

REPORT: TRACK AND TRACE APPS

What you need to know

July 2021

Asia

India

Aarogya Setu

The *Aarogya Setu* (Bridge to Health) contact tracing app was launched in April 2020. Initially, use of the app was **voluntary**, but its use soon became **mandatory** for Indian citizens living in containment zones and for all government and private sector employees. Noida, a Delhi suburb, made the use of *Aarogya Setu* compulsory for all residents, who would otherwise risk up to six months in prison.¹ Mandating use of the app subsequently faced legal challenges, and its use now appears to be **voluntary**, or **advisable**. Travelers arriving in India from abroad may be asked to download *Aarogya Setu*.²

To register on *Aarogya Setu*, a user requires an Indian mobile number operated in India. Like most apps, *Aarogya Setu* uses Bluetooth to let users know if they've been in close contact with someone infected with COVID-19 during the past two weeks. Based on the date of exposure and proximity, the app recommends different courses of action.

Once someone has tested positive for COVID-19, the Indian Council of Medical Research (ICMR) shares this information with *Aarogya Setu*, which changes the user's status to COVID+ve (Red) and initiates contact tracing.³

The app collects the user's name and mobile phone number, gender, travel history and whether they're a smoker. This information is not made public.

Since June 2021, *Aarogya Setu* users have been able to update their vaccination status and download a vaccination certificate from the Indian Government's CoWIN vaccination platform.⁴

Japan

COCOA

Last year, Japan's Ministry of Health, Labor and Welfare (MHLW) released a **voluntary** COVID-19 contact confirmation app. Free to download for Android and iOS devices, the Contact Confirming Application, known simply as *COCOA*, is designed to notify users of close contact (within a one meter radius for more than 15 minutes) with someone subsequently testing positive for COVID-19.⁵

The app automatically records and tracks the user's movements, relaying the information as encrypted data. It does not release phone numbers or personal information to other users. *COCOA* only retains the data for two weeks. Once a day, it advises users if they have been in close contact with an infected person and recommends testing.

¹ [BBC](#), May 15, 2020

² [Gov.UK](#), India

³ [Aarogya Setu](#), How Setu works

⁴ [Aarogya Setu](#), June 1, 2021

⁵ [TimeOut](#), July 15, 2020

If a [COCOA](#) user tests positive for COVID-19, a health center will text them a processing number, which must be entered in the app.⁶ This will trigger alerts to all users with a history of close proximity with the infected person. They will receive a “confirmation of contact with positive person” alert. They can then indicate if they have any symptoms (and self-isolate) and arrange a test. Testing does not appear to be mandatory, and people not displaying symptoms can continue with their normal life.

The MHLW advises travelers that they [will need](#) the COCOA app after entering Japan.

Overseas Entrants Locator

Anyone entering or returning to Japan must download the [Overseas Entrants Locator](#) app, on which they must register their details on arrival at the airport.⁷ They must check in on the app after arriving at the location for their 14-day quarantine period. Once in quarantine, users will receive requests multiple times daily to confirm their GPS location by tapping the “I’m Here!” button. Travelers are also expected to use the MySOS video call app to receive video calls confirming their location.

Malaysia

MySejahtera app

The Government of Malaysia launched the [MySejahtera](#) COVID-19 mobile app in April 2020 to help monitor the pandemic.⁸ The app is freely available from the Apple App Store, Google Play Store, Huawei AppGallery and from the government’s own mobile app gallery, GAMMA. Users must register on the app’s website, providing a phone number or email address to receive a one-time login. It was initially used by Malaysians and residents of Malaysia.

The Government claims personal information will only be used for managing and mitigating the COVID-19 outbreak. Data will not be shared with any other party.⁹

[MySejahtera](#) enables users to do the following:

- Access COVID-19 health guidelines and updates
- Perform a health self-assessment and for family members without the app
- Receive health advice over the phone
- Identify COVID-19 hotspots using the Hotspot Tracker
- Locate nearby testing facilities
- Share their location with government agencies
- Check-in at point of entry to businesses
- QR Code acting as a digital health passports

Having completed a health self-assessment, app users are assigned to one of six classifications:

