

DEVELOPING MOBILE APPS FOR RESEARCH – CASE STUDY

#BrazilBreathing


JOSHUA WOODCOCK
RESEARCH IT

4TH APRIL 2019




#BritainBreathing



 **#BritainBreathing**

Getting started
Please sign in or register



Select to register as a new user ☒

Username

Password

Confirm password

By using this app you agree to the [Terms and conditions](#)

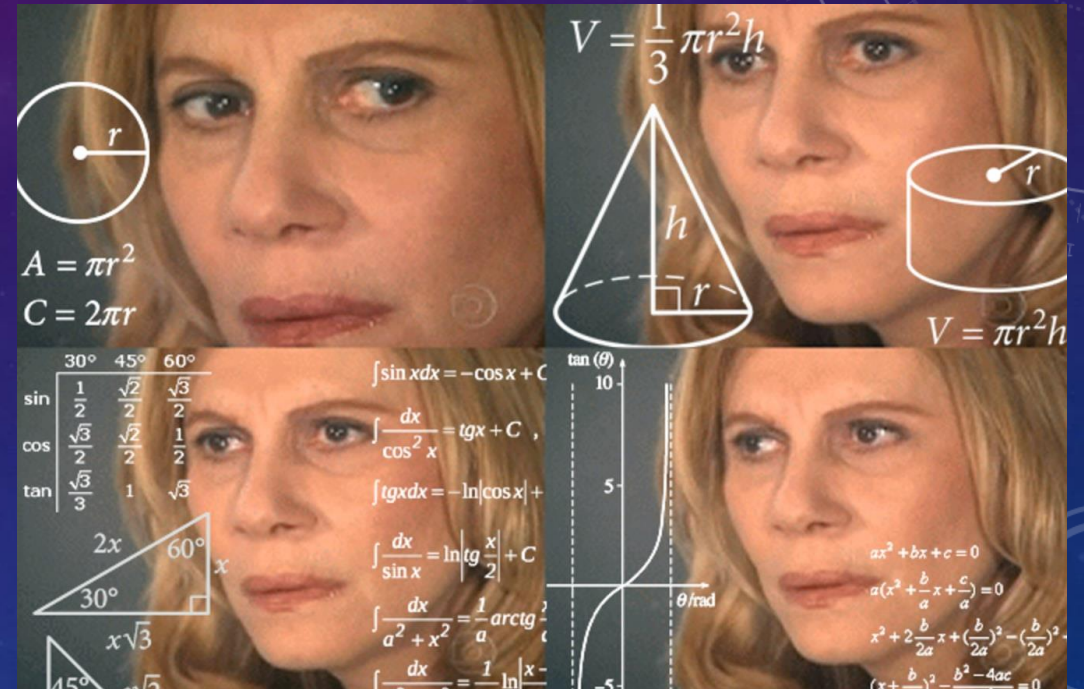
- Original App
- Citizen Sensors
- Released in 2017, using Ionic Framework
- Needed Updates
 - GDPR
 - Metadata

BRITAIN BREATHING UPDATE CHALLENGES

- No documentation by previous developer.
- Ionic Framework version outdated.
- How do we release the update?
- **Android** - Keystore for signing apps corrupted.
- **iOS** – convoluted testing process.

Issues arising were used to inform the design of the new Mobile Development Service.

More info in Adrian's talk.



BRAZIL BREATHING - PURPOSE

- New citizen sensors to - a new environment, different hemisphere, different climate
- Collaboration between University of Manchester and the Federal University of Technology in Paraná, Brazil.

