“STOPP CORONA” APP
Digitising contact tracing to flatten the COVID-19 curve
CHALLENGE

When the COVID-19 pandemic spread across the world, many governments and organisations sought new ways of working together to best mitigate and overcome the virus outbreak in their countries and regions.

The partnership between the Austrian Red Cross and the Austrian government is an example of a swift collaboration tackling this unprecedented global crisis. Part of the world’s largest humanitarian organisation, the Austrian Red Cross plays a key role in the government’s crisis response team.

Contact tracing is a proven strategy for reducing the basic reproduction number (R) of a virus, indicating how many new cases one infected person generates on average. Without measures taken to curb transmission, experts estimate that the rate of new infections would grow exponentially until about 70% of the population has been infected.

So, when virus cases were confirmed in Austria, the health authorities set their sights on tracing, identifying, alerting and isolating people who have been exposed to infection. Such contact-tracing solutions had been effective in containing the spread of pandemics in the past. But the process has historically been manual and labour intensive.

The Austrian Red Cross believed that smartphone technology could help it respond more rapidly to new outbreaks by tracing past contacts of a patient through an app. Among the first of its kind in Europe, the technology should be effective and secure from the day it launched. For help in creating that groundbreaking solution, the organisation turned to Accenture.
The Austrian Red Cross worked closely with Accenture to develop a custom app that would automate contact tracing, also referred to as "exposure notification".

The "Stopp Corona" App was designed to log contacts anonymously between mobile phones, create a contact history for each user, and help break infection chains by sending early notifications to potentially exposed people.

Development moved quickly, starting with a design thinking workshop to capture key requirements and feasibility. Over 100 Accenture volunteers surveyed potential users to test acceptance and prioritise features. With these insights, the team went live with a minimum viable product (MVP) in less than three weeks – a fraction of the time it normally takes to get an app of this scale and complexity up and running.

To detect contacts between mobile phones, devices perform a **digital handshake** with other nearby devices through automatic pairing via Bluetooth radio signals. If people test positive for COVID-19, they can report this via the app. The app then sends an anonymous alert to everyone with whom the infected users digitally shook hands.

This **automated early signalling** allows potentially exposed individuals to self-quarantine and notify health authorities for guidance.

The app uses digital technology to make **contact tracing easy and accessible** on and between iOS and Android smartphones.

**Data privacy and security** was built in to ensure that the app only records anonymous public keys on the device, not location details nor other user data. Users' phone numbers are only identifiable if they voluntarily report an infection, and this data is kept by the Austrian Red Cross for less than 30 days.
In order to slow the spread of a virus, contact identification and communication are critical. Carrying out these tasks manually requires a skilled labour force and is very time-consuming, since locating patients and contacts can be difficult and they may be reluctant or unable to engage in conversation.

Yet citizens are looking to play their part in breaking infection chains. Digital contact tracing using Bluetooth is proving to be a powerful and non-invasive means to do just that by measuring the proximity of contacts between people.

The goal of the app is simple and compelling: fewer infections means lives saved and social and economic life can resume more quickly.

Designed to be user-friendly and widely accessible, the app helps health authorities and citizens work together on remote assessment and take action through swift communications. Not only will people get the help they need faster via early detection, authorities can spend more time caring for the sick rather than tracing contacts.
When the “Stopp Corona” App was launched, hundreds of thousands of people quickly downloaded it via Google Play™ and Apple Store®. In its first weeks alone, it became the number one Apple and Google app in Austria. Users are making the difference to help contain the virus, cases of infection have already been registered and contacts have been notified so they can take the appropriate precautions.

What’s more, the app was developed in record time, going live just three weeks after conception. This is thanks to the commitment of the team who were motivated by the urgent need to slow the spread of the virus. It was also made possible by the unique combination of skills brought together on this project. The Accenture team included health and public service experts, technology specialists and data and cyber security consultants.

It was important to design a simple-to-use solution that functioned well and securely as soon as it hit the app stores. To reassure all users, we also gained approval of the data protection commission of the Red Cross and the federal government, and open sourced the app for transparency.

As the first functioning COVID-19 contact-tracing solution in Europe, Red Cross affiliates in other countries are looking to adapt the technology to help stem the spread of COVID-19. As an open-source project, the Austrian Red Cross has invited developers from other organisations to join forces to make the app technology available worldwide.
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