1. Low risk
2. Casual contact - may have been exposed to someone with COVID-19
3. Close contact - exposed to someone infected with COVID-19, via healthcare, working in close proximity, traveling together or living together
4. Person under surveillance - at risk of infection, e.g. traveled abroad within the last 14 days
5. Suspected case - at risk of being infected, having traveled abroad or attended a mass gathering within 14 days before the onset of symptoms
6. Confirmed case - individual has tested positive for COVID-19

⁶ [Ministry of Health, Labour and Welfare](#), Q&A for contact confirmation app users

⁷ [Ministry of Health, Labour and Welfare](#)

⁸ [Open Gov Asia](#), April 7, 2020

⁹ [MySejahtera](#), FAQs

By October 2020, 17 million Malaysians were using [MySejahtera](#). With 60% of the population using the app, this will make contact tracing easier for the Ministry of Health.¹⁰ Contact tracing is achieved through the combined efforts of [MySejahtera](#) and manual contact tracing.

MySejahtera Traveller

[MySejahtera Traveller](#) is a function built specially for travelers, both Malaysian and non-Malaysian, who are returning to or visiting Malaysia. Features of the function include:¹¹

- Ensuring travelers complete a health declaration form prior to arrival in Malaysia
- Check-In at point of entry to Malaysia (Arrival Check-In) using the MySejahtera QR Code Scanner
- Issuing a Home Surveillance Order (HSO) digitally to the MySejahtera user
- Daily self-assessment during 14 days of home quarantine
- Reminding person under HSO to go for a lab test on day 13 of quarantine
- Reminding the District Health Department to end the HSO
- Completion of the HSO on day 14

While it is not explicitly stated, downloading and registering the [MySejahtera](#) app **would appear to be mandatory for all arriving passengers**, as it is essential for confirming arrival in Malaysia and beginning the 14-day HSO quarantine period.

MySejahtera Check-In¹²

[MySejahtera Check-In](#) is another extension of [MySejahtera](#), enabling small businesses, restaurants, shops, construction sites, companies, schools, public transportation, hotels and other premises to follow government standard operating procedures related to the pandemic. After registering, such organizations may obtain and display a QR code, which users of the [MySejahtera](#) app may scan to log their location and enable entry to premises and public transportation.

Pakistan

Pass Track

The [Pass Track](#) app can speed a traveler's arrival in Pakistan, reducing the time spent with immigration and public health officers.¹³ Using the app, travelers are able to provide the mandatory information required for entry into Pakistan - although this can also be supplied using web-based forms. It can also be used to **voluntarily** update the Government on the development of any COVID-19 symptoms while in the country.

From May 1, 2021, use of the app by arriving travelers has been **mandatory** for submitting required entry information, with no exceptions allowed.¹⁴ As a result, passengers will no longer need to separately submit a Health Declaration Form.

Philippines

Traze Contact Tracing

Working with Cosmotech Philippines, the Philippines Port Authority (PPA) has launched the [Traze Contact Tracing App](#).¹⁵ The app uses QR code scanning to automate contact tracing. The Recursive QR Code changes every few minutes to avoid screenshots being used by other users.

[Traze](#) users who have come into contact with someone testing positive for COVID-19 receive in in-app

¹⁰ [Malay Mail](#), October 13, 2020

¹¹ [MySejahtera Travel Kit](#)

¹² [MySejahtera](#)

¹³ [Government of Pakistan](#), Current Policies

¹⁴ [Geo News](#), Apr. 16, 2021

¹⁵ [Traze](#)

notification, enabling them to take precautions and begin self-isolation, if necessary.

Equipped with [Trazee](#), users no longer need to complete manual contact tracing forms. [Trazee](#) works even when the user is offline, although they will need to go online to send their data to the system's server.

[Trazee](#) is used solely for contact tracing purposes. A user's data is deleted every 30 days.

The app appears to be [mandatory](#) for anyone departing from or arriving at any airport in the Philippines. However, anyone without a mobile phone can get their unique QR code from airport helpdesks. Since April 2021, [Trazee](#) has also been deployed by the Metro Rail Transport (MRT3) system.