MANCHESTER
1824

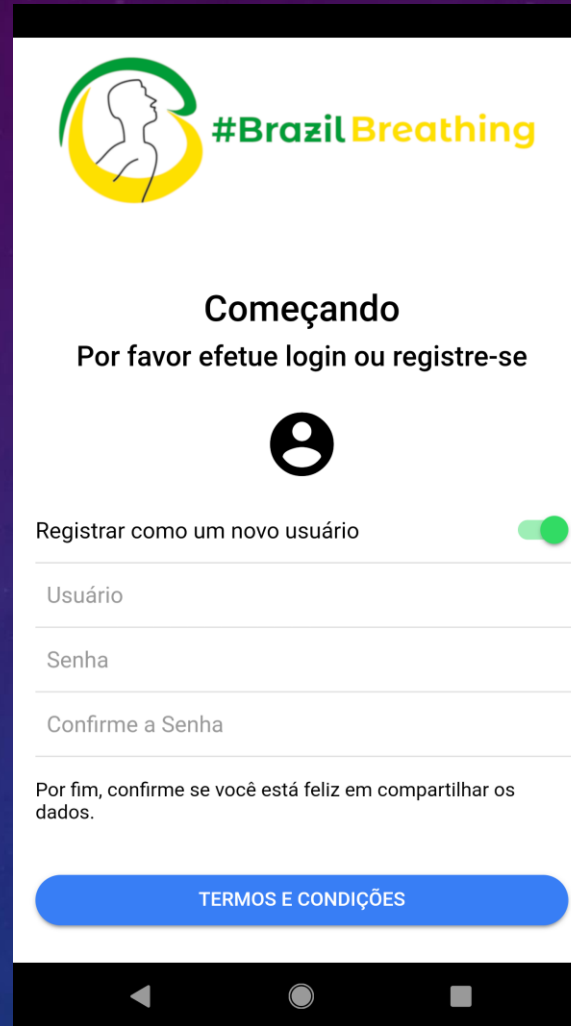
The University of Manchester

UTFPR
UNIVERSIDADE TECNOLÓGICA FEDERAL DO PARANÁ

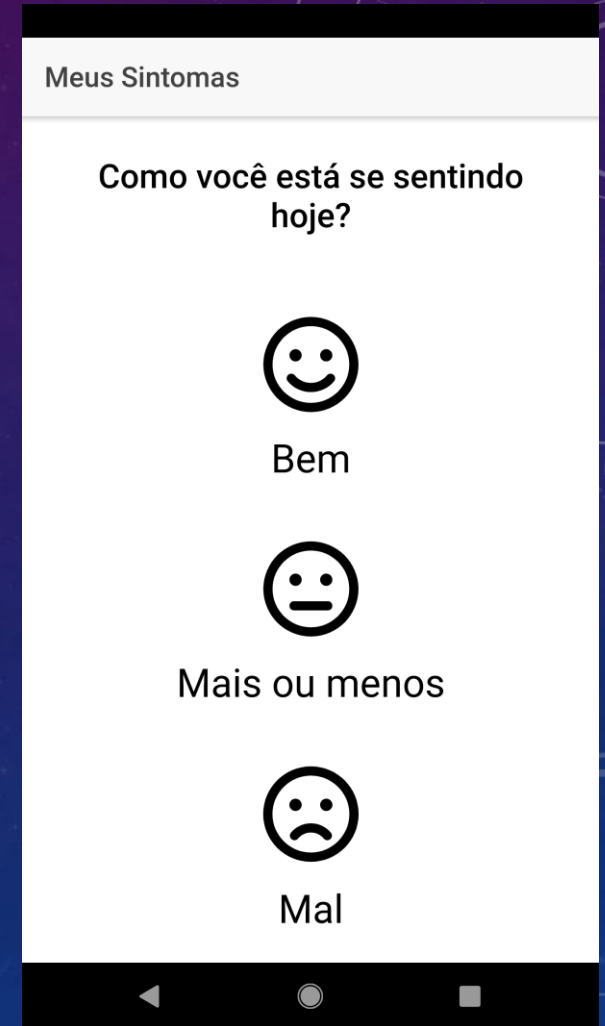


TRADUÇÃO

- App Localisation
- Language – Portuguese
- Icon changes, to reflect Brazilian colours.
- Registration changes.



The screenshot shows the login screen of the Brazil Breathing app. At the top, there is a logo featuring a stylized profile of a person's head in white, set against a green and yellow circular background, with the text "#Brazil Breathing" to its right. Below the logo, the text "Começando" (Starting) is displayed, followed by "Por favor efetue login ou registre-se" (Please log in or register). A black circular icon with a white person silhouette is centered below the text. Underneath, there is a toggle switch labeled "Registrar como um novo usuário" (Register as a new user), which is currently turned on. Below the toggle are three input fields labeled "Usuário" (User), "Senha" (Password), and "Confirme a Senha" (Confirm Password). At the bottom, there is a blue button labeled "TERMOS E CONDIÇÕES" (Terms and Conditions). The app is running on an Android device, as indicated by the navigation bar at the bottom.



The screenshot shows the symptom selection screen of the Brazil Breathing app. At the top, the text "Meus Sintomas" (My Symptoms) is displayed. Below it, the question "Como você está se sentindo hoje?" (How are you feeling today?) is shown. There are three options, each with a circular icon and text below it: a smiling face icon with the text "Bem" (Good), a neutral face icon with the text "Mais ou menos" (More or less), and a sad face icon with the text "Mal" (Bad). The app is running on an Android device, as indicated by the navigation bar at the bottom.

