STOPP CORONA APP

THE AUSTRIAN CONTACT TRACING APP
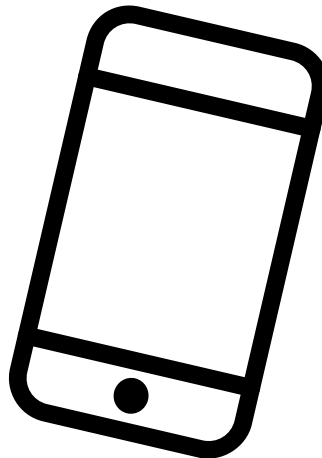## A DIGITAL TOOL IN THE FIGHT AGAINST COVID-19

Gerry Foitik

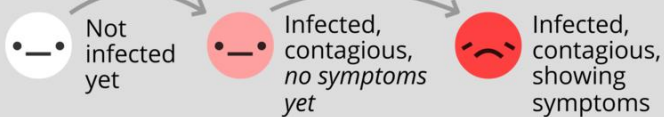AUSTRIAN
RED CROSS

WHAT ARE CONTACT TRACING APPS?

Contact tracing apps are mobile software applications designed to aid contact tracing in response to the recent pandemic. Contact tracing is the process of identifying persons ("contacts") who may have been in contact with an infected individual.
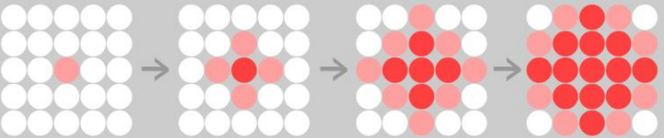
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WHY IS CONTACT TRACING IMPORTANT?

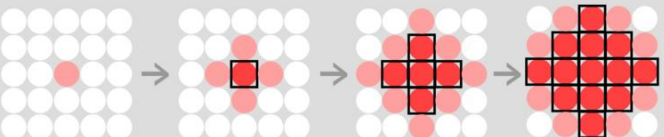As far as COVID-19 cares, there are 3 kinds of people:

Not infected yet

Infected, contagious, *no symptoms yet*

Infected, contagious, showing symptoms

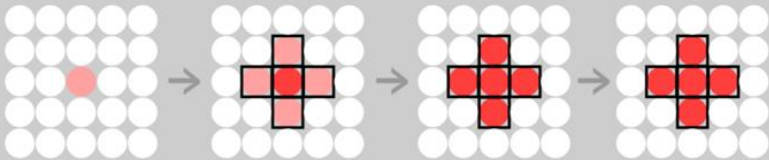If we do nothing, here's what happens to a neighborhood with one Patient Zero:

We get a wave of infections, of course.

Here's what happens if, when someone finds out they're infected, they immediately self-isolate:

Alas, people are contagious *before* showing symptoms! We're one step *behind* the virus.

But here's what happens if, when someone finds out they're infected, they *and their close contacts* self-isolate:

The chain of transmission is broken! By finding & isolating close contacts, we're *one step ahead*.
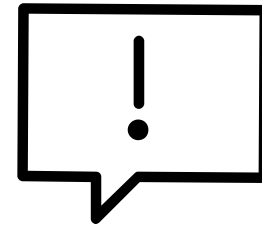
Infection chain stopped ✓

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WHY IS CONTACT TRACING IMPORTANT?

Breaking the chain of transmission

Bob develops symptoms

Infection Bob

Infection Anne

Beginning of the infectious period

Timeframe for contact tracing

1 2 3 4 5 6 7 8 9

Bob Anne

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4

WHY DO WE NEED CONTACT TRACING APPS?