Singapore

TraceTogether

Singapore's Ministry of Health (MOH) launched the [TraceTogether](#) Program to enhance its contact tracing efforts, releasing an app developed by government IT agency GovTech, with a token version also available.¹⁶ While [TraceTogether](#) is [not mandatory](#), the MOH believes there are good reasons to use it:

- Rapid notification of COVID-19 exposure through close contact
- Reducing the spread of COVID-19
- Protecting the community and easing the load on health workers

As well as being able to download the [TraceTogether](#) app, people without a mobile phone can collect a free wearable physical [TraceTogether Token](#). All residents of Singapore aged above 7 years are eligible to collect a token. Once collected, the Token is registered in the user's name. Users should wear/carry the Token whenever they are out and about in Singapore.

Like the app, the Token uses Bluetooth signals to record other nearby [TraceTogether](#) devices. It features a QR code.

As it only captures proximity data, and not GPS/geolocation data, [TraceTogether](#) cannot track a user's location. Nor does the app access a user's phone contact list or address book. Encrypted data is held locally on a user's mobile device until they consent to sharing it with the Ministry of Health. If a user does not come into close contact with a COVID-19 case, data older than 21 days is automatically deleted.

If the user or someone with whom they've been in close contact tests positive for COVID-19, the Ministry of Health is able to use the data for contact tracing.

SafeEntry

While [TraceTogether](#) identifies when people are in close proximity to COVID-19 cases, [SafeEntry](#) helps people testing positive for COVID-19 recall the places they've visited. This helps the Ministry of Health (MOH) spot potential clusters. The two systems work together to speed up contact tracing, reducing the time taken from 4 days to less than 2 days.¹⁷

[SafeEntry](#) is a national digital check-in system logging identities (National Registration Identity Card NRIC or Foreign Identification Number FIN) and mobile numbers of people visiting hotspots, workplaces and selected public venues. It also logs the time of visit. All businesses and services, including workplaces, hotels, restaurants and entertainment venues must check-in anyone visiting their premises.¹⁸ Check-in for [SafeEntry](#) is mandatory; business and venues are encouraged to facilitate [SafeEntry](#) for check-out too, but this is not compulsory.

From June 1, 2021, the authorities introduced [Trace Together-Only SafeEntry \(TT-only SE\)](#) at all venues with

¹⁶ [Mobile Health News](#), March 20, 2020

¹⁷ [TraceTogether](#), How do TraceTogether and SafeEntry work together

¹⁸ [SafeEntry](#), Where does SafeEntry need to be deployed?

high visitor numbers, and/or where people are likely to be in close proximity for prolonged periods.¹⁹ Such venues include shopping malls, workplaces, gyms, hotels, restaurants, places of worship and education (follow link below for the full list).²⁰

Nationwide, [SafeEntry](#) check-in must be performed using the [TraceTogether](#) app or token by:

- Using the [TraceTogether](#) app to scan the venue's QR code
- Displaying the [TraceTogether](#) Token's QR code for venue staff to scan
- Tapping the app or token as a SafeEntry gateway device

Previously used approaches to check-in, such as using a mobile device's camera to scan a venue's QR code, the SingPass app, or scanning barcodes on personal IDs, are no longer accepted.

Providing the information requested for [SafeEntry](#) is **mandatory**. Anyone failing to provide the necessary information may be denied entry to a business or venue.

Europe

Denmark

[Smitte | stop](#)

With the [Smitte | stop](#) app, users can easily and anonymously inform close contacts of a COVID-19 diagnosis. The app supports traditional methods of contact tracing by speeding up the notification process. Using Bluetooth, smartphones with [Smitte | stop](#) register close contact with other users.

Once someone has been diagnosed with COVID-19, they let the app know, and it notifies close contacts. This includes advice from Danish health authorities. The app appears to be voluntary and may only be available in Danish.²¹

France

[TousAntiCovid](#)

Originally launched in June 2020 as [StopCovid](#), the [TousAntiCovid](#) app is available to download from the App Store and Google Play. The app is promoted under the premise "I protect myself; I protect others."²² As a contact tracing app, it allows users to be alerted or alert others about exposure to COVID-19. It's regarded to be particularly useful in situations where social distancing is difficult.

[TousAntiCovid](#) has been updated to include daily information about the state of the pandemic in France and a Forms section, which generates any travel declaration forms that might be needed during periods of curfew or lockdown.

