

# Helping build Japan's COVID-19 App with Microsoft

Ben Ishiyama-Levy

CEO  XAMARINERS

Microsoft & Xamarin MVP

[ben@xamariners.com](mailto:ben@xamariners.com)

@xamariners





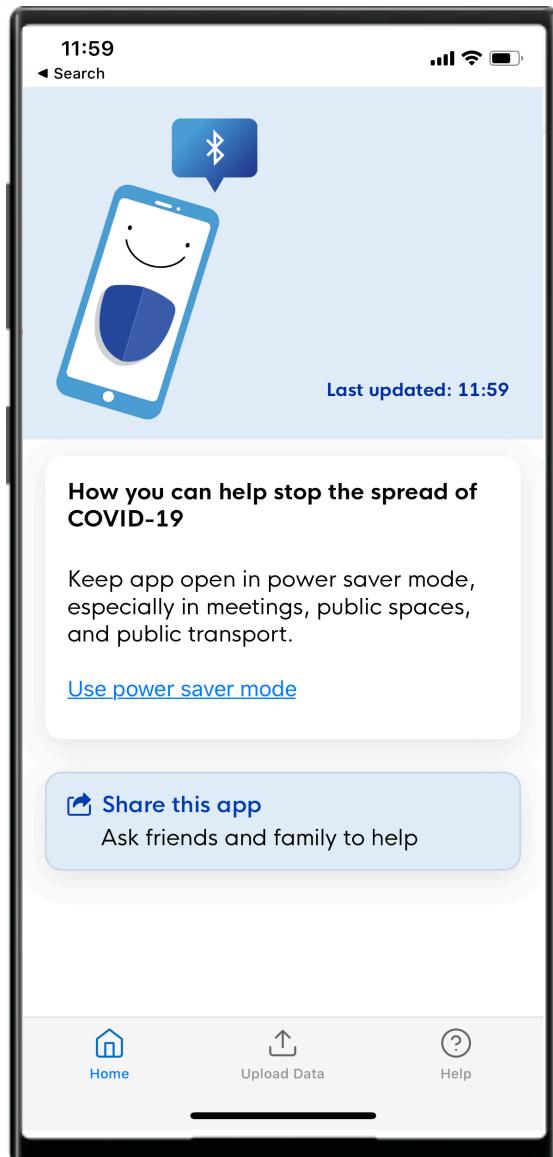
## Privacy-Preserving Cross-Border Contact Tracing

Third-parties cannot use BlueTrace communications to track users over time

Limited collection of personally-identifiable information

Local storage of encounter history

Revocable consent



Govtech / MOH / SG United

## TraceTogether App

---

TraceTogether supports Singapore's efforts to mitigate the spread of COVID-19 through community-driven contact tracing.

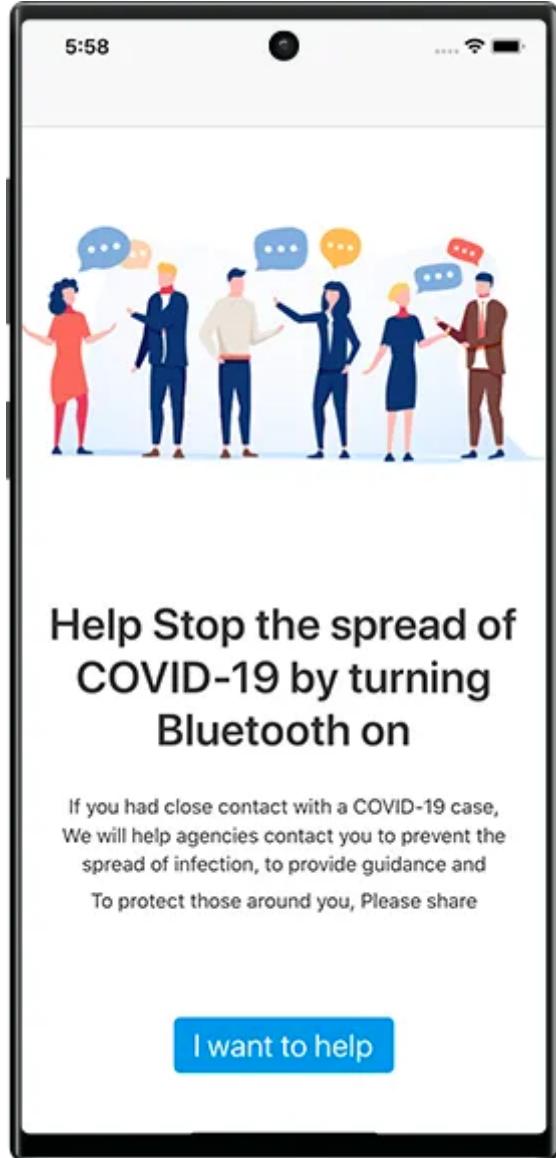
1,400,000 Users

Project Resources:

- <https://www.tracetogther.gov.sg/>

*Tech Stack:*

- Native Android (Java) & Android (Swift)
- BlueTrace protocol
- Azure Functions



Microsoft Japan / Xamariners / OSS

## Covid 19 Radar App

---

Open Source / i18n / Cross Platform Contact Tracing App by exposure notification framework.

Project Resources:

- <https://github.com/Covid-19Radar/Covid19Radar>
- <https://lp-covid-19radarjapan.studio.design>

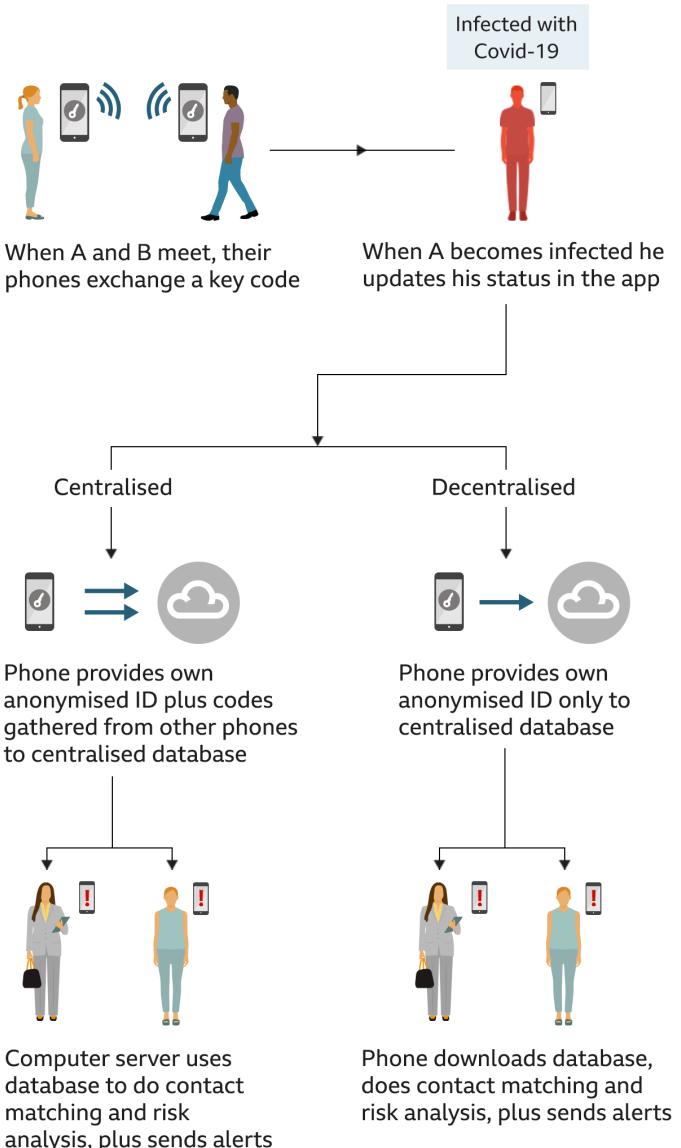
Services:

- Project Management, Xamarin & Azure Function Development, UI Test, DevOps

Tech Stack:

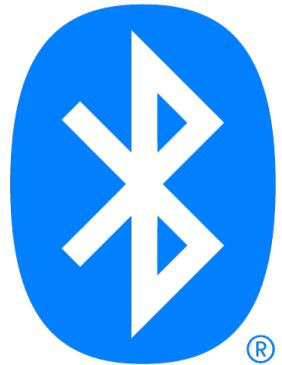
- Xamarin.Forms (iOS / Android), Xamarin.Forms Shell
- Azure Functions / Cosmos Db
- Test coverage (Xamarin: App Centre UI Test + BDD – Backend: Nunit Unit Tests )
- CI, CD (Azure DevOps, AppCentre)

