

KEYS, Daniel

From: KEYS, Daniel
Sent: Monday, 15 June 2020 7:21 AM
To: McBride, Paul; s22
Subject: FW: Correspondence from Minister Robert to the Prime Minister re Apple and Google Exposure Notification Framework [SEC=OFFICIAL]
Attachments: MS20-000022 - Letter to the Prime Minister from Minister Robert re Apple and Google ENF.pdf

FYI regarding the use of the Apple and Google ENF.

Daniel Keys
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The Department of Health acknowledges the traditional owners of country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present.

From: s47E(d)
Sent: Saturday, 13 June 2020 11:04 AM
To: KEYS, Daniel
Cc: s47E(d)
Subject: FW: Correspondence from Minister Robert to the Prime Minister re Apple and Google Exposure Notification Framework [SEC=OFFICIAL]

Hi Daniel

Please see letter attached for info

MPS – please log in PDMS and assign to ITD for info

Thanks
 s22

s22
 Department Liaison Officer
 Office of the Hon Greg Hunt MP
 Minister for Health
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 Suite M1.41, PO Box 6022, Parliament House, Canberra ACT 2600, Australia

From: s47E(d) @dta.gov.au>
Sent: Friday, 12 June 2020 2:46 PM

To: s47E(d)@pm.gov.au>

Cc: s47E(d)@health.gov.au>; s47E(d)@pmc.gov.au; s47E(d)

s47E(d)@dta.gov.au>

Subject: Correspondence from Minister Robert to the Prime Minister re Apple and Google Exposure Notification Framework [SEC=OFFICIAL]

OFFICIAL

Good afternoon

Please find attached correspondence from Minister Robert to the Prime Minister regarding Apple and Google Exposure Notification Framework. No hard copy to follow

This letter has been copied to the Minister for Health, The Hon. Greg Hunt MP and Minister for Foreign Affairs, The Hon. Marise Payne.

Kind regards

s22

A/g Departmental Liaison Officer
Office of the Hon Stuart Robert MP
Minister for the National Disability Insurance Scheme
Minister for Government Services
Parliament House, Canberra ACT 2600

M: s47E(d)

E: s47E(d)@dta.gov.au

OFFICIAL

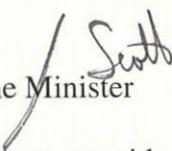
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**The Hon Stuart Robert MP
Minister for the National Disability Insurance Scheme
Minister for Government Services**

Ref: MS20-000022

The Hon Scott Morrison MP
Prime Minister
Parliament House
CANBERRA ACT 2600

Dear Prime Minister 

I am writing to provide an update on our work with Apple and Google on their Exposure Notification Framework (ENF) and its relationship to the Australian Government's COVIDSafe contact tracing application.

Our Government's centralised, government-led approach to contact tracing has helped to manage the spread of COVID-19 in Australia. This approach relies heavily on our world-class public health infrastructure and expertise. The introduction of the COVIDSafe app has complemented manual contact tracing conducted by trained health officials. This approach is underpinned by legislation and strong privacy and security controls to assure Australians that their information is being used sensibly and carefully, and only to further public health outcomes.

In the six weeks since its launch, more than 6.2 million Australians have registered for the COVIDSafe app. This represents one of the fastest uptakes of global tracing apps. The Digital Transformation Agency (DTA) continues to improve COVIDSafe's technology and operation, including greater accessibility and improvements to Bluetooth performance. The DTA is continuously investigating technologies that can enhance COVIDSafe, particularly Bluetooth performance.

On 20 May 2020, Apple and Google released the initial version of the ENF. Apple and Google claim that the ENF will improve Bluetooth performance by enabling a device's operating system to natively record close encounters rather than through an app such as COVIDSafe.

The DTA is working to validate this claim through testing of the Bluetooth functionality. Results of this testing are expected in the next week. These results will form one component of an overall decision on whether Australia should adopt the ENF to support our contact tracing efforts.

However, Apple and Google have indicated that the ENF's decentralised contact tracing model can only be adopted in its entirety (that is, the operating model changes must be adopted in addition to any Bluetooth improvements). ENF users are anonymous, meaning that close contacts cannot be identified and contacted by a health official directly. Instead, blanket device-generated notifications are used to alert close contacts to a potential exposure to COVID-19.

The decentralised nature of the ENF limits the ability of health officials to be able to identify outbreak clusters because the initial exposure source remains unknown.