Use of [TousAntiCovid](#) is entirely **voluntary**. Users are free to activate/deactivate it whenever they choose. However, since July 2021, its use has become almost obligatory, as the French government now requires people to demonstrate their health status ([pass sanitaire](#)) in order to visit leisure and culture venues, such as concert halls, sports halls, cinemas and amusement parks, where more than 50 are gathered.²³ From the start of August, the government plans to abolish the 50-person threshold and extend the use of [pass sanitaire](#) to cafes, restaurants, shopping centers, hospitals, as well as for travel by air, rail and long-distance bus. Other situations may be added at a later date.

¹⁹ [Smart Nation Singapore](#), TT-only SE

²⁰ [Smart Nation Singapore](#), Venues/events where TT-only SE is mandatory

²¹ [Smitte | stop](#), About the app

²² [Government of France](#), Coronavirus Information

²³ [Government of France](#), Health Pass

Germany

Corona-Warn-App

Developed by SAP and Deutsche Telekom, the [Corona-Warn-App \(CWA\)](#) is supported by the Federal Ministry of Health as a way of tracing COVID-19 infection chains.

Using Bluetooth technology, [CWA](#) determines if users have been within 1.5 meters of an infected person for at least ten minutes. Use of [CWA](#) has been extended to event registration, so that users are notified of potential COVID-19 exposure if visiting the same venue at a similar time as a positively tested individual.²⁴

The [CWA](#) can also act as a health credentials pass, as it is capable of storing QR codes from vaccination certificates and of booking COVID-19 tests and displaying the results. [CWA](#) is different to the [CovPass-App](#), which is Germany's digital vaccination certificate. The [CovPass-App](#) generates a QR code which can be added to [CWA](#).²⁵

Iceland

Rakning C-19

[Rakning C-19](#) is Iceland's contact tracing app, which is available from the App Store and Google Play.

Italy

Immuni

Launched on June 2020 by the Ministry of Health, [Immuni](#) is managed by public company Sogei S.p.A. The app uses Bluetooth Low Energy Technology to track contacts between people and warn users potentially exposed to COVID-19. [Immuni](#) can be downloaded for free from Apple's App Store, Google's Play Store and Huawei's AppGallery.²⁶ Use of the app is [entirely voluntary](#).

Once someone tests positive for COVID-19, they can use [Immuni](#) to anonymously alert people they've been in close contact with. The app sends out a notification, which includes advice on how to deal with the situation. As it uses Bluetooth Low Energy technology to determine contact, [Immuni](#) does not use geolocation/GPS or any personal data.

All foreign citizens visiting Italy can use the app. If they receive an exposure notification, they're advised to call 118 or a national toll-free number 1500 to be connected to the National Health Service.²⁷

Portugal

Stayaway COVID

This app is intended to support Portugal's efforts to screen people for COVID-19. By monitoring someone's most recent contacts, the app can notify of any exposure to COVID-19. Use of the app is [entirely voluntary](#), free and at no time requires access to the user's identity or personal data.²⁸

If someone is diagnosed with COVID-19, they receive a code to voluntarily enter into [Stayaway COVID](#). The app can then use the person's status change to notify other users of the risk of exposure. These users should self-isolate and contact healthcare services. The app's exposure warning disappears after 14 days.

²⁴ [Coronwarn](#)

²⁵ [Bundesministerium für Gesundheit](#), Coronavirus

²⁶ [Immuni](#)

²⁷ [Italia](#), Immuni

²⁸ [Stayaway COVID](#)

Spain

Radar COVID

Radar COVID is Spain's COVID-19 risk contact notification system, available from the App Store and from Google Play.²⁹ Using Bluetooth, the app exchanges signals with other devices that have enabled *Radar COVID*. It determines if there has been close contact with anyone subsequently diagnosed with COVID-19.

Use of the app is free of charge, permitted for all citizens, and is done so on a **voluntary basis**. There is no need to sign up or provide any personal information. Users **voluntarily** tell the app if they receive a positive COVID-19 test result by uploading a single-use confirmation code provided by health authorities. With the user's consent, potential exposure alerts may be sent out to all other users who may have come into close contact over that past 14 days.

U.K.

NHS COVID-19 app

The *NHS COVID-19* contact tracing app is available for use in England and Wales.³⁰ Use of the app is **voluntary**, and it is free to download from the App Store and Google Play. Anyone aged over 16 can use it.

