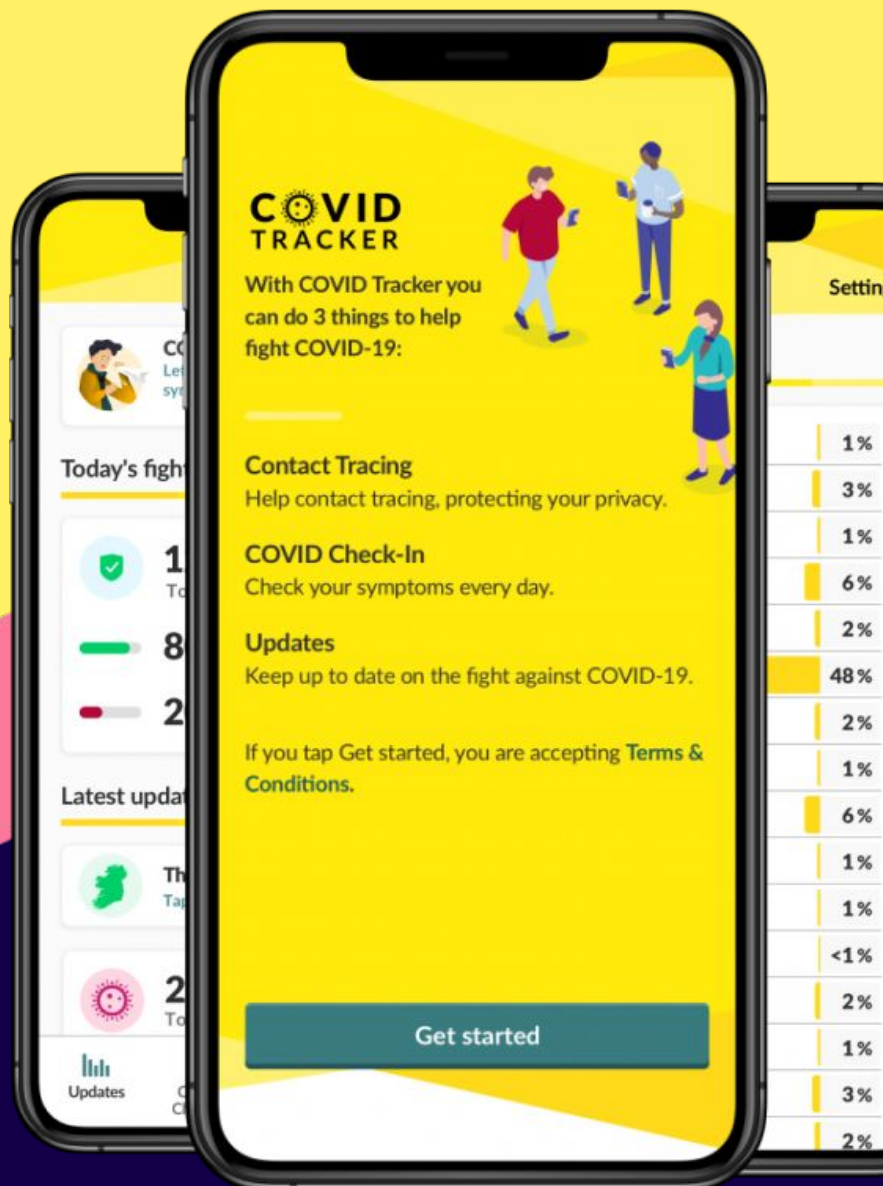


# Launching a Public Health App Within 3 Months

Discover the HSE's story of building the most successfully deployed contact tracing app.