"If rapidly and widely developed, these mobile apps for instant contact tracing could help to significantly slow the rate of transmission, and support countries to emerge from lockdowns safely, as restrictions are gradually eased"
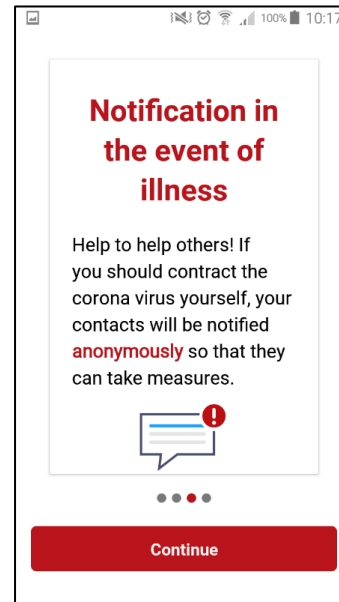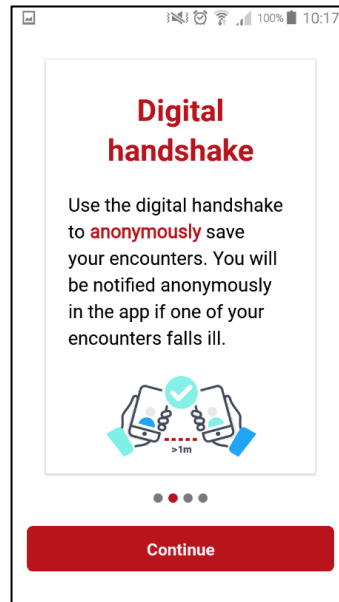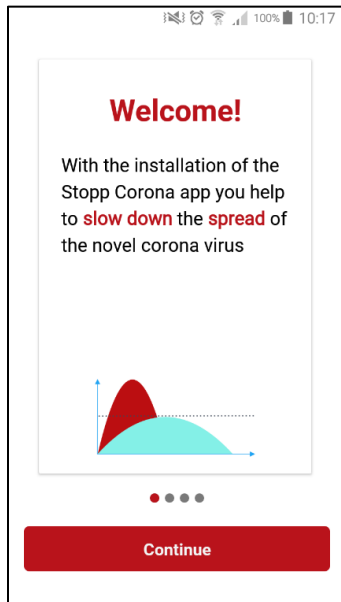
"Our models show we can stop the epidemic if approximately 60% of the whole population use the app ... Lower numbers of app users will also have a positive effect"

Oxford University

WHAT IS THE STOPP CORONA APP?

