FINOS

Fintech
Open Source
Foundation

The Unexpected Story of NearForm

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NearForm Presenters
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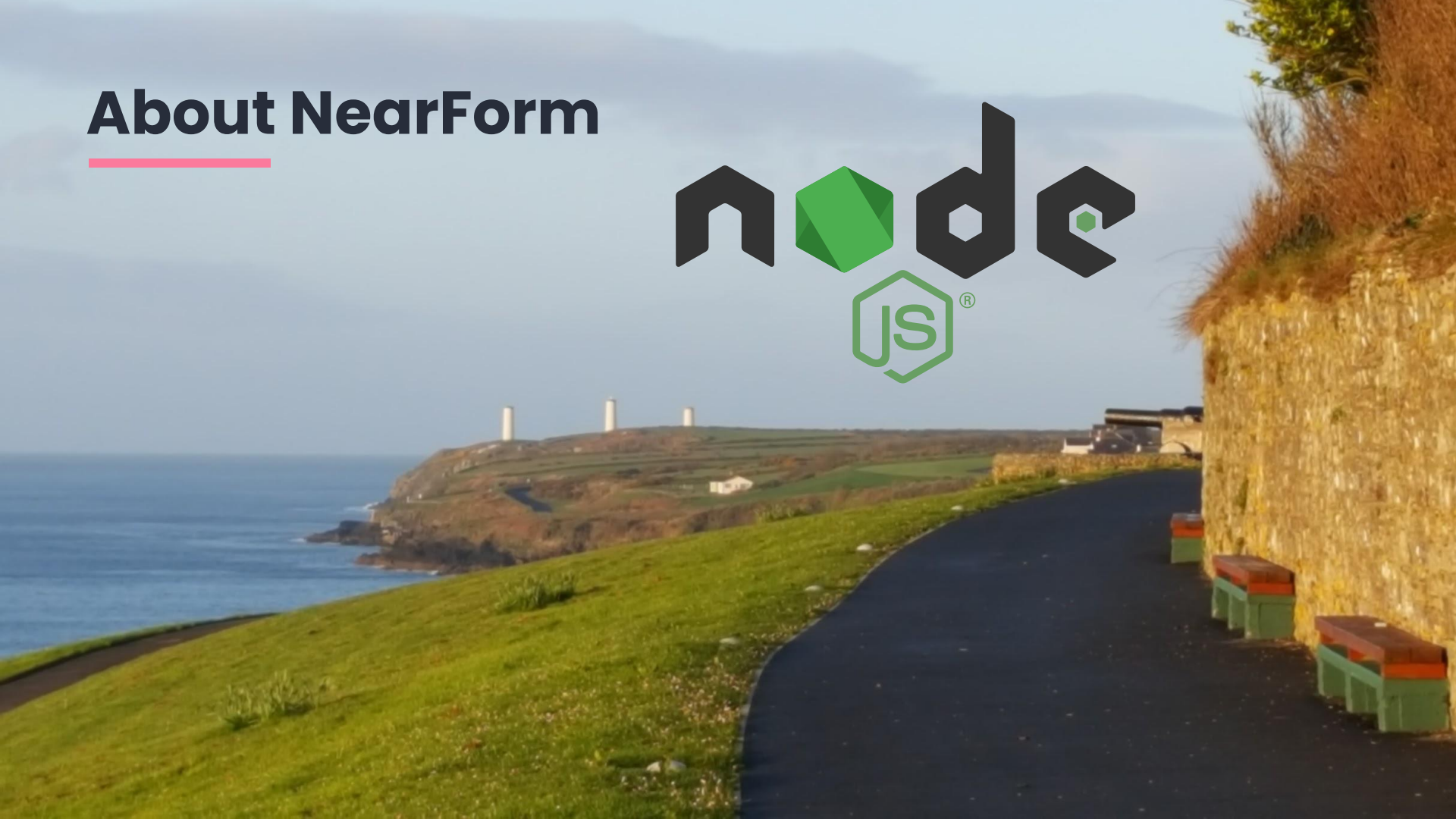
Ger O'Shaughnessy - Head of Propositions

August 2020

Presenters

GER O'SHAUGHNESSY
HEAD OF PROPOSITIONS
CONOR O'NEILL
CHIEF PRODUCT OFFICER

About NearForm



Example NearForm OSS

Clinic.js

Clinic.js is our suite of Node.js performance analysis tools. It includes Doctor, Bubbleprof, Flame and Autocannon. It uses TensorFlow.js ML to ensure data accuracy in noisy environments.