The app runs on proven software developed by Apple and Google, and it's been designed so that no one will know the user's identity or location. Data, or the app, can be deleted at any time. The app is available in English, Welsh, Bengali, Urdu, Gujarati, Punjabi, Chinese, Romanian, Turkish, Arabic, Polish and Somali.

NHS COVID-19 includes the following features:

- Trace: find out proximity to other app users who have tested positive for coronavirus.
- Alert: advises level of coronavirus risk in local postcode district.
- Check-in: QR code scanner to alert users who've visited a venue where they may have come into contact with coronavirus. No more form filling.
- Symptoms: check for COVID-19 symptoms and see if a test is needed.
- Test: order a test if required.
- Isolate: keeps track of a self-isolation countdown and provides relevant advice.

With the U.K. relaxing the 1 meter-plus social distancing rule from July 19, 2021, it has been suggested that *NHS COVID-19*'s sensitivity may need to be reduced.³¹ Under its initial setting, the app defined proximity as spending more than 15 minutes within 2 meters of another user.

Middle East

Israel

HaMagen

The Ministry of Health has launched *HaMagen* contact tracing app.³² It can tell users if they've been in close contact with anyone subsequently diagnosed with COVID-19. The app cross-checks the **GPS history** of the user's mobile phone against Ministry of Health historic geographic data for anyone testing positive for COVID-19. This happens on the user's mobile phone; GPS data does not leave the phone; nor does it get

²⁹ [Radar COVID](#), Terms and Conditions

³⁰ [NHS](#), NHS COVID-19

³¹ [BBC](#), July 11, 2021

³² [Ministry of Health](#), Israel

sent to a third party. If diagnosed with COVID-19, users do have the option of **voluntarily** sharing their location with the Health Ministry.

HaMagen is available in five languages: Hebrew, Arabic, English, Russian and Amharic. It can be downloaded for free from the App Store and Google Play. Use of the app is **voluntary**.

If a user crosses paths with a COVID-19 patient, they are informed of the exact time and location at which this happened, so that they can review, and confirm or reject the notification. Confirmation requires the user to report exposure; rejection means they can carry on as usual. Rejection is a permitted option because *HaMagen* detects a device's proximity and not a person's proximity, e.g., the mobile phone many have not been in the user's possession at the time of exposure.

Qatar

Ehteraz

Ehteraz is Qatar's official contact tracing app operated by the Ministry of Health. It's available from the App Store and Google Play. Downloading the app requires a Qatari SIM card for activation. Visitors to Qatar can purchase a SIM card on arrival at Doha's Hamada International Airport.

Ehteraz has been developed to notify potential exposure to an infected individual, provide a QR code confirming the user's COVID-19 and vaccination status (gold color display), identify locations with high infection rates, and provide official announcements on health, social distancing, containment efforts and up-to-date COVID-19 statistics. The app can also confirm when a user has completed quarantine.

Using the *Ehteraz* app, travelers will be able to participate in public activities, such as visiting restaurants and shopping malls and using public transportation. Use of the app would appear to be **mandatory**, given that two people have recently been prosecuted for not using it.³³

United Arab Emirates (U.A.E.)

Testing and contact tracing capabilities

Alhosn is the U.A.E.'s official COVID-19 results and contact tracing app.³⁴ It was developed by the Ministry of Health and Prevention, Abu Dhabi Health Authority and Dubai Health Authority. It uses the decentralized model for contact tracing. The app can be downloaded from the App Store, Google Play, the Galaxy Store and Huawei's AppGallery.

Alhosn combines the features of two previously launched apps, StayHome and TraceCovid.

Users simply need to download, register and turn on Bluetooth and push notifications on their mobile phones. The app needs to run in the background at all times. Using Bluetooth, it sends and records signals between mobile phones on which it is installed. The data exchanged is anonymized.

Users can store their COVID-19 test results on the app, and should they test positive, they share this data - anonymous IDs and timestamps from the past 21 days - with the health authority for contact tracing.