The Stopp Corona Apps is a single purpose contact tracing app developed by the Austrian Red Cross in partnership with Accenture.
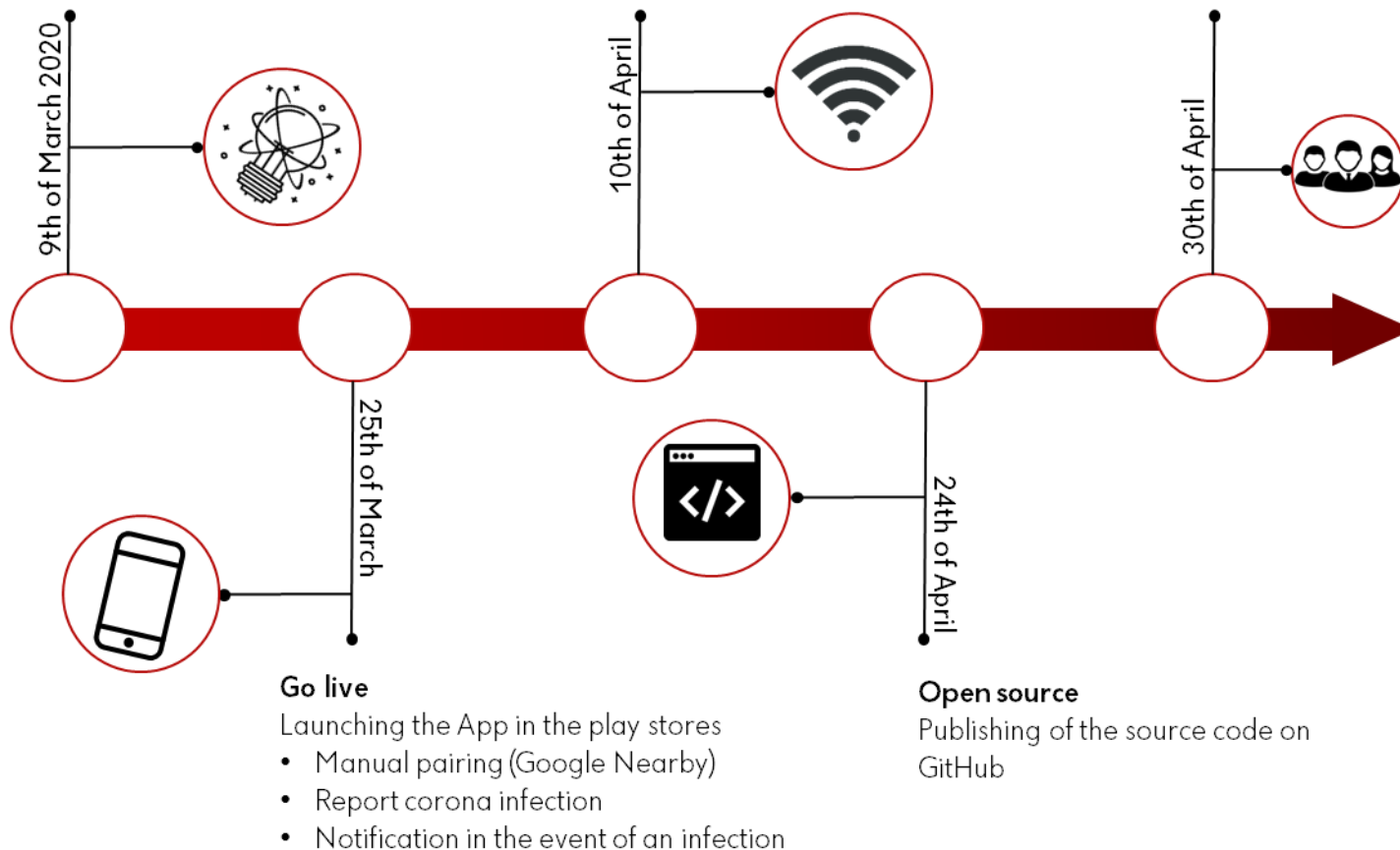
TIMELINE

Ideation and Conceptualization
First conceptualization meeting with Accenture

Version 1.1
- Automatic pairing (Bluetooth Low Energy)
- Asses and report symptoms
- Notification in case one of your contacts developed symptoms

Google / Apple API
The ARC gets access to the first version of Apple and Google's jointly developed, cross-platform contact tracing API

9th of March 2020

10th of April

30th of April

25th of March

24th of April

Go live
Launching the App in the play stores
- Manual pairing (Google Nearby)
- Report corona infection
- Notification in the event of an infection

