



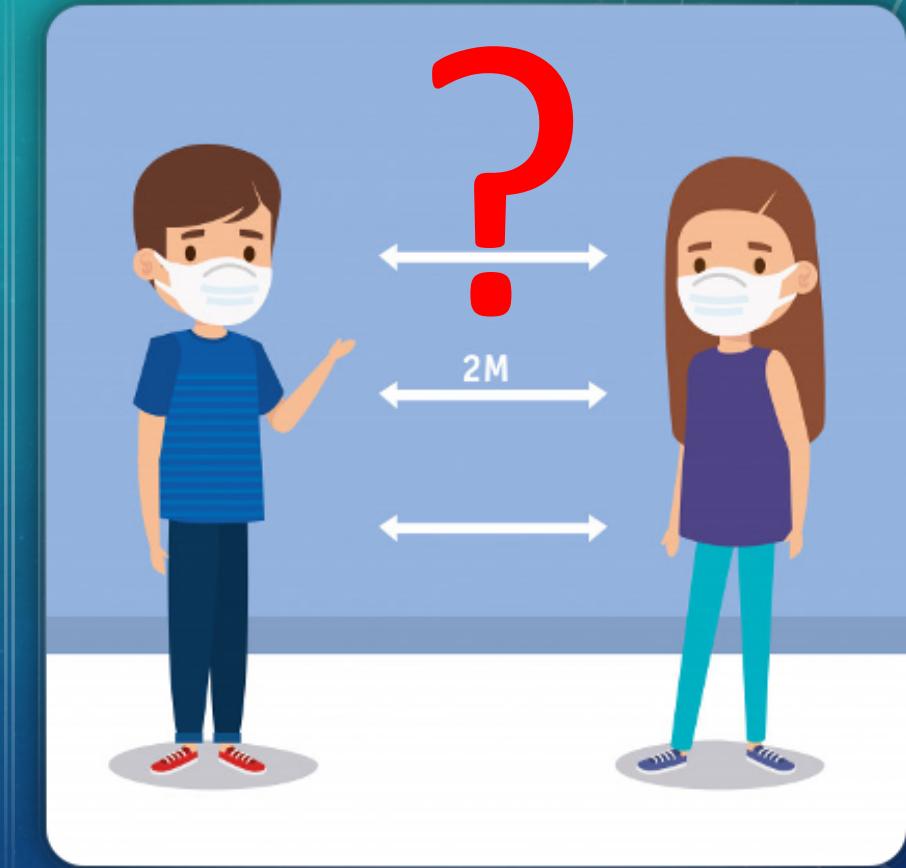
Safe Harbour

CHALLENGE AREA #3 – RECOVERY AND RETURN TO NORMAL



OUR CHALLENGE

- Some people don't care about **crowding** and **social distancing**, essentials for world's health recovery
- In the countries that have passed the peak of infection the rules to prevent a second Covid-19 wave **aren't always respected** because people think to have **already defeated the virus**
- What if there was a simple method **to report and see on a map** the places where the rules are not totally respected, in order to prevent the risk of infection?



OUR SOLUTION

Introducing **Safe Harbour**, the new **advisory** app for Covid-19

Features:

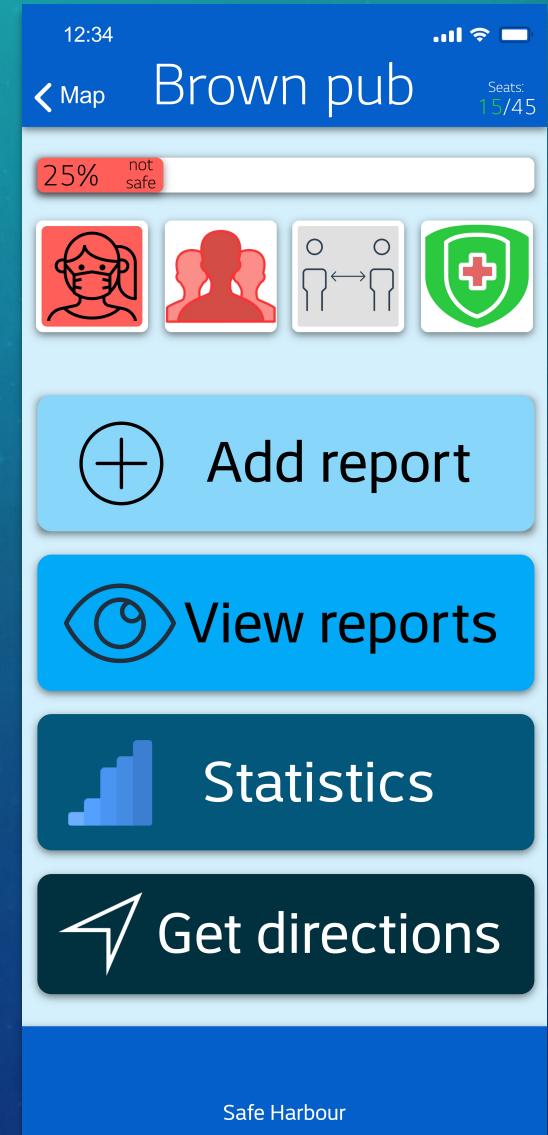
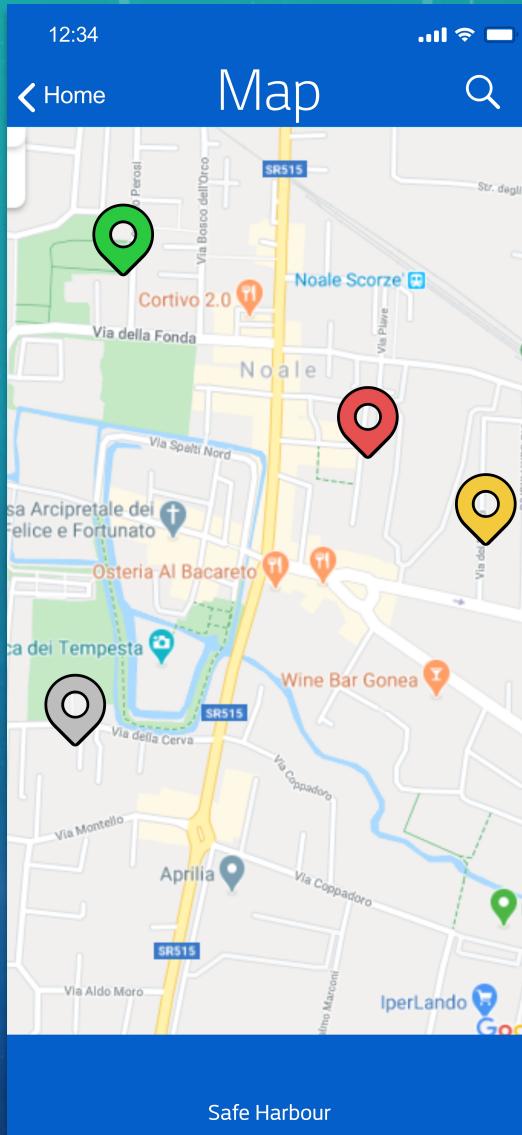
- Map
- Community
- Safeguard of people and activities
- Data analysis powered by Google and Firebase
- Simplicity and effectiveness



**Safe
Harbour**

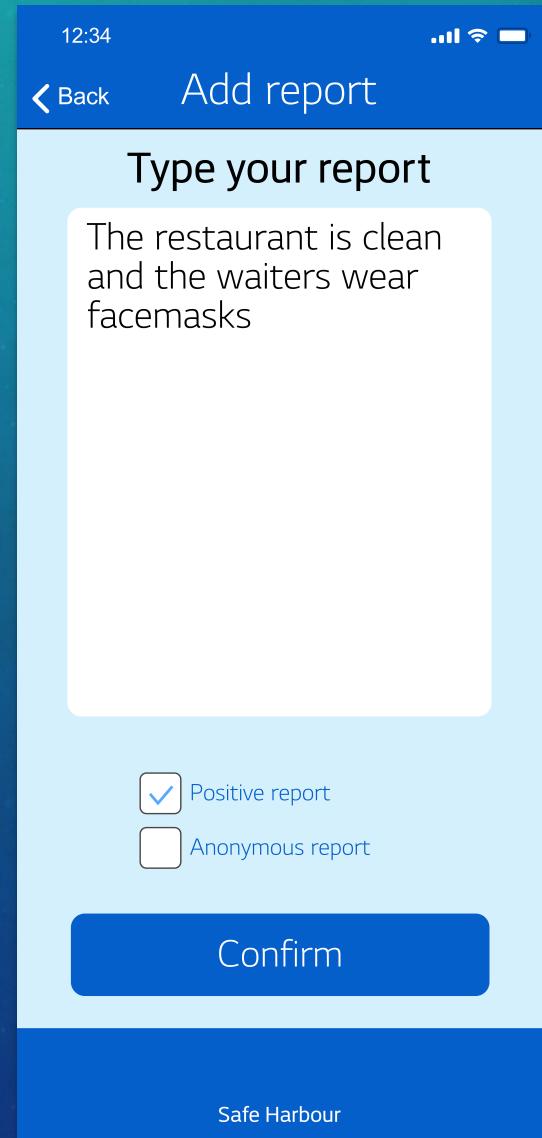