QUIC HTTP/3

The next version of HTTP is coming soon and NearForm Research is leading its implementation on Node.js. HTTP/3 is a major departure from HTTP/1.1 and HTTP/2.

Worker Threads

The worker_threads module enables the use of threads that execute JavaScript in parallel.

Workers (threads) are useful for performing CPU-intensive JavaScript operations.

InnerSource

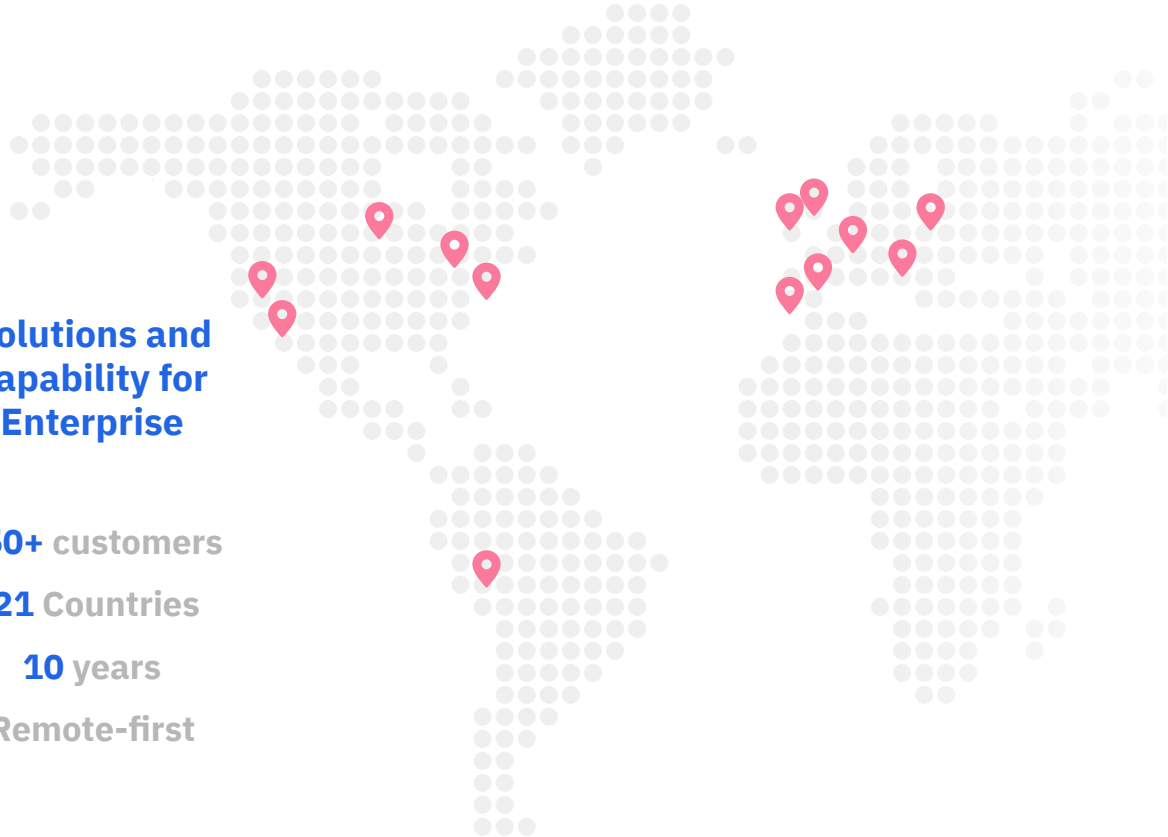
InnerSource enables organisations to uncover creativity, by removing obstacles for collaboration.