Open source
Publishing of the source code on GitHub

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GENERAL FUNCTIONALITIES

The "Stopp Corona" App is used to record contacts between mobile phones to retroactively warn the recorded contacts in case of a later detected or suspected infection. For this purpose a random ID and a key pair consisting of a public and a private key is generated on each device.
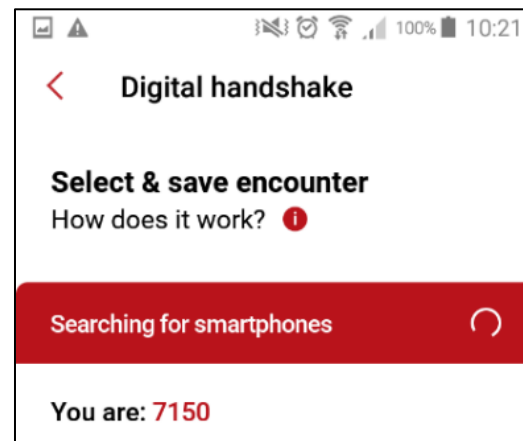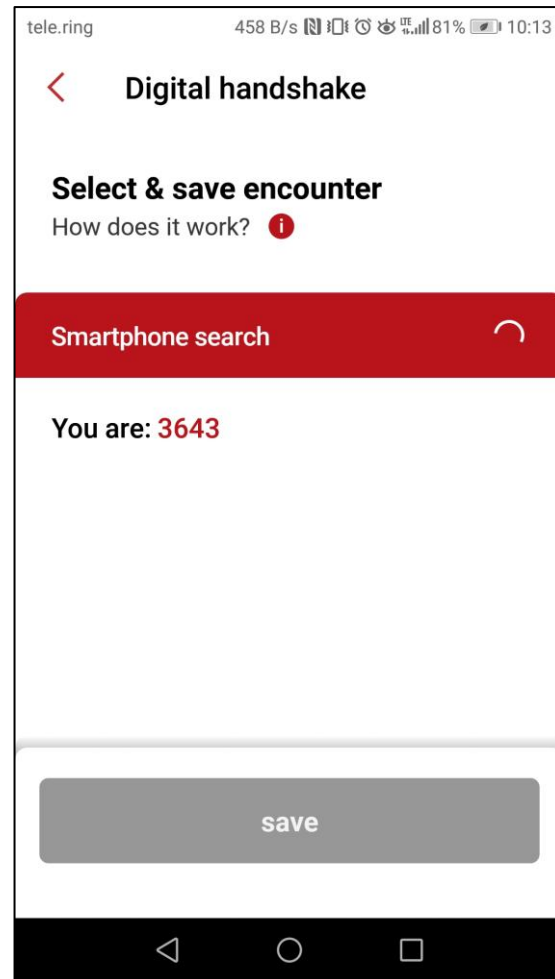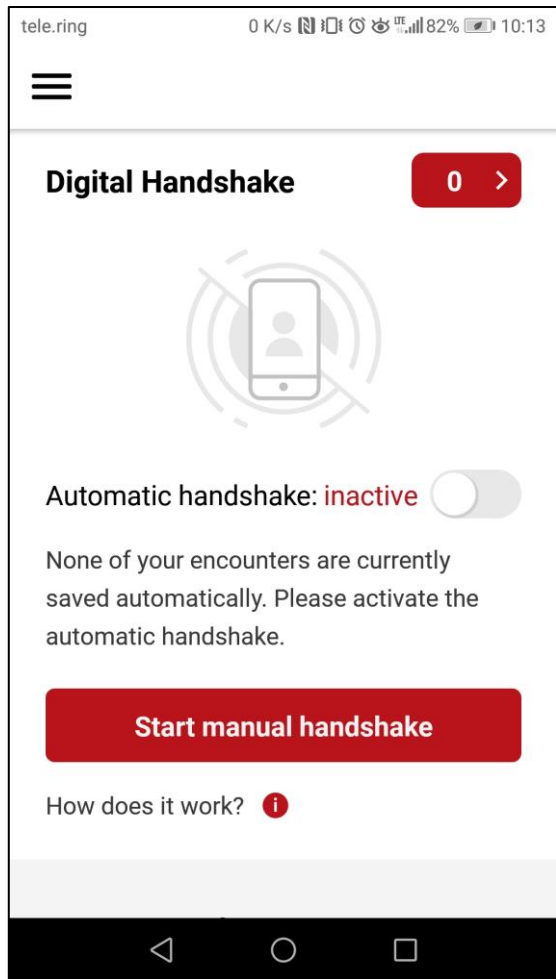
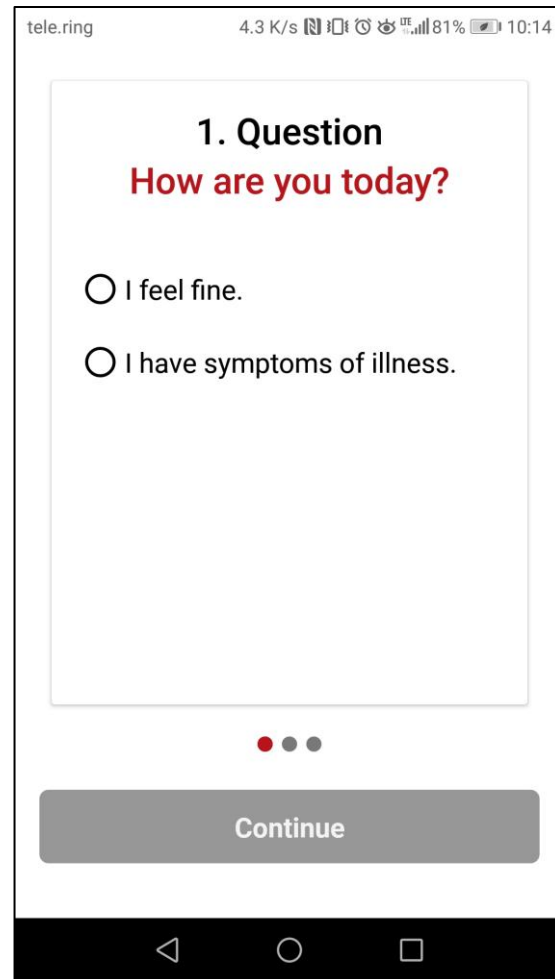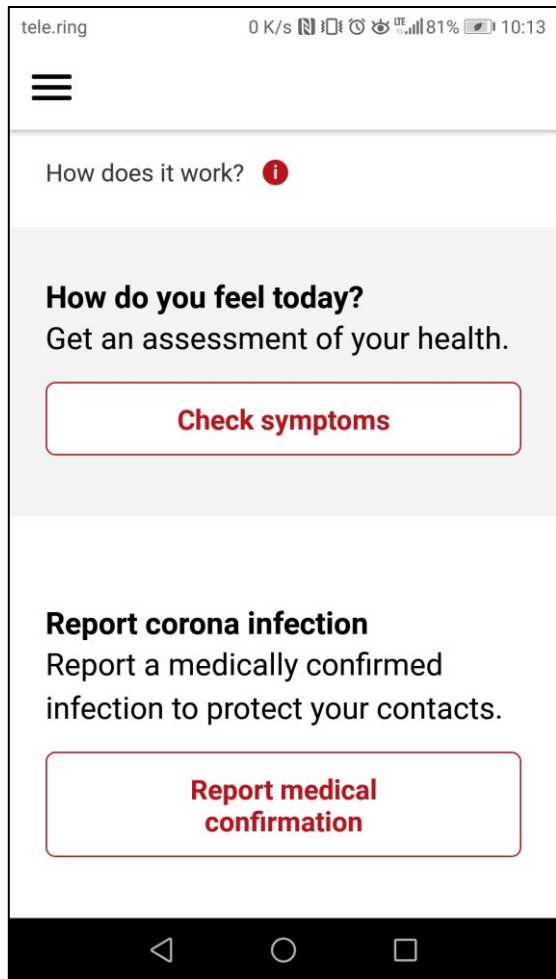# USER JOURNEY
AUTOMATIC HANDSHAKE
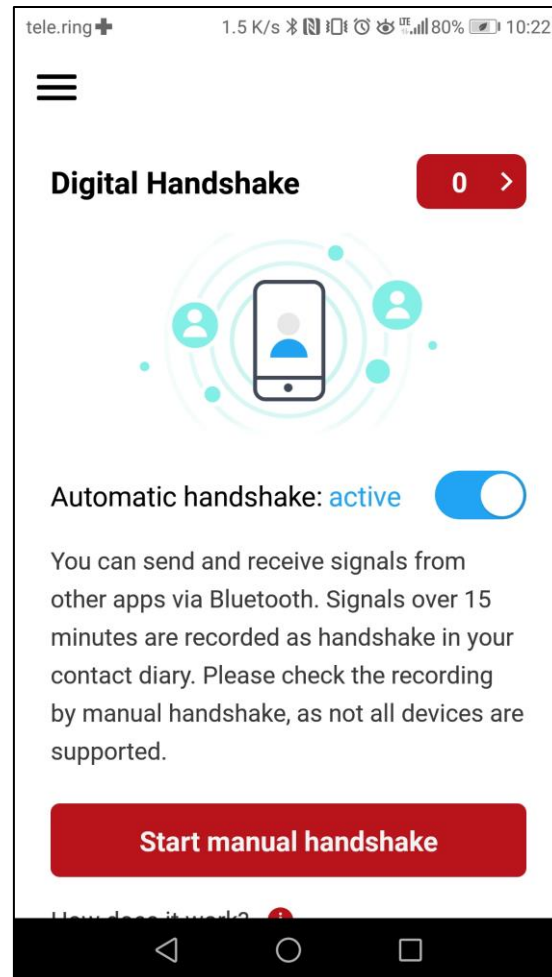
USER JOURNEY
MANUAL HANDSHAKE