The ENF is also subject to the opinions of Apple and Google, which are overseas corporations, to determine when the pandemic has ended for the purposes of shutting down the ENF, instead of taking a public health-led approach tailored to local conditions. This encroaches on the sovereignty of decision-making for democratically elected governments worldwide.

Adopting the ENF would mean Australia's proven approach to contact tracing in support of public health outcomes would need to fundamentally change. The ENF removes public health decision making from the sovereign purview of Australia's government and puts it squarely into the hands of two global technology corporations. It limits access for state and territory health officials to effectively manage the pandemic. It would require the Government to amend the underpinning legislation and reintroduce privacy and security risks that have already been addressed.

A change in approach could also seriously erode trust in Government's ability to provide a technology response to COVID-19 as it would be a fundamental scope change in the way that Australia has managed automated contact tracing to date.

The ENF would also significantly reduce our coverage in the Australian community. It provides significantly less device compatibility compared to COVIDSafe and at risk groups, such as elderly users and those from lower socio-economic communities, will be affected most.

All accumulated 'close contact' data on user phones would be lost, creating an additional vulnerability in our efforts to contain COVID-19 in Australia. We risk losing much of what we have gained through our quick and deliberate actions, just as we are easing restrictions for Australians.

For these reasons, I consider that adopting the ENF model in its entirety is unacceptable to Australia, even if testing results show an improvement in Bluetooth functionality.

Australia is not alone in this regard. Other countries that have implemented sovereign technology to help solve tracing challenges associated with COVID-19 are in the same position.

As foreshadowed with your office, I propose to chair an international Ministerial-level meeting in the coming weeks to reach a joint position in response to the Apple and Google ENF. It will include a selection of countries who, alongside Australia, were first movers in implementing sovereign digital responses to COVID-19.

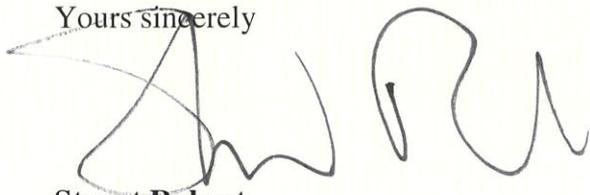
The aim of the meeting is to achieve a consensus decision to require that Apple and Google decouple the Bluetooth performance improvements from the overall ENF operating model to allow it to be harnessed within the sovereign approaches and tracing capabilities developed by individual jurisdictions. The countries I propose to meet with are France, India, Israel, Iceland, Poland, Cyprus, New Zealand, Norway, Singapore and the United Kingdom.

If successful, this would allow Australia, along with other countries, to leverage the technology benefits Apple and Google have proposed within the existing approaches, while still enabling the ENF model to operate in jurisdictions that do not have an existing contact tracing solution.

I will provide an update on the results of testing and the outcomes of the Ministerial meeting in the coming weeks.

I am confident these actions will help us to continue to manage Australia's response to COVID-19 and provide the best contact tracing solution for Australians.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Stuart Robert', written over the typed name below.

Stuart Robert

CC: The Hon Greg Hunt MP, Minister for Health and The Hon Marise Payne, Minister for Foreign Affairs

KEYS, Daniel

From: KEYS, Daniel
Sent: Friday, 12 June 2020 2:31 PM
To: s22 ; McBride, Paul; s22
Subject: RE: Apple and Google API Letter to MO [SEC=OFFICIAL]
Attachments: Apple Google ENF Exposure Notification Framework 3 June 2020.pdf

Thanks s22

Here is the slide deck that the DTA presented to their MO that informed their decision. I've also shared this with the office so it doesn't come as a surprise.

Cheers

Daniel Keys
Chief Information Officer and Chief Security Officer

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From: s22
Sent: Friday, 12 June 2020 12:36 PM
To: KEYS, Daniel ; McBride, Paul ; s22
Cc: s22
Subject: Apple and Google API Letter to MO [SEC=OFFICIAL]

Good afternoon Daniel and Paul

As you will be aware, there is significant activity occurring with the release of the new Apple and Google API.

This email is to give you a heads up that the DTA Minister will be writing a letter to the Prime Minister and our Health Minister on the DTA's position and plans for addressing the recent API's releases. I have not been privy to the contents of this letter, however I will assume it will bounce to you both at some stage. Currently the letter is with the DTA Ministers Office and it may be inbound at any time.

Current situation (as I understand it):

- DTA have a prototype of the new API and are undertaking numerous tests to see how it could support or enhance the current COVIDSafe application.
- The specific component DTA are interested in is an element called the Exposure Notification Framework (ENF). This element will significantly resolve Bluetooth connectivity issues (handshakes and interactions with other devices such as medical etc).