**“NearForm have proved themselves to be a reliable and responsive company working with the HSE team to deliver the COVID Tracker app.**

**“It was essential for such an important national project to have a partner that took privacy, security and performance so seriously.**

**“The timeframe was ambitious for a project of this scale and NearForm responded exceptionally well to the challenge.”**

**Fran Thompson, Chief  
Information Officer – Health  
Service Executive**



# Helping People to Stay Safe

## HEALTH SERVICE EXECUTIVE: CASE STUDY

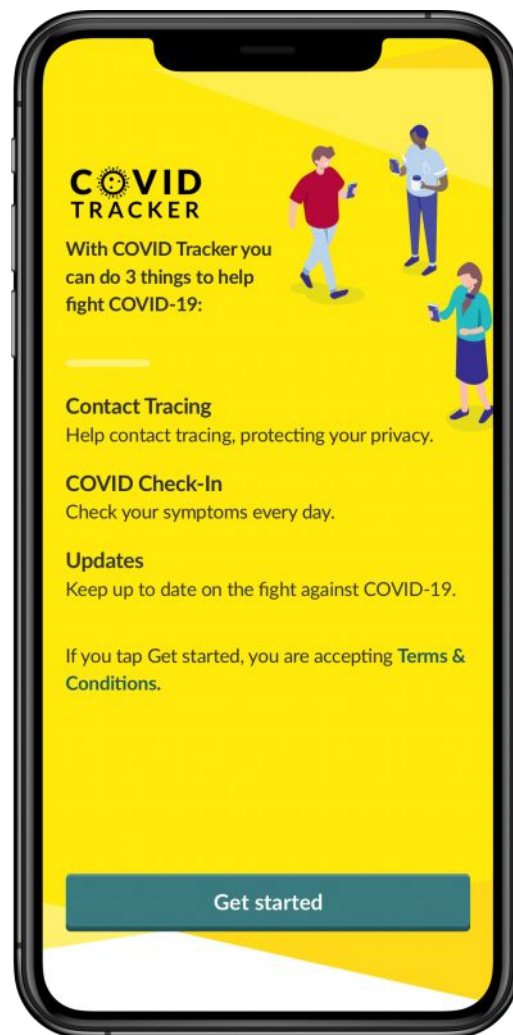
### How NearForm helped build the gold-standard COVID-19 contact tracing app within 3 months

#### THE STORY

Responsible for the provision of public health services for all people living in Ireland, the Health Service Executive manages a varied range of programmes and services across the country, working in close partnership with the Department of Health and other agencies. Additionally, the website hse.ie provides important resource links, information and health advice for the Irish public.

As the COVID-19 pandemic swept the globe and hard-hit countries across Europe took increasingly bold measures to 'flatten the curve', the HSE explored new tools and resources to help manage the disease and bolster the health system in Ireland.

The use of existing Bluetooth technology in smartphones to support contact tracing — considered one of the most important activities for controlling the spread of coronavirus — emerged as a potentially life-saving option. So the HSE began looking for a partner to develop a contact tracing app for Ireland, one that would be reliable, secure and easy for the public to use. And it needed to be built in just weeks.



#### Helping you to stay safe and protect each other

- **Contact tracing**
- **Symptom tracking**
- **Latest information and updates**