For each user, *Alhosn* generates a unique QR code using a color to determine COVID-19 test status:

- Grey - no test results currently available
- Green - tested and healthy
- Amber - need to be tested or retested due to possible exposure
- Red - most recent test returned a positive result

³³ [Gulf Times](#), July 17, 2021

³⁴ [Alhosn](#)

While use of *Alhosa* is **not mandatory**, everyone is **encouraged to use** it. It makes getting around the U.A.E. easier, especially if crossing the border between some of the emirates or trying to enter certain venues. And as it is the government's preferred system for presenting PCR test status' officials are unlikely to accept anything else.³⁵

Health credentials added

The capabilities of *Alhosa* have been expanded to include the green pass, which will show people's vaccination status and PCR test validity.³⁶ The green pass is intended to help ease restrictions by supporting safe movement. It's also needed to access a range of venues and facilities across the U.A.E. According to the Abu Dhabi Emergency Crisis and Disasters Committee (NCEMA), a green pass is **mandatory** to access shopping malls and large supermarkets, restaurants, bars and cafes, museums, cinemas, gyms, hotel facilities, parks, beaches and swimming pools.³⁷

A color-coding system has six categories, which result in a green status for different time periods, typically starting after a negative PCR test result has been uploaded:

Category	Person's Status	App Status
1	Fully-vaccinated for more than 28 days or vaccine trial volunteer	Green for 30 days
2	Fully-vaccinated for fewer than 28 days and with a negative PCR test	Green for 14 days
3	Received first vaccine dose and with a negative PCR test result	Green for 7 days
4	Received first dose but are late for their second dose by 48 days or more, and have a negative PCR test result	Green for 3 days
5	Have an approved vaccine exemption certificate and a negative PCR test result	Green for 7 days
6	Unvaccinated, no exemption, but has a negative result from a PCR test	Green for 3 days

When the relevant PCR test validity (green status) ends, the App Status will turn grey. It will turn red following a positive PCR test result.

North America

Canada

COVID Alert

COVID Alert is the Government of Canada's **voluntary**, private and anonymous COVID-19 exposure notification app, which is available from the App Store and Google Play.³⁸

Like most apps, it uses Bluetooth to exchange random codes between mobile phones. The strength of Bluetooth signal is used to estimate how close app users are to one another. Each day, the app checks a

³⁵ [Time Out Abu Dhabi](#), June 20, 2021

³⁶ [Arabian Business](#), June 7, 2021

³⁷ [Time Out Abu Dhabi](#), June 9, 2021

³⁸ [Government of Canada](#), Download COVID Alert today

list of random codes from users who have informed it, through a one-time key, of a positive test result for COVID-19. *COVID Alert* then notifies anyone who may have been in close contact with such users during the last 14 days. Exposure is defined as being within 2 meters of an infected person for 15 minutes or longer.

COVID Alert does not use GPS or track the user's location. It cannot access any personal information about the user, such as name, address, health information, etc.

As at July 8, 2021, the app had been downloaded 6.6 million times across nine provinces and territories. *COVID Alert* is not yet available in Alberta, British Columbia, Nunavut and Yukon.

Southwest Pacific

Australia

COVIDSafe is a government-backed app that helps identify people exposed to COVID-19.³⁹ The app is **completely voluntary** and can be downloaded for free from the App Store and Google Play.

COVIDSafe supports the manual process of finding people who have been in close contact with someone with COVID-19. The app is available in English, Chinese, Arabic, Greek, Italian, Korean, Punjabi, Turkish and Vietnamese. Once the pandemic is over, users will be prompted to delete the app from their mobile phones. Information held on a highly secure information storage system will also be destroyed.

Like similar apps, *COVIDSafe* uses Bluetooth® to look for other devices with the app installed. Through a digital handshake, the app notes when contact occurs, securely logging an encrypted reference code from the other user's phone, as well as the date and time. *COVIDSafe* does not record locations. It stores contact information on the phone for 21 days.

Once someone tests positive for COVID-19, health officials will ask for consent to upload the digital handshake information to the National *COVIDSafe* Data Store, enabling close contacts to be alerted and advised to quarantine or get tested.

Note

The information presented in this report represents the latest view as at July 26, 2021. We have carefully researched and checked the information contained. However, we do not guarantee or warrant the correctness, completeness or topicality of this article and do not accept any liability for any damage or loss as a result of the use of the information contained within this article.

Do you have questions or comments regarding this report?
Please email mike.eggleton@bcdtravel.co.uk to share your thoughts.

³⁹ [Australian Government](#), Department of Health, COVIDSafe app