- DTA's position overall is to not adopt the API in its current state as it completely changes the business model of the COVIDSafe which would mean we basically start again (legal, policy tech). The preference is to work with Google and Apple to change the way the API is constructed, so they can pick and choose the elements of interest such as the ENF of interest.
- To do this I believe DTA have had some pushback from Google and Apple, noting it is all or nothing.
- DTA is now in the process of engaging with numerous countries on this specific issue, and will be establishing a coalition of the willing to begin placing international pressure on Google and Apple to work through a change where all benefit.
 - Note feedback from international engagement has suggested Australia is seen to be the world leader in such a capability and they are looking at us for advice.

I will advise when any further developments are in hand.

s22

Director, Business Architecture and Delivery
Delivery Manager COVIDSafe Health Portal

National Incident Response Division

Department of Health

s22

Google/Apple Exposure Notification Framework (ENF)

Discovery Phase - May 2020

What are Google and Apple introducing?

Phase 1

- On 20 May 2020, Apple and Google introduced new 'exposure notification APIs' that use the Bluetooth capability on devices to support contact tracing.
- The feature was introduced in the most recent version of iOS (13.5x) and requires an authorised government app to take advantage of the feature.

Phase 2

- Over the coming months, Google and Apple will be making changes to their underlying operating system to include the exposure notification capability as a native function.
- This means users will not necessarily need a Government contact tracing app on their device to be notified of a close contact.

We want ENF's improved Bluetooth connectivity

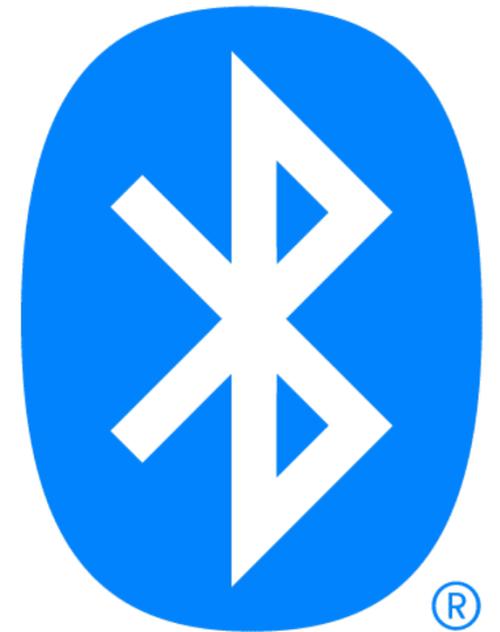
The major benefit of the ENF is a promised Bluetooth performance improvement, we would like access to that improvement without needing to adopt the whole ENF.

While Apple/Google have promised this improvement to us, we have been unable to validate their claims and compare against the significant Bluetooth improvements we have already made in COVIDSafe over several releases.

Bluetooth Performance Risk

The ENF does not provide data about Bluetooth performance to our developers in a way that allows easy comparison between the ENF and COVIDSafe. We are working with Apple/Google to finalise a prototype to undertake testing. Preliminary results will be available by the end of next week. Further real-life testing will also be required.

If testing does not show the promised Bluetooth performance improvements, the ENF could generate less encounter data than COVIDSafe. Additionally, if the Bluetooth improvements are marginal compared to COVIDSafe, we would need to consider whether adopting the ENF is warranted given the effort and process change it causes.



The ENF will reduce device compatibility

Adopting the ENF will mean less device compatibility compared to COVIDSafe. This means less Australians will be able to participate contact tracing. The groups most likely affected will include at-risk parts of the community, such as elderly users and those from lower socio-economic communities.

Apple

COVIDSafe is currently backward compatible to iOS version 10 and the iPhone 5s. The ENF is only compatible with iPhone 6 or later devices running the current iOS version 13.5 (released on 20 May 2020) or above. Apple has advised that the uptake of version 13.5 has been slightly slower than usual but have not confirmed actual rates.

Android

Android users will be able to access the ENF if they are running v6.0 or later, currently covering 87% of Android users. COVIDSafe supports greater backward compatibility to Android v5.1, currently covering 98% of Android users.