It involves:

- Cultural Inventory
- Building an InnerSource Visibility platform
- Engineering confidence into customers' Software Delivery Life Cycles

Why invest so much in OSS?

NearForm



Solutions and capability for Enterprise

150+ customers

21 Countries

10 years

Remote-first

TELUS
CONDÉ NAST
EY
Uber
priceline.com
BOSCH
CapitalOne
Florida Blue
Nutrien
THE LINUX FOUNDATION
Walmart
Moody's
ADP
dpd
News Corp
ATG
The New York Times
Saks Fifth Avenue
AMERICAN EXPRESS
ancestry

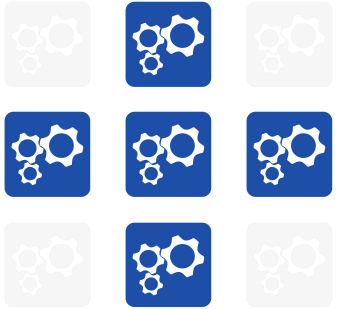
NearForm

Engagement models

Digital Enterprise

Digital Solutions

Strategic Guidance



Consult

Trusted Advisor
Technical Directors
Business Framing

Deliver

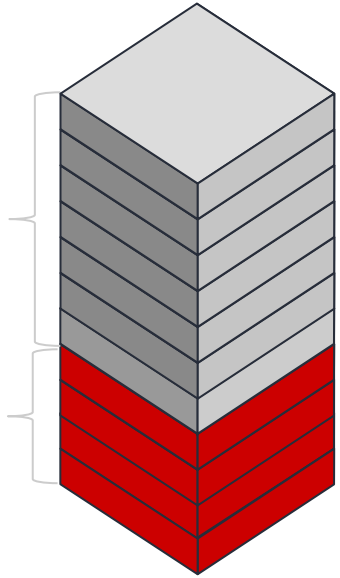
Research and Design
Accelerated Development
Deployment
Support

Transform

Accelerated Enterprise
Training and Capability
Strategic roadmap
Opensource .....

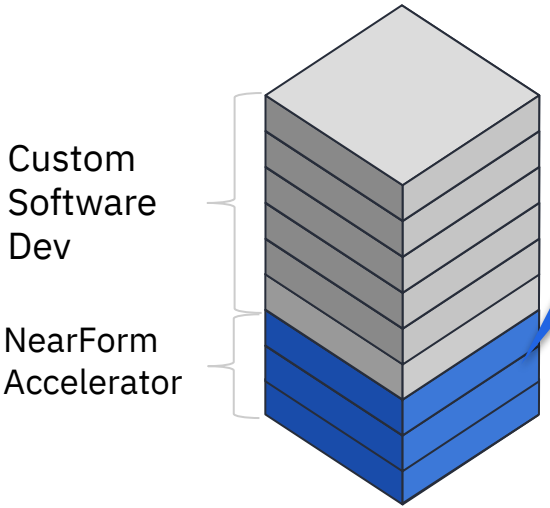
NearForm Accelerators: for Development Projects

Typical Project



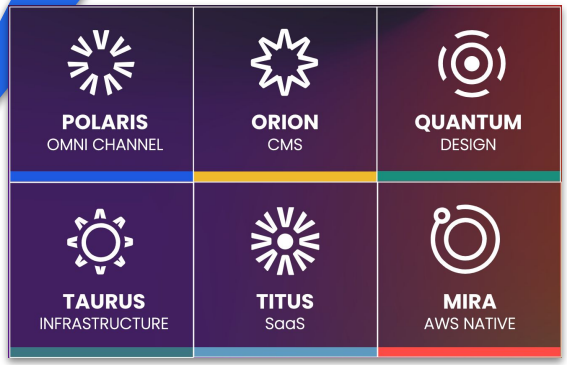
Tech choices, Tools, Environment Set-up, Learning, on-boarding,CI/CD set-up, etc.