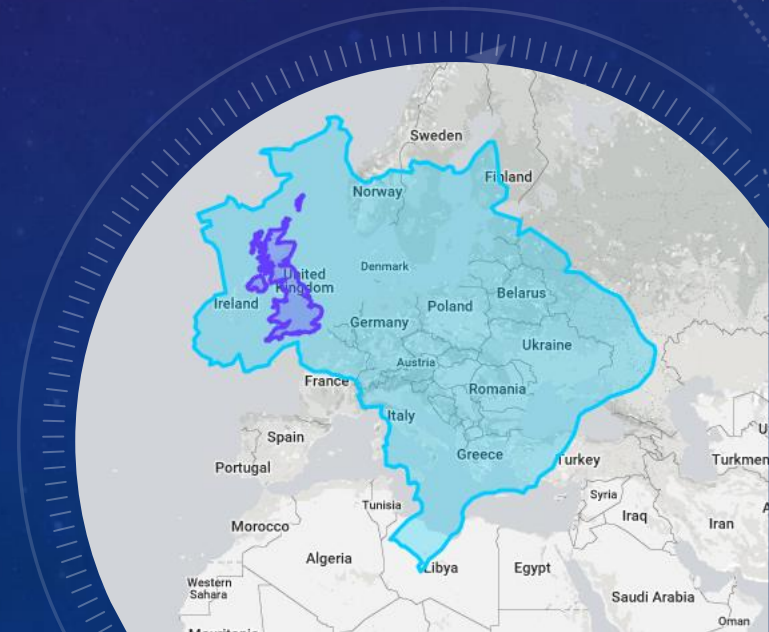


DEEPER UNDERSTANDING

- Added metadata points
- e.g. splitting up allergies and respiratory problems
- Track “How Are You Feeling?”
- Richer picture of research participants, and how they are affected separately by each type of symptom

MISSED CONNECTIONS

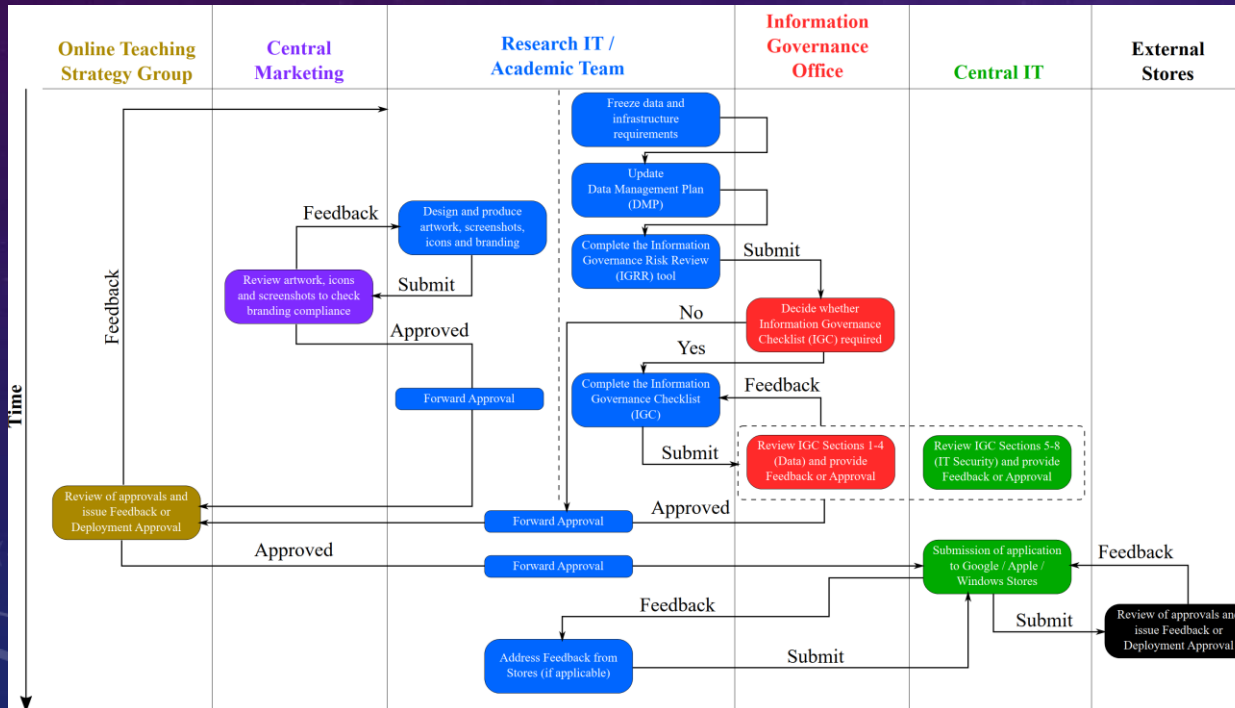
- Brazil is a large country, like, VERY LARGE.
- Diverse environments, cities of Rio de Janeiro, Sao Paolo to Araucaria rainforests of Paraná.
- Infrastructure isn't consistent across the entire country.
- Environmental differences
- Solution - store the data locally, then when there is a connection send all of them in order



BRAZIL BREATHING – RELEASE

Central IT Release Process

- Difficult to navigate, not geared towards research needs.



RIT Mobile Development Service

- Working to establish variations on the central process.
- Simpler, efficient, fit-for purpose.
- **Integral part of the new service.**

LESSONS LEARNT

- Maintenance Maintenance, Maintanance.
- Not Easy
- Battle with software and hardware.
- Release of app is time consuming., and often unaccounted for.

Lessons learnt have been central in defining the new Mobile Development Service.

Addresses previous issues in documentation, processes and tooling.



MANY THANKS

- For further information please contact:
 - adrian.harwood@manchester.ac.uk
 - joshua.woodcock@manchester.ac.uk
- Or:
 - its-research@manchester.ac.uk

Links

- thetruesize.com (comparing countries)
- pexels.com (free, high quality, stock photos)
- broadlygenderphotos.vice.com (stock photo library featuring images of trans and non-binary models)