The impact of adopting the ENF is significant

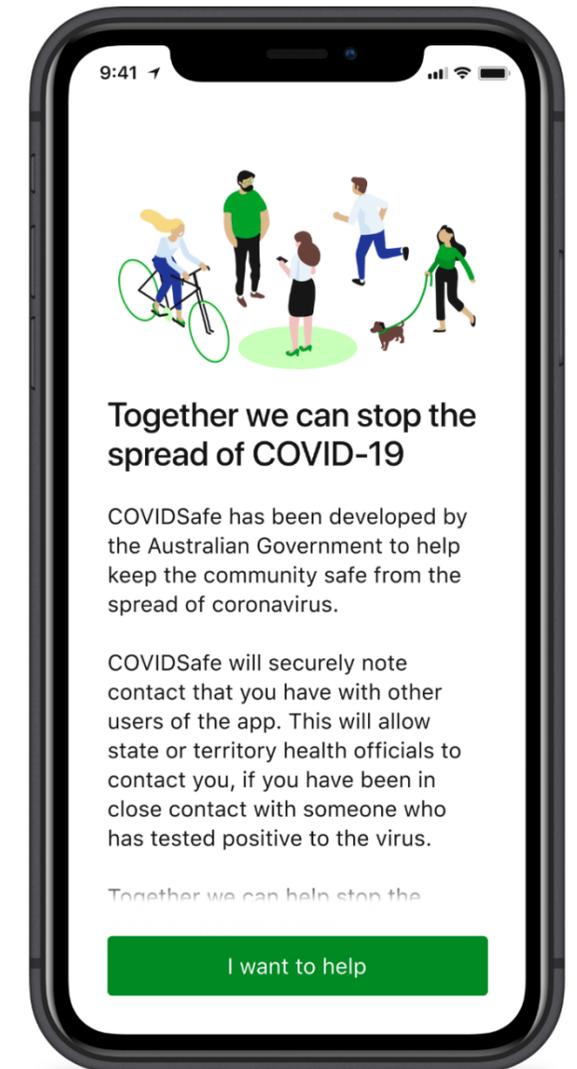
Our approach to contact tracing would fundamentally change.

Adopting the ENF would mean revisiting decisions that underpin our current contact tracing model supporting public health outcomes. The decentralised ENF model limits access for State and Territories officials to effectively manage the pandemic.

Patient to Patient tracing and identification of an infection source are not possible under the ENF.

The ENF maintains encounters for 14 days (compared to 21 days for COVIDSafe), allowing a shorter time window to track infection exposure after a positive test.

The algorithm defining a close contact is managed on the phone. If the Bluetooth performance improvements do not eventuate, there is no way health officials can compensate. By uploading the raw encounter data and running the algorithm in the health portal, COVIDSafe allows health officials to apply their knowledge and discretion to triage high risk cases including the elderly or an infection cluster.



The impact of adopting the ENF is significant

All contact data collected to date would be lost.

This means Australia's 21-day contact tracing data pool needs to be rebuilt. The lost encounter data would be a vulnerability in our efforts to contain coronavirus.

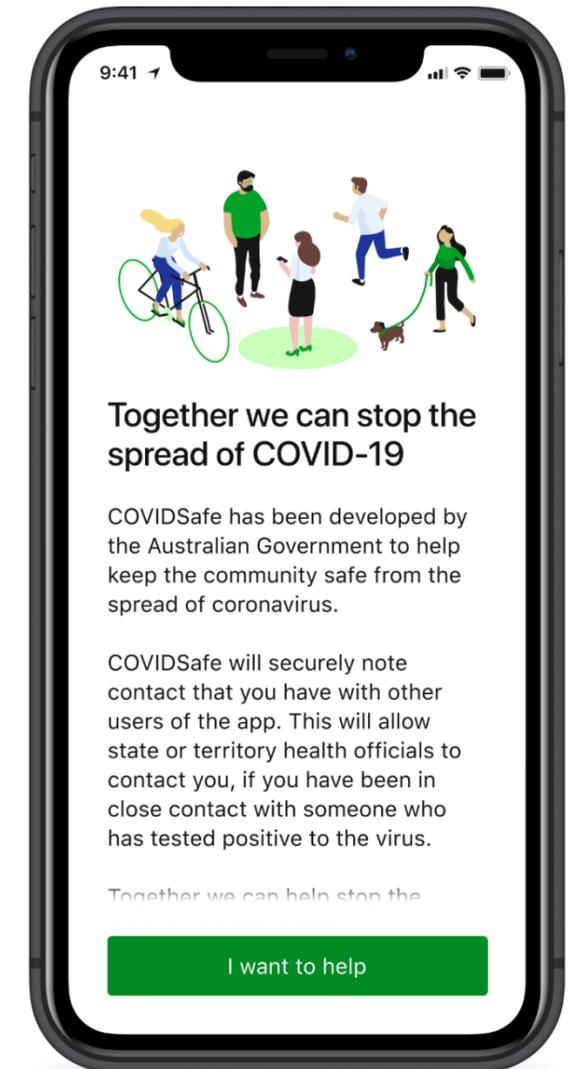
A new Privacy Impact Assessment (PIA) would be required and legislative amendments may be needed.