# Centralised vs decentralised apps



## *Bluetooth Limitations*

---



+



+



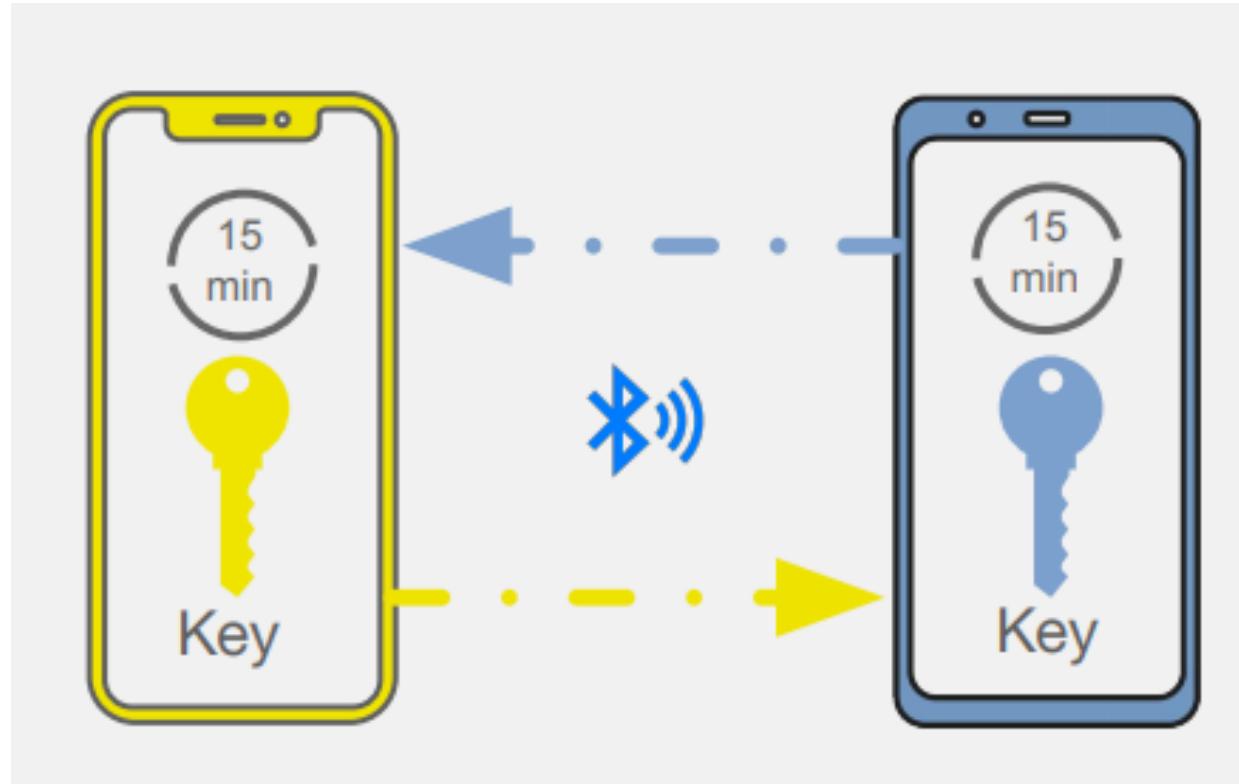
Tracing doesn't work properly when in the background on because of the way Apple restricts use of Bluetooth