USER JOURNEY
ASSESSMENT I

USER JOURNEY
ASSESSMENT II

USER JOURNEY
ASSESSMENT RESULTS

1

tele.ring   30.8 K/s 📶76% 10:35

Result
Stay healthy and help to protect others.

In the current situation it is important to follow a few basic rules. Care for you, care for me.

- Wash your hands regularly: with soap, warm water and for at least 20 seconds.
- Keep at least 1-2 meters distance to other people.
- Keep in touch via electronic media.
- If you feel ill, please stay home.

Finished

2

tele.ring   1.8 K/s 📶76% 10:35

Result
The symptoms you describe can occur in case of a corona infection.

Please report your suspected infection in the next step to protect others.

Your message helps to prevent the infection from spreading further. Your close contacts may have become infected unnoticed and already spread the virus. It is therefore important that these people are informed and stay away from other people.
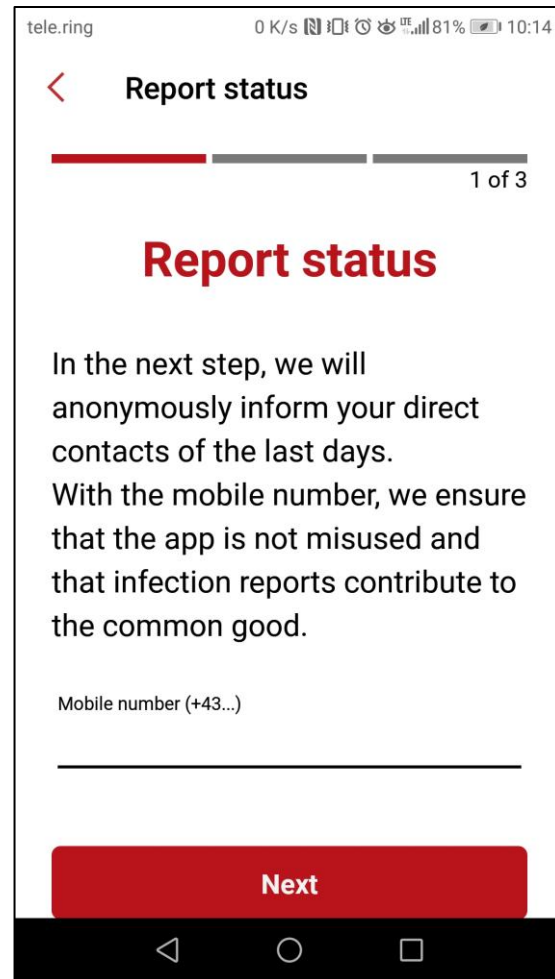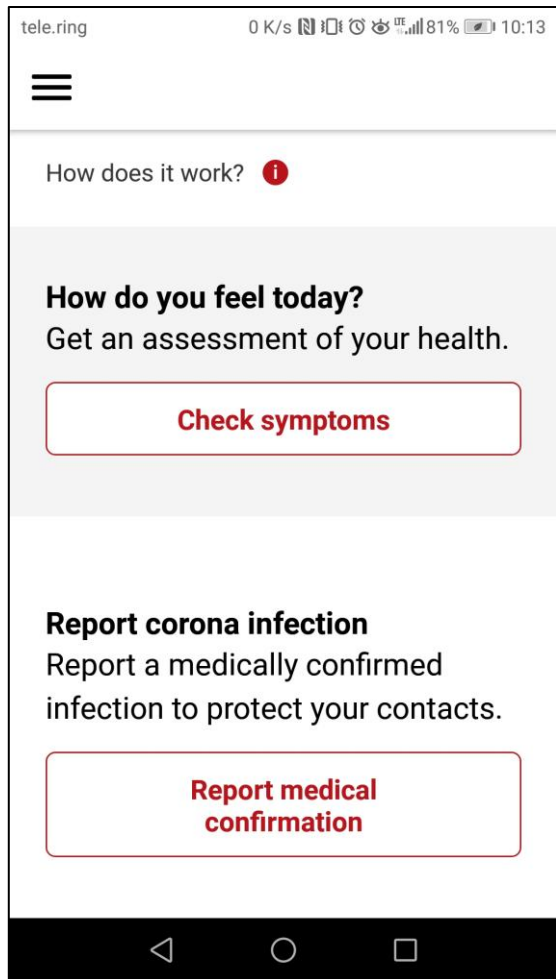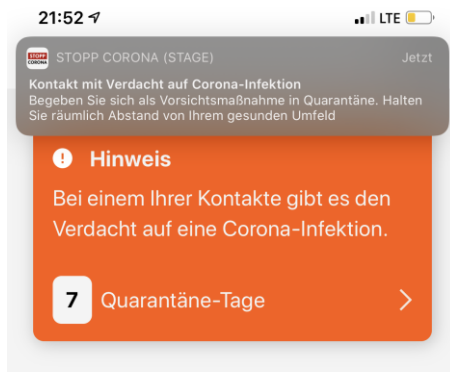
To anonymous notifications

