or should be adopted. The member states need to agree on the best possible privacy-preserving contact tracing app solution while the Commission should strongly back its common uptake.

### Contact tracing apps – how do they work?

An important part of keeping the virus at bay is keeping track of the virus carriers and the people they have encountered. This is called contact tracing. One way to do this is through a smartphone app that tracks contacts between people and time spent in the proximity of another person. The idea behind the app is that when a person becomes infected, the people that they have had contact with receive a notification on their phone. This way, the contacts become aware of their possible risk of infection and can take necessary measures.



Contact tracing through a smartphone app has its limits. First, not all of Europe's population owns a smartphone, and unfortunately it is often precisely the at-risk elderly who do not have a smartphone. Secondly, the people who do own a smartphone may not always carry it with them. Thirdly, as downloading the app is voluntary, people may decide not to use it. For this reason, it is crucial for the app to be as trustworthy and reliable as possible, in order to prevent people from deciding against downloading the app out of privacy or security concerns. Overall, contact tracing apps should be seen as a supporting mechanism for manual contact tracing – that is, talking to the infected person and identifying all of the people they have come into contact with. Due to the reasons mentioned above, contact tracing apps cannot completely replace manual contact tracing.

While it is important to realise the limits of contact tracing apps, it is at the same time crucial to not underestimate the benefits they can bring. [A study by scientists at Oxford University](#) has estimated that for every one to two users, one infection will be averted. Moreover, according to the same study, if 60 percent of the population were to download the app and comply with the recommendations, the pandemic could be stopped. Deploying the app will significantly decrease the labour required to track the infection. This will not only decrease the labour costs but also helps to avoid problems caused by a lack of human resources. Thus, contact tracing apps should be seen as an effective supporting tool for manual contact tracing.

### What about privacy?

Privacy is essential to European values when it comes to digital technologies. It is therefore important that the app guarantees its users' privacy. If that is not the case, many people will not trust the applications and will not use them, thus rendering them ineffective. There are several factors when it comes to privacy concerning tracing apps.

Firstly, the app must not be able to track the location of the individual. The app only needs to track the encounters that the owner of the smartphone has had with other people using Bluetooth technology. Tracking geolocations is not only unnecessary, but would likely discourage people from downloading and using the app.

Secondly, the app must be built in a way that would make it impossible for users to identify other users. In other words, when a notification appears on a person's phone about having come into contact with someone who was infected, the identity of the infected person must remain concealed.

One significant aspect of the debate on contact tracing apps concerns whether the collected data should be stored in a cloud-based service or locally (on edge) on people's devices – in other words, whether the storing of data should be centralised or decentralised. While the EU has not signified a clear stance on the issue, there are hints towards the [preference for a decentralised system](#). While most countries have decided for a decentralised approach, France, for example, has decided to use a centralised approach. While a cloud-based service would provide the benefit of aggregating anonymised data and allowing further conclusions to be drawn (e.g. intensity of contacts, number of people that could develop symptoms), privacy advocates have strongly voiced their preference for a decentralised approach, as it decreases the threat of personal data being misused through data breaches or cyberattacks. Centralised data gathering may also subject the data to the threat of misuse by governments for surveillance purposes. As rule of law is under threat in some member states, the common protocol should be a decentralised one, and the Commission should take a strong stance against the use of centralised data gathering with contact tracing apps. With the eHealth Network coordinating and the eHDSI providing a common ICT infrastructure, the European Commission is perfectly suited to support member states in developing apps based on DP-3T (Decentralized Privacy-Preserving Proximity Tracing) or another decentralised privacy-preserving app protocol.

### Facing forward

Currently, there are no plans for an app based on a common protocol in the European Union. At the time of writing, Latvia and France have already released their versions of the app. Apps based on different protocols can cause problems with interoperability, especially when there is no consensus on whether data gathering is centralised or decentralised. It is crucial that the member states find a solution that is interoperable, meaning that the different systems and applications are able to "communicate" with each other. A sure-fire way of avoiding interoperability issues is for member states to agree on a common protocol which would be used to develop apps for all member states – reliable apps that people all over Europe can download and use, effective not only in their own member state but also when travelling within Europe.

The European Commission needs to make an explicit case for the public health and economic benefits of an app based on a common protocol to the member states. Besides simplifying contact tracing within member states a great deal, a common protocol would mean cross-border compatibility, implying that a common protocol may allow for borders to remain open in the case of a second wave of the virus thanks to reliable tracing. The importance of contact tracing apps for open borders has also been [confirmed by the EU ministers](#) of telecommunication.

## Conclusion

As there are already several apps in production and at least two that have been released, the European Union is running out of time to promote the uptake of contact tracing apps based on a common protocol to make them operable between member states. While the member states first need to agree on the common protocol, the Commission is well positioned to help in the development and uptake of the app through the possibilities of the Digital Single Market. Although the corona crisis has presented many challenges to the European Union, these challenges should be seen instead as possibilities to work together and find a solution – a common solution.

This publication is part of the research project “Repair and Prepare”, a joint project of the Bertelsmann Stiftung and the Jacques Delors Centre. For more information, please visit

[www.strengtheningeurope.eu](http://www.strengtheningeurope.eu).

**Repair and Prepare**  
|||| Strengthening Europe

Hertie School gGmbH • Chairman of the Supervisory Board: Bernd Knobloch • Chairman of the Board of Trustees: Frank Mattern • Academic Director: Prof. Dr. Henrik Enderlein • Managing Director: Dr. Axel Baisch  
• Registered Office: Berlin • Trade Register: Local Court, Berlin-Charlottenburg HRB 97018 B • Hertie School – founded and supported by the non-profit Hertie Foundation