# Exposure Notification API

---

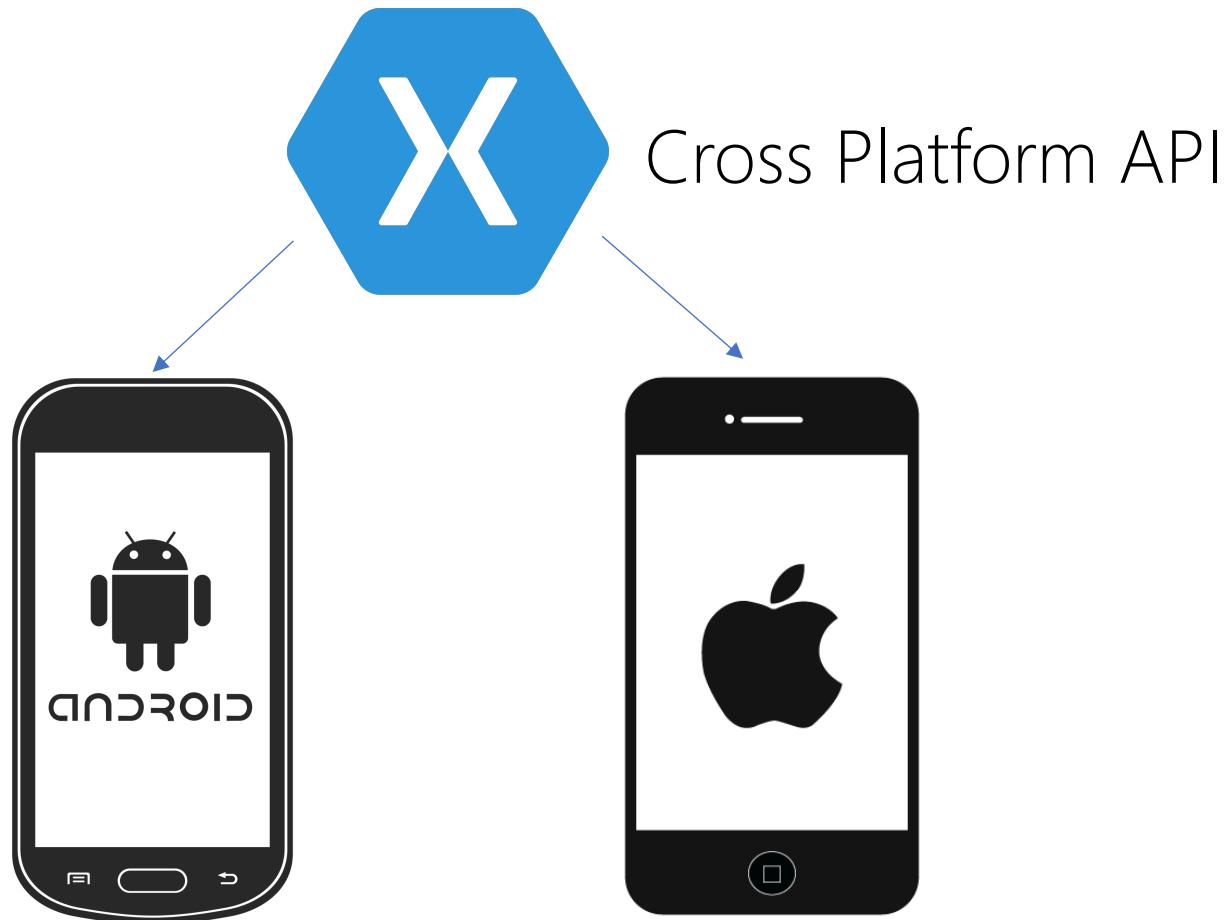
<https://www.google.com/covid19/exposurenotifications/>