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USER JOURNEY
REPORT A CONFIRMED INFECTION

USER JOURNEY
INFECTION MESSAGES
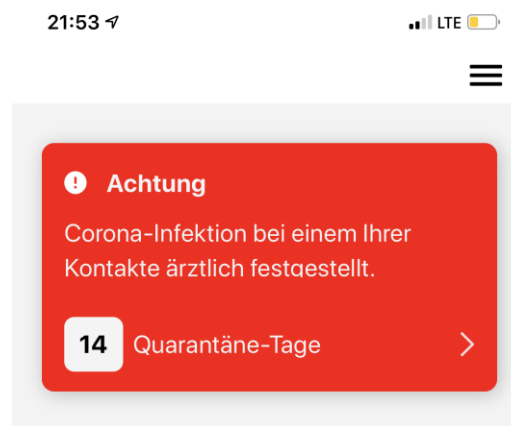
PRIVACY & SECURITY

The source code of version 1.1 (which was not publicly available at that time) has been made available to the leading data privacy & cyber security experts in Austria for analysis:

"In our opinion the concept of the app is compliant with data protection laws. The technical security check did not reveal any critical security vulnerabilities."

The source code was made publicly available on the 24th of April.

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NEXT STEPS

Apple and Google have released the first version of their exposure notification API. This is a developer-focused release, and is a seed of the API in development, with the primary intent of collecting feedback from developers.

- Integration of the Google / Apple exposure notification API

- Bluetooth beacon for people without smartphone

- ...

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Thank you for your attention