# Helping People to Stay Safe

## HEALTH SERVICE EXECUTIVE: CASE STUDY

### How NearForm helped build the gold-standard COVID-19 contact tracing app within 3 months

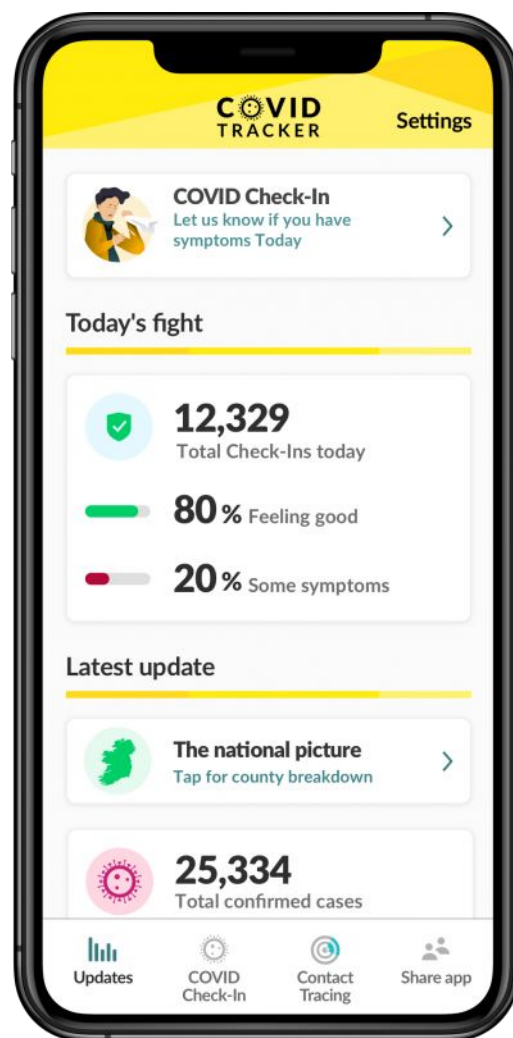
#### THE KICKOFF

The sun was shining the afternoon of Sunday, 22 March, 2020 when NearForm got a call from the HSE. They wanted to build a contact tracing app for Ireland and had heard we have the capability and expertise to develop one quickly and to the highest quality.

The team came together that same afternoon, setting up a virtual command centre and kicking off a fully remote, design-led workshop with the HSE and Department of Health to outline the requirements, scope and functionality of the app. We relied on the same tools we use every day as a dispersed company, collaborating and communicating using Zoom and Miro, as well as Sketch and InVision for prototyping.

A broad, collaborative team including NearForm, the HSE, Department of Health, Office of the Government Chief Information Officer (OGCIO), An Garda Síochána and more quickly identified the user needs and data concerns for the app, and got to work. It was widely reported that the code for Singapore's app would be open-sourced for other governments to replicate; however, that process was ongoing. The decision was made to start with a fresh build.

The team pushed hard into the night and Monday morning presented a prototype with a full user journey and onboarding sequence. We now had the basis of a working app that could be scrutinised and tested.



# Helping People to Stay Safe

## HEALTH SERVICE EXECUTIVE: CASE STUDY

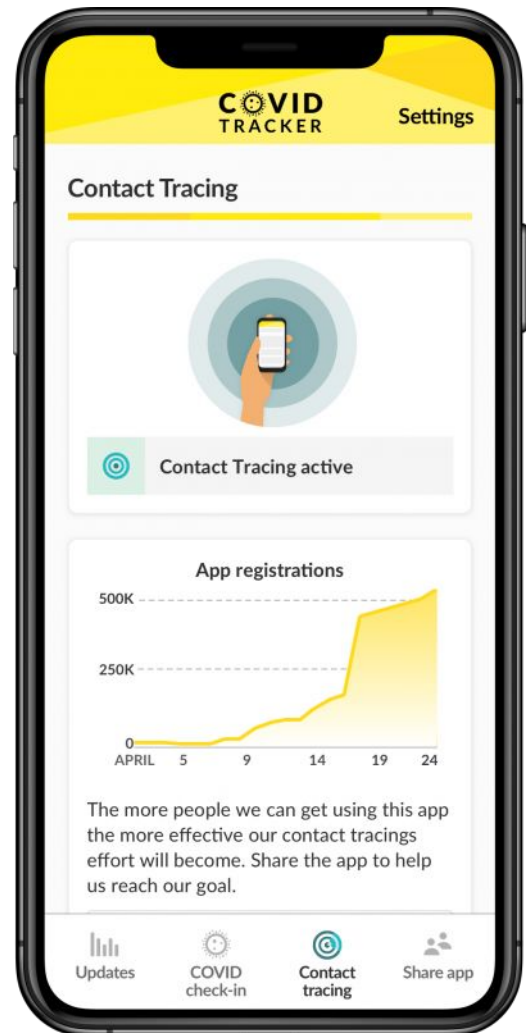
### How NearForm helped build the gold-standard COVID-19 contact tracing app within 3 months

#### THE PROCESS

From the start of our work with the HSE, NearForm followed the same design and development process we've honed through years of working with global enterprises. Collaboration was key, and communication was transparent and constant.

Everyone across the broader team agreed that this app needed to be built quickly, but more importantly it needed to be built right. Protecting the privacy and anonymity of users was paramount, and the reliability of close contact data was the focus. The app had to benefit the Irish contact tracing team and provide real support to the overall effort to protect Ireland's residents.