<https://developer.apple.com/documentation/exposurenotification>



# Xamarin Exposure Notification API

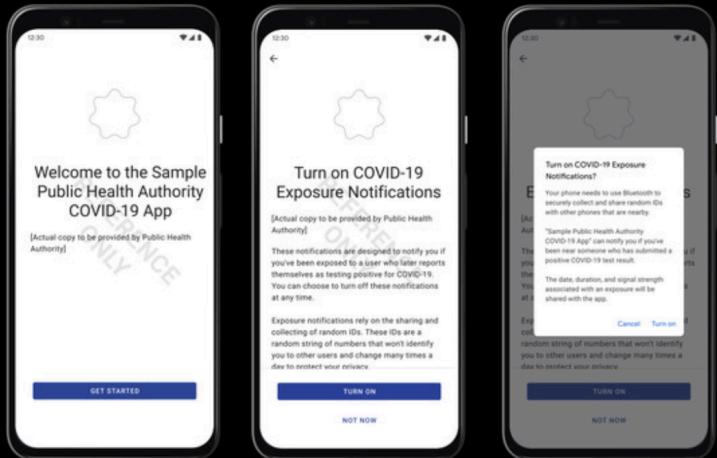
---



<https://github.com/xamarin/xamarin.exposurenotification>

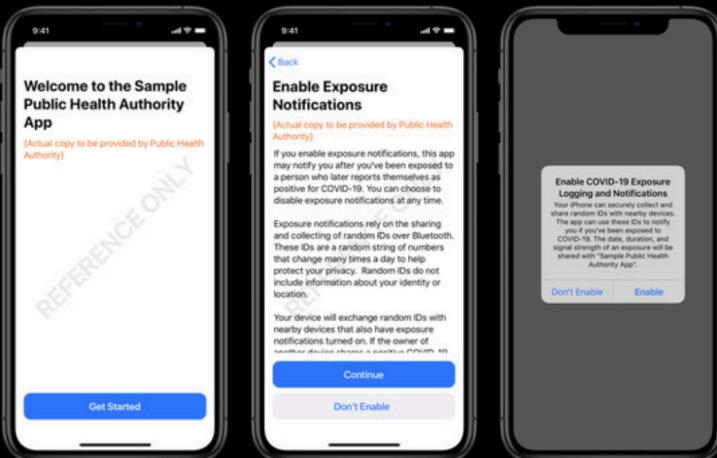
<https://github.com/xamarin/xamarin.exposurenotification/blob/master/Exposure%20Notification%20Planning.pdf>

## Sample Public Health Authority App Onboarding



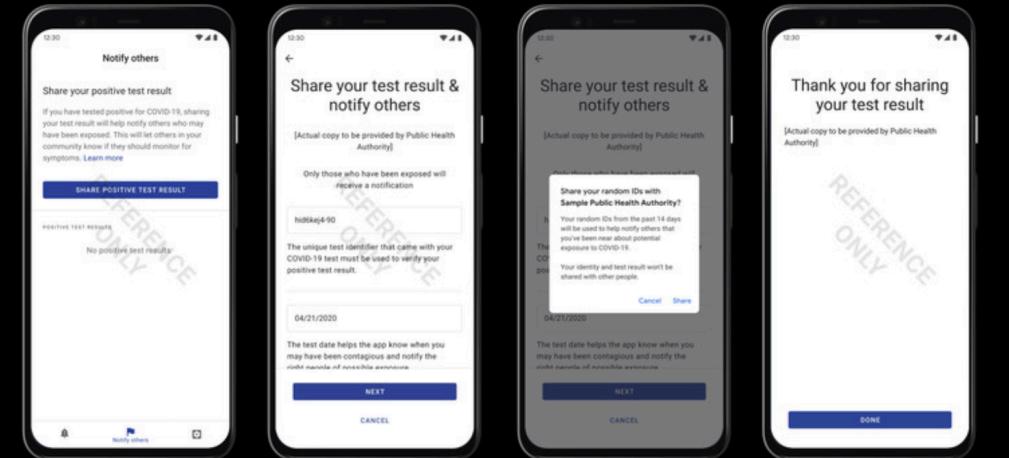
Android - Onboarding Flow

## Sample Public Health Authority App Onboarding



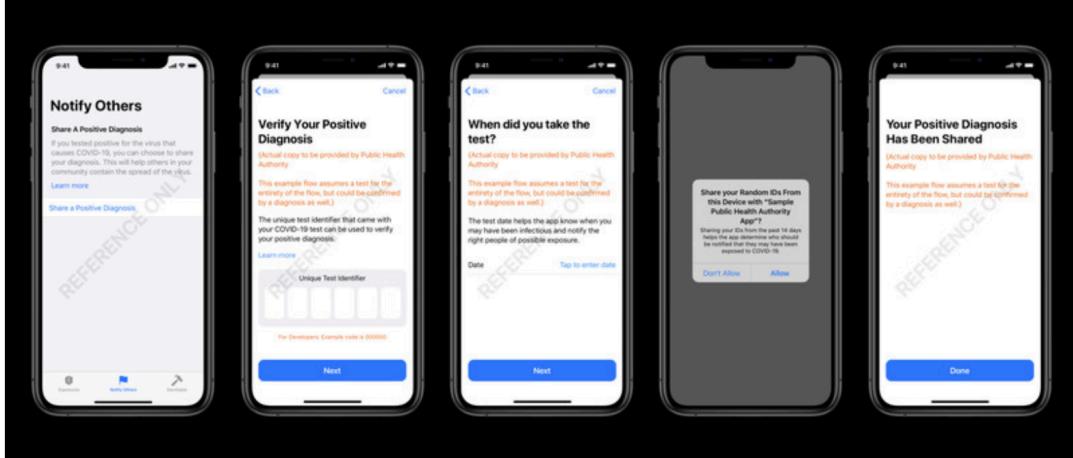
iOS - Onboarding Flow

## Sample Public Health Authority App Positive Result Flow



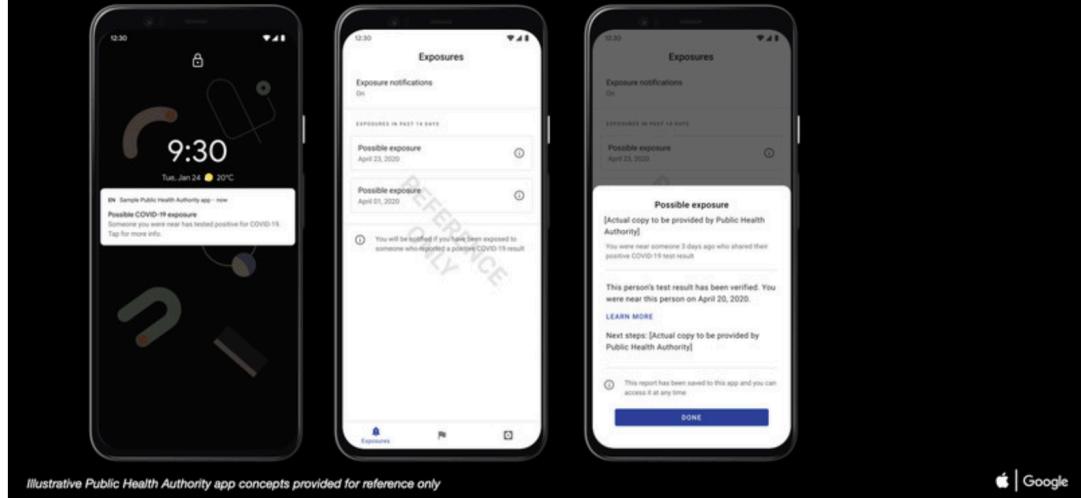
Android - Sample Public Health Authority Flow

## Sample Public Health Authority App Positive Result Flow



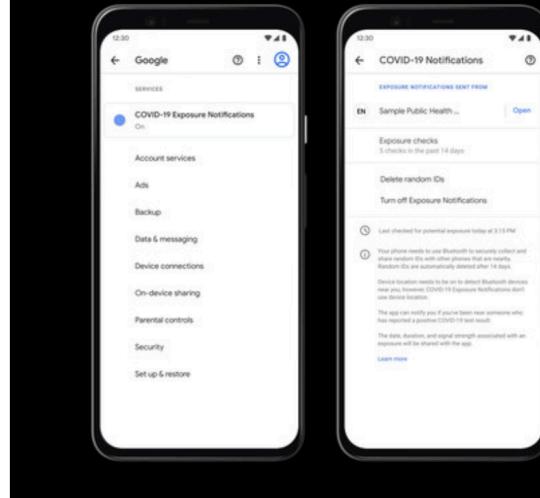
iOS - Sample Public Health Authority Flow

## Sample Public Health Authority App Exposure Notifications Flow



Android - Exposure Notifications Flow

## Exposure Notifications Settings



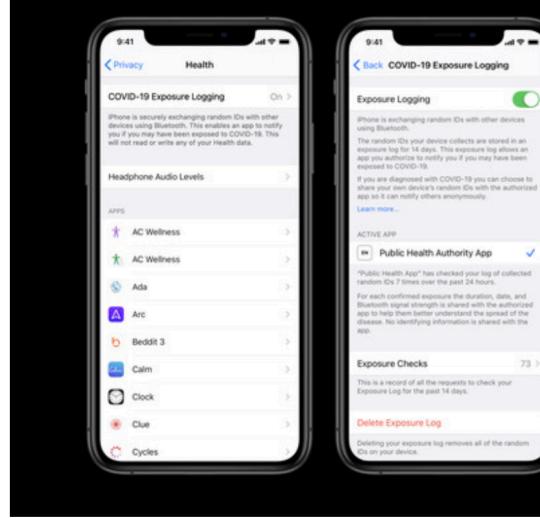
Android - Exposure Notification Settings

## Sample Public Health Authority App Exposure Notifications Flow



iOS - Exposure Notifications Flow

## Exposure Notifications Settings



iOS - Exposure Notification Settings

Thank you