Open source programming saves lives: Interview with Cian Ó Maidín, CEO of NearForm

Maddyness speaks to one of the team behind the COVID-19 track and trace app that has taken the world by storm, about how open source code has allowed for borderless tracing, data protection, and speed of delivery.

Temps de lecture : minute

29 October 2020

From the seaside town of Tramore in Ireland's County Waterford, Cian Ó Maidín oversees a team spanning 20 countries, united by a common goal – to prove that 'open source is art'. After years of remoulding the programming landscape from behind the scenes, his company NearForm has in many ways become the success story of Ireland's COVID response. As we over the Irish sea struggle on with our much-delayed and occasionally-derided contact tracing app, Ireland's equivalent has been adopted multinationally – and successfully.

Cian got a call from the Irish government on a Saturday near the end of March. "We stood up a team on a weekend; we built up a prototype in about 10 days," he tells me of the genesis of the app that looks set to crack borderless tracing. NearForm has made separate apps for Ireland, Northern Ireland, Scotland, Gibraltar and Jersey – and for several US states, including New York. The app always needed to work across Northern Ireland and the Republic – and on Wednesday it was announced that Scotland, Northern Ireland and Jersey's apps would become interoperable with each other. The US version of the app is also interoperable between the four participating states.

COVID Tracker has an active user base of over 1.3 million in Ireland – around 35% of the population over 16 years. This is well over the 15% uptake needed (according to an Oxford study Cian cites) to reduce infections by 15% and deaths by 11%. It has had its glitches - false positives and a battery issue, to name a couple - but as Cian emphasises, "it's important to take a long term view of this."

> *"It's not all 'whizz bang' and it's gone; it's a long-term thing, where over time the more people that install it, the more protection society gets."*

So how does one juggle data protection and efficacy, speed of delivery and long-time impact, to create a COVID-19 track and trace app? Taking things back to NearForm's roots, Cian tells me that this piece of software is a "manifestation of the value of an open source approach to doing things".

For the uninitiated, this approach means the source code is made available to everyone, for free. Pieces of code are perfected through collaboration - and always open to being updated further. Back in 2011 when NearForm started up, the team were involved in the development of the programming language Node.js - which let people to "use Javascript, the common language of the internet for building applications in the browser, on the server side."

Node.js - the first of many experiments in the open-source way of doing things by NearForm - is now incredibly popular, and NearForm itself has gone onto work with clients from Apple to Mastercard to Netflix. As an organisation it attracts people who love what they do, and who are able to work rapidly by standing on the shoulders of others. And why, personally, does Cian rate open source programming so highly?

"When I started working as a developer, all of the technologies that I would have been taught were created centrally by a big company - so it was kind of 'centrally controlled innovation', and there was a prescribed way of doing things. The thing about open source is that it's not centrally controlled at all. It's more like free market economics. Somebody has a good idea; some people start to see that that's a good idea; they start to contribute to a project and that project starts to become popular because it's the right technology and the right solution at the right time."

"And it's completely decentralised, so people from all over the world can contribute to this thing. From a personal perspective I really like it because there are no politics, no barriers; it's completely without borders and completely unbiased as a community. It's all about an idea, and contributing

to an idea – and I find that very attractive myself."

Being 'without borders' would come in handy when it came to creating COVID Tracker Ireland. Placing open-source in the context of NearForm's recent public health agenda, Cian says, "Another government can pick it up and they don't have to redo everything and start from scratch again."

"As they have other requirements or other things they want to add to that project, it becomes something that everybody else who is sharing it gets for free. The value of the technology has grown in a massive way government on government, project on project."

There were several other key principles – primarily maximising data protection and combatting powerlessness in Ireland's collective consciousness.

"Back in March, everyone had this slight feeling of powerlessness. It was horrible because this whole world was being destroyed around us and we had no ability to do anything about it. So we decided that we would need to try and empower people with the app." Cian says.

"We realised we needed to put more than just a contact-tracing thing into it. We put analytics into the app so users can figure out what infection rates are like where they're living. We did accelerated behavioural studies prelaunch, so we looked at the messaging and the data we were presenting to people – and really tailored that to what would make people feel more empowered."

Open-source analysis cropped up again via the privacy question. "The

data protection people were crying out for blood", Cian laughs. "and the decision was to engage ahead of the launch, to say 'there's nothing to see here'". He praises the Irish government for being the first to publish a Data Protection Impact Assessment report, and for in general being ahead of the curve with criticism. In terms of the programming,

> *"We published the source code to the app in advance of launch so the tech community pulled it apart. They were like 'wow, this is actually really well-written, this is bona fide technology'. They could look at the code and see that it was privacy-preserving".*

And, best of all, "People got behind it in Ireland, which was lovely. Irish people tend to do that in times of crisis – we tend to come together."

As things stand, the use of NearForm's COVID tech is steadily growing throughout Ireland and the world. There remains a need to reinforce the importance of track and trace technology to citizens, especially those whose trust in government is waning, and for Cian "we could probably do a better job on that from a public health and industry perspective".

For sure, COVID-19 isn't going anywhere, but while Cian stresses that tech like NearForm's isn't *the* solution, it's definitely going to be part of it.

Discover NearForm

COVID-19 has shaken up everyone's routine in a big way. Not everyone lives like <u>Mark Wahlberg</u>, but at Maddyness we're interested in the tips, tricks and rules the founders we interview live by – as inspiration and proof that there's no 'one way' to be a founder.

So, we're asking everyone we interview: do you have a ridiculous CEO-style morning routine? If not, tell us how your days normally unfold and the rules you live by.

"I have an office that I can go into that's really close to my house. Between feeding the dog and getting my kids out to school before I come in in the morning, the big things for me are… I actually bought a Peloton for my office during the pandemic, and I've started using a standing desk.

"I decided to get fit during the pandemic and every day, a part of my work is that I get a workout on the peloton, I stand up for most of the day and, besides the world falling apart around me, I'm gonna get stronger and fitter!"

Article by Cian Ó Maidín