Like that of so many countries, the initial solution worked on the centralised data model, in which app data was stored in a central database. However, the team met with obstacles that could not be resolved, both technical and privacy-related. The Bluetooth proximity detection feature on certain smartphones would not work if the phones were locked, for example, while in a pocket or handbag. And the prospect of collecting and storing user data, even if it was anonymised, raised too many privacy concerns.



# Helping People to Stay Safe

## HEALTH SERVICE EXECUTIVE: CASE STUDY

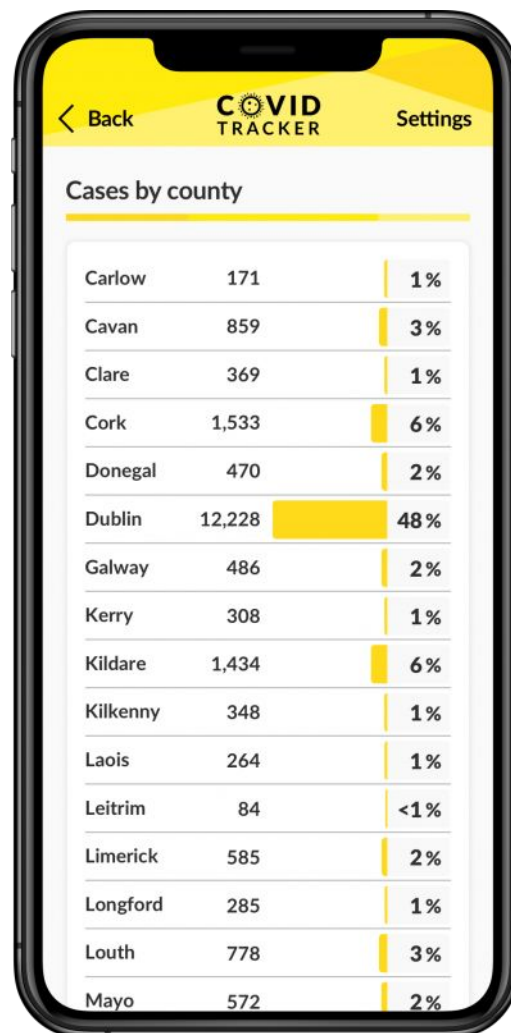
### How NearForm helped build the gold-standard COVID-19 contact tracing app within 3 months

#### THE PROCESS (CONTINUED)

When the team reached out to Apple and Google to try to find a way around the technical issues, we learned the two companies were coming together to create a solution that would address not just the tech but the privacy problems as well. Due to be released in May, the joint Apple-Google application programming interface (API) would allow governments and health authorities to build apps according to a decentralised data model and specifically enable Bluetooth proximity detection on locked phones as long as users had Bluetooth turned on.

The team decided to switch models and secured beta access to the new technology from Apple and Google. Moving as quickly as ever, we redesigned the user onboarding flow and created a new working prototype. Dublin-based quality assurance firm Expleo worked with the HSE and An Garda Síochána to conduct user testing of the app, focusing especially on testing the Exposure Notification System (ENS) within the Apple-Google solution.

Within three months of that first phone call from the HSE, the team had a secure, tested, user-friendly, reliable contact tracing app that worked and was ready to be deployed on a national scale.



# Helping People to Stay Safe

## HEALTH SERVICE EXECUTIVE: CASE STUDY

### How NearForm helped build the gold-standard COVID-19 contact tracing app within 3 months

#### THE SOLUTION

The COVID Tracker Ireland app is the most successfully deployed contact tracing app built on the decentralised model using the joint Apple-Google technology. In addition to enabling Bluetooth contact tracing on Apple and Android devices, the app also includes a symptom checker that lets users record how they're feeling each day and a national overview of how the virus is spread across Ireland.

User setup consists of four steps, and the app does not request access to any of the user's phone data. All contact data is stored in the app on the user's phone and is deleted after 14 days. Close contacts are recorded only when two phones running the app are within close proximity of each other for a minimum duration of time — this is currently within two metres for at least 15 minutes, but can be changed according to health authority guidelines.

Designed for ease of use by all demographics, the user interface is simple and clean, with minimal navigation and plain language. While people are encouraged to use the daily symptom checker, the app was built so that users could set it up and forget about it. If a user tests positive for Covid-19, they will be asked to share their app data with the national contact tracing team and given a one-time use code to upload that data via encrypted transfer.