Accelerated Project



Deploy Accelerator

Tech stack, tools, processes, documentation,CI/CD,archetypes, training, opensource



Polaris architecture

Release Channels

Developer Tools

- Documentation Tools - docsify
- Testing Tools - Jest & Cyprus
- Linter - ESLint & Prettier
- Bundler - Expo tooling
- Component Development - Storybook
- Security Tooling - (many tools)
- Package Management - Yarn

Application

- App Pages
- App Templates
- App Components
- Design Tokens
- UI Controls - Various React Native Components
- Routing - React Router
- Forms - Formik
- Localisation - I18next
- Native Capabilities - React Native
- State Machine - XState
- Css in Js - Styled Components
- Progressive Web App - Workbox
- REST Service clients - Fetch
- React Native Platform - Expo
- Cross Platform Mobile - React Native
- Cross Platform Web - React Native Web
- UI Framework - React
- Development Language - TypeScript

Deployment

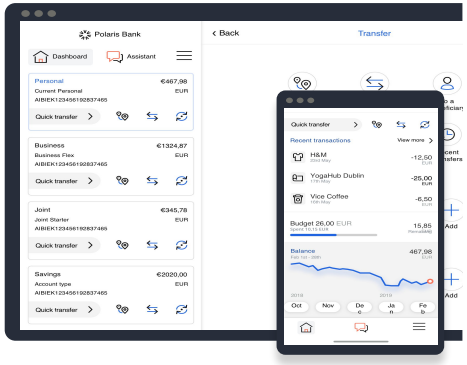
- Deploy Pipeline Tooling
- Automation & Security Tooling
- Continuous Integration System

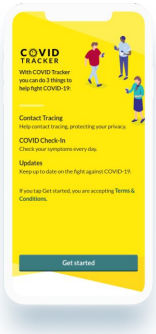
NearForm Accelerators: Impact

OPEN BANKING

NearForm

IBM



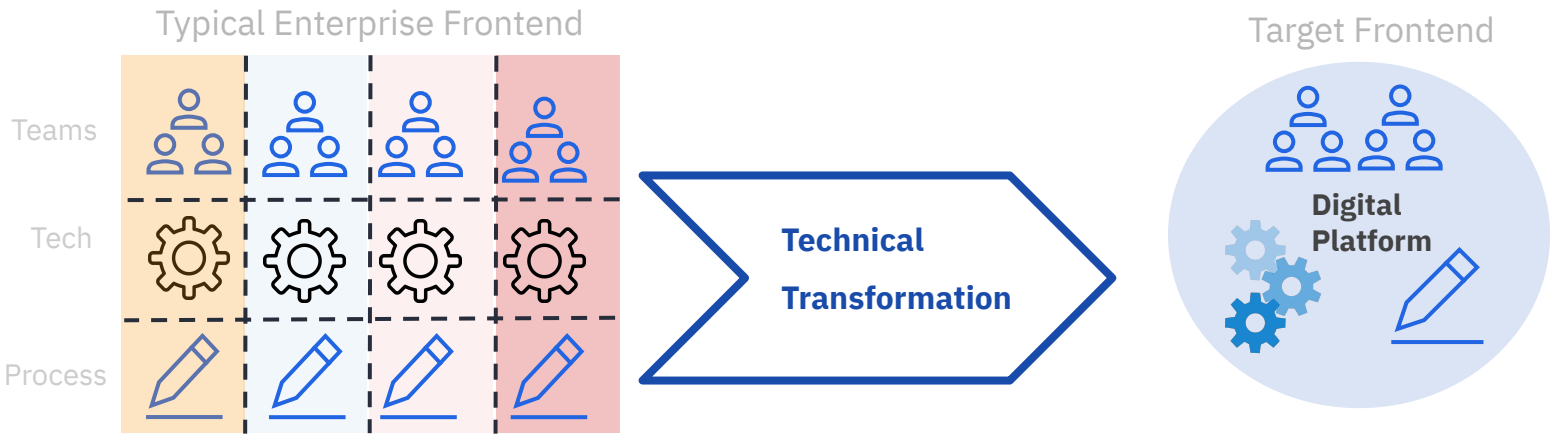


Scalability

Opensource

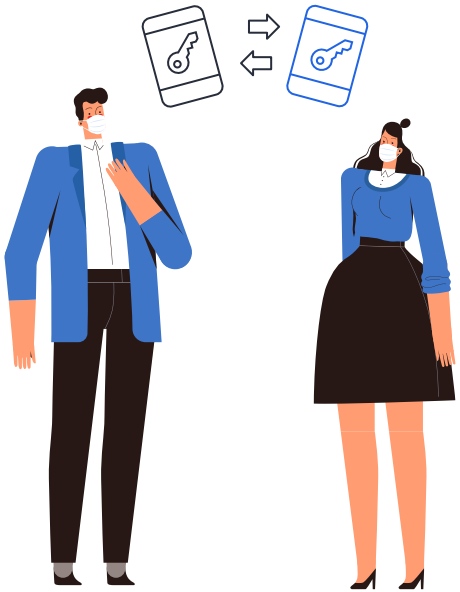
Platform Approach

NearForm Accelerators: Digital platform



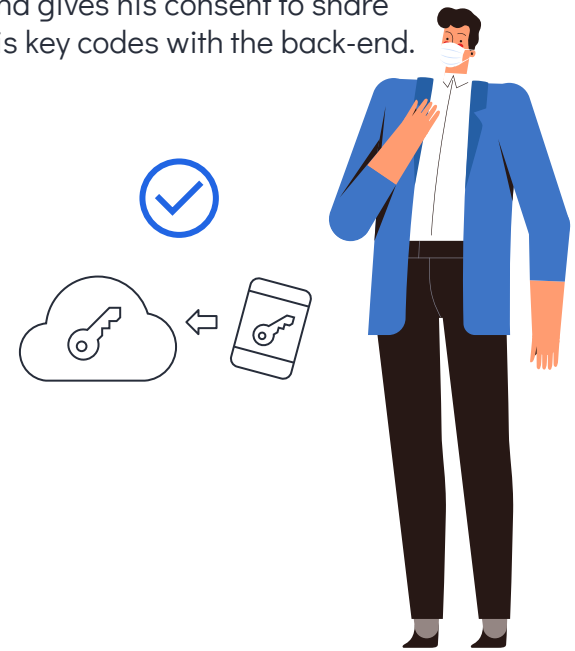
Contact Tracing / Exposure Notification

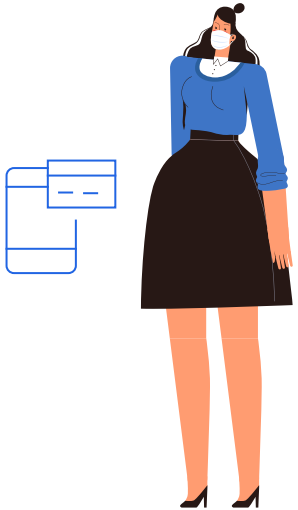
How Exposure Notifications Work



When A and B are near each other, their phones exchange anonymous key codes.

When A becomes infected, he updates his status in the app and gives his consent to share his key codes with the back-end.





The app on B's phone regularly downloads the infected keys to check for matching codes. It alerts her that somebody she has been near has tested positive.

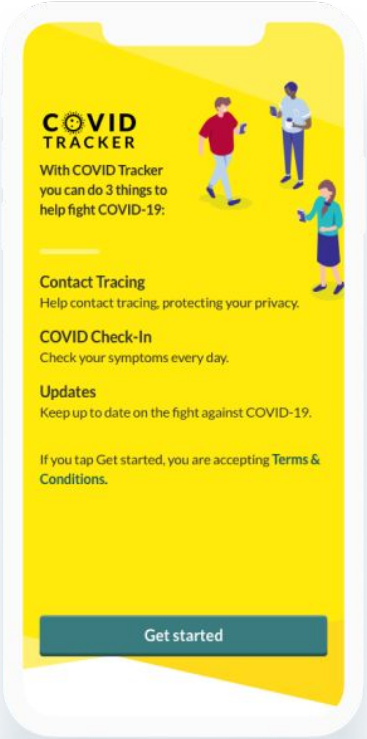
COVID Tracker App for Ireland

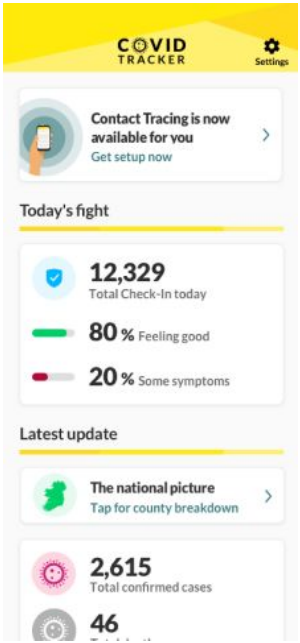
All-in-one application available in two languages - Irish and English.

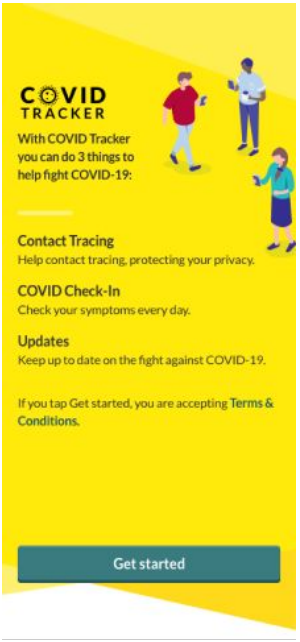
- Contact Tracing
- Symptom Check-In
- Information Updates

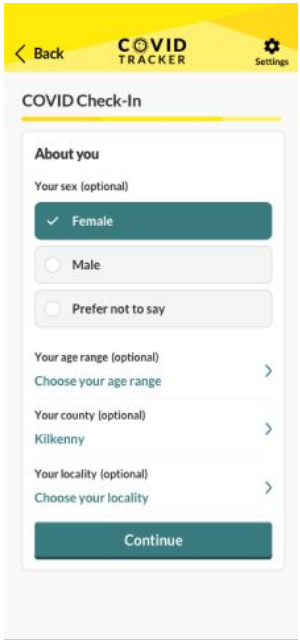
App installed by over 40% of adults in 4 weeks

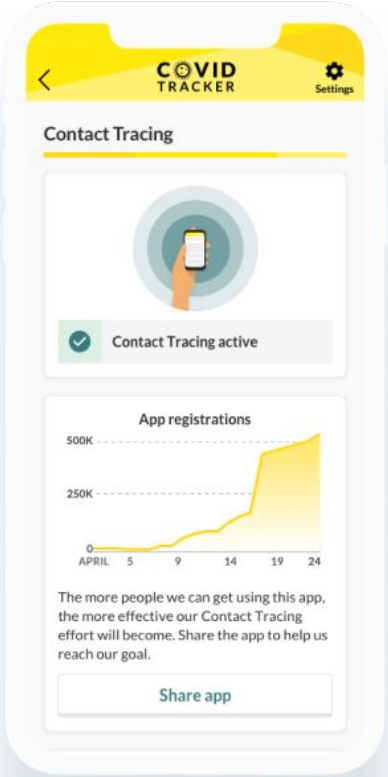
137 confirmed app exposure notifications in 4 weeks

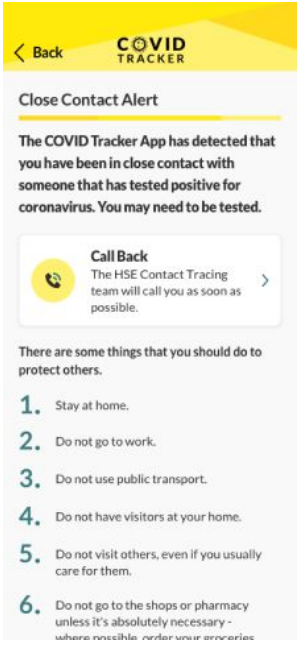



COVID TRACKER
Settings
Contact Tracing is now available for you
Get setup now
Today's fight
12,329
Total Check-In today
80 % Feeling good
20 % Some symptoms
Latest update
The national picture
Tap for county breakdown
2,615
Total confirmed cases
46


COVID TRACKER
With COVID Tracker you can do 3 things to help fight COVID-19:
Contact Tracing
Help contact tracing, protecting your privacy.
COVID Check-In
Check your symptoms every day.
Updates
Keep up to date on the fight against COVID-19.
If you tap Get started, you are accepting Terms & Conditions.
Get started


Back
COVID TRACKER
Settings
COVID Check-In
About you
Your sex (optional)
Female
Male
Prefer not to say
Your age range (optional)
Choose your age range
Your county (optional)
Kilkenny
Your locality (optional)
Choose your locality
Continue


COVID TRACKER
Settings
Contact Tracing
Contact Tracing active
App registrations
500K
250K
0
APRIL 5 9 14 19 24
The more people we can get using this app, the more effective our Contact Tracing effort will become. Share the app to help us reach our goal.
Share app


Back
COVID TRACKER
Close Contact Alert
The COVID Tracker App has detected that you have been in close contact with someone that has tested positive for coronavirus. You may need to be tested.
Call Back
The HSE Contact Tracing team will call you as soon as possible.
There are some things that you should do to protect others.
1. Stay at home.
2. Do not go to work.
3. Do not use public transport.
4. Do not have visitors at your home.
5. Do not visit others, even if you usually care for them.
6. Do not go to the shops or pharmacy unless it's absolutely necessary -

SOLUTION HIGHLIGHTS

Jurisdictions: 9 to-date

Population Coverage: 53 million by September 2020

Average Uptake: 40% of addressable population

Delivery Time: 4-7 weeks

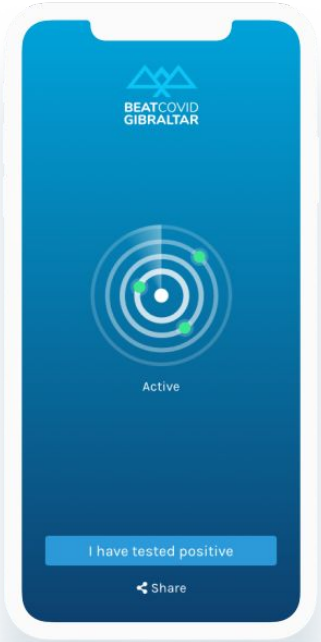
Average Security Issues: 0

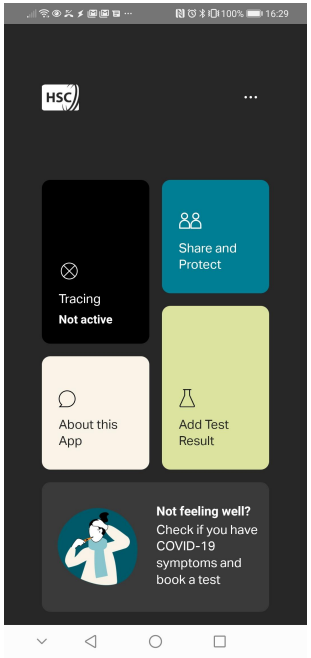
Interoperability: World's first

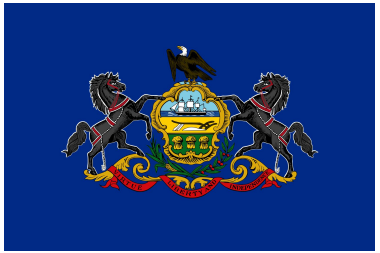
Open Source: Code to Linux Foundation Public Health

https://github.com/covidgreen

Other Jurisdictions







Full circle to Open Source

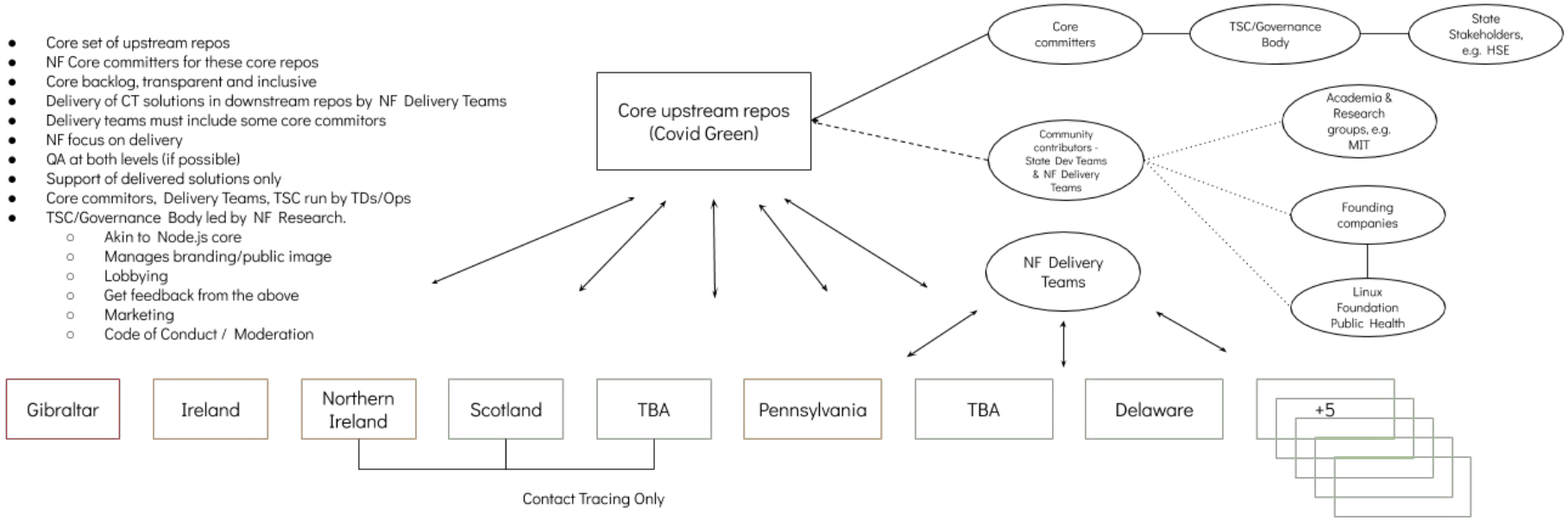
Benefiting even more from open source

NearForm worked with the Irish Government to donate the source code for their app to the not-for-profit Linux Foundation Public Health, for use by any PHA to help fight COVID-19.

COVID Green benefits from the inputs of many countries, states and vendors.

Scaling

- Core set of upstream repos
- NF Core committers for these core repos
- Core backlog, transparent and inclusive
- Delivery of CT solutions in downstream repos by NF Delivery Teams
- Delivery teams must include some core commitors
- NF focus on delivery
- QA at both levels (if possible)
- Support of delivered solutions only
- Core commitors, Delivery Teams, TSC run by TDs/Ops
- TSC/Governance Body led by NF Research.
  - Akin to Node.js core
  - Manages branding/public image
  - Lobbying
  - Get feedback from the above
  - Marketing
  - Code of Conduct / Moderation



Outro

Outro:
Questions we feel we have raised today....

(1) Open Banking - what is the feeling US/UK on what's next?

(2) Frontend Technical Debt - are Accelerator frameworks part of the answer?

(3) Covid Story - is this really an opensource coming of age story too?

Link to open banking page:
https://community.nearform.com/api-banking

Covid Green:
https://github.com/covidgreen

Q&A

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