The implementation of the current PIA and legislation represented may weeks of work, parliamentary scrutiny and working with the OAIC on privacy concerns. All of this work would need to recommence if the ENF was adopted.

Security and privacy risk would be re-introduced.

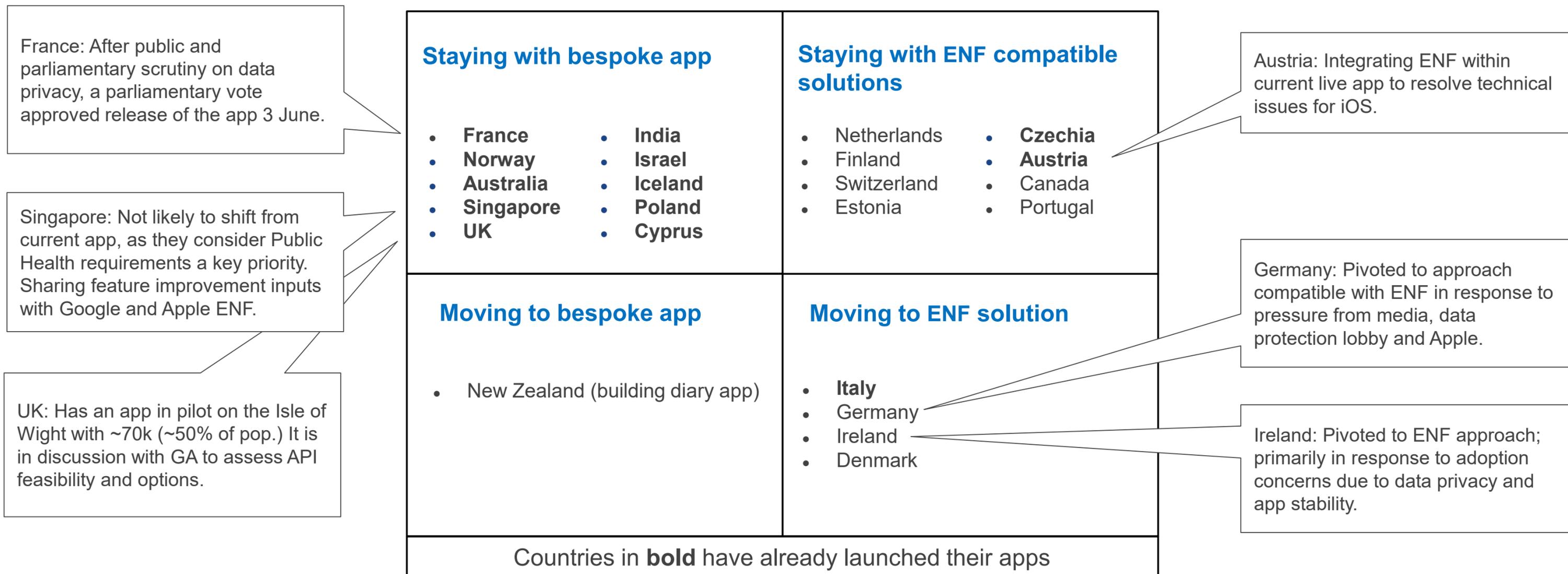
ACSC have advised the ENF would reintroduce privacy and security risks that have been overcome in COVIDSafe as part of the recent encryption (crypto) update in Release 4.

This will re-expose vulnerable users to potential malicious attacks under the ENF.



Worldwide adoption of the ENF is mixed

Ireland, Germany, Italy and Denmark recently moved from building a bespoke application to the ENF. A number of other countries are engaging with Apple / Google to test how the ENF may integrate with their systems and processes.



Note : Bespoke apps refer to app making bespoke use of Bluetooth radio or other processes for contact tracing as opposed to GA-API for Exposure Notificatio

Next Steps

Testing

- We have integrated with the Apple API and expect to integrate with the Google API shortly. This will allow prototype testing against the ENF framework next week to assess the Bluetooth performance improvements against COVIDSafe.

Further conversations with Apple and Google are required

- Access to the Bluetooth improvements in the ENF may enable further performance improvements to COVIDSafe.
- It is worthwhile to continue discussions with Apple / Google to determine if that is possible without needing to adopt the entire framework and the subsequent impact that would have on the national coronavirus response.