The app's code has been open sourced and is [available on GitHub](#), along with a series of app design and development reports and documentation. Additional information on privacy and research, including a Data Protection Impact Assessment and Data Protection Information Notice are available on the [COVID Tracker app page of the HSE website](#).



**COVID  
TRACKER**



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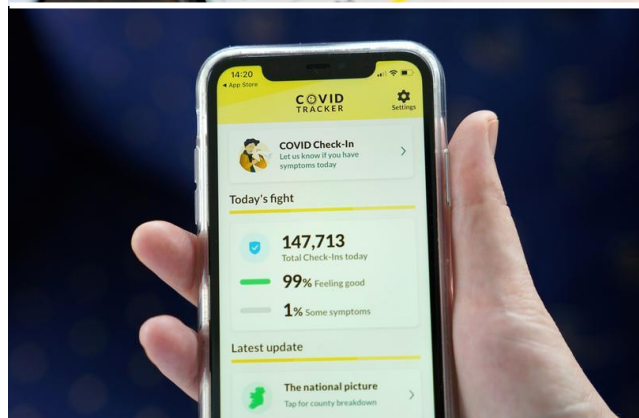
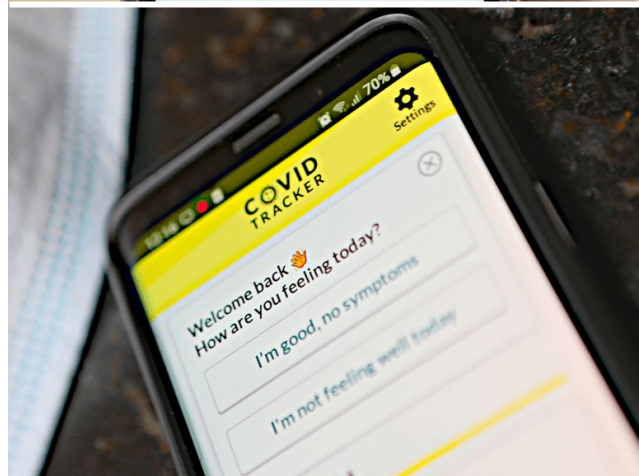
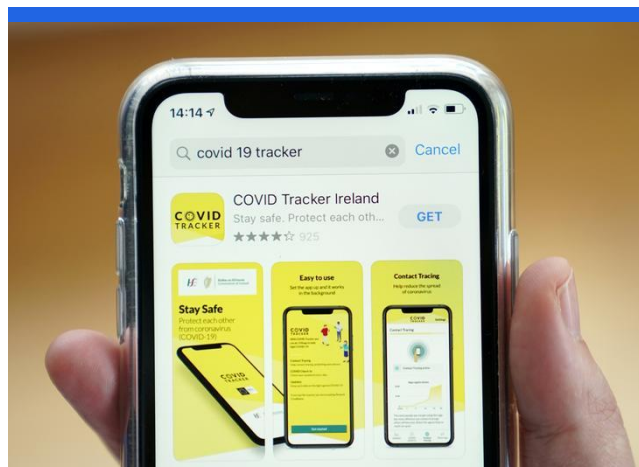
#### THE RESULT

Within 36 hours of the official launch, Ireland's COVID Tracker app had more than one million downloads, representing more than 20% of the population of Ireland and over a quarter of all smartphone users in the country. The speed and volume of adoption made it the most successful launch of a contact tracing app in the world and bodes well for the potential of the app to make a real impact in Ireland's effort against Covid-19.

Even beyond the technical achievements and successful deployment, the process of developing the COVID Tracker app tells a remarkable story of what's possible when talented, determined people come together to create something valuable and important.

An incredible cross-section of the Irish government, technical and scientific communities came together to inform and oversee the creation of this app, from the HSE and Department of Health to the Government Chief Information Officer, Behavioural Research Unit within the ESRI, Central Statistics Office, data protection officials, Science Foundation Ireland, Irish Army and many more.

NearForm are currently working with a number of other countries and jurisdictions to develop contact tracing apps that meet their unique requirements, proud to be able to contribute our skills and expertise to the global fight against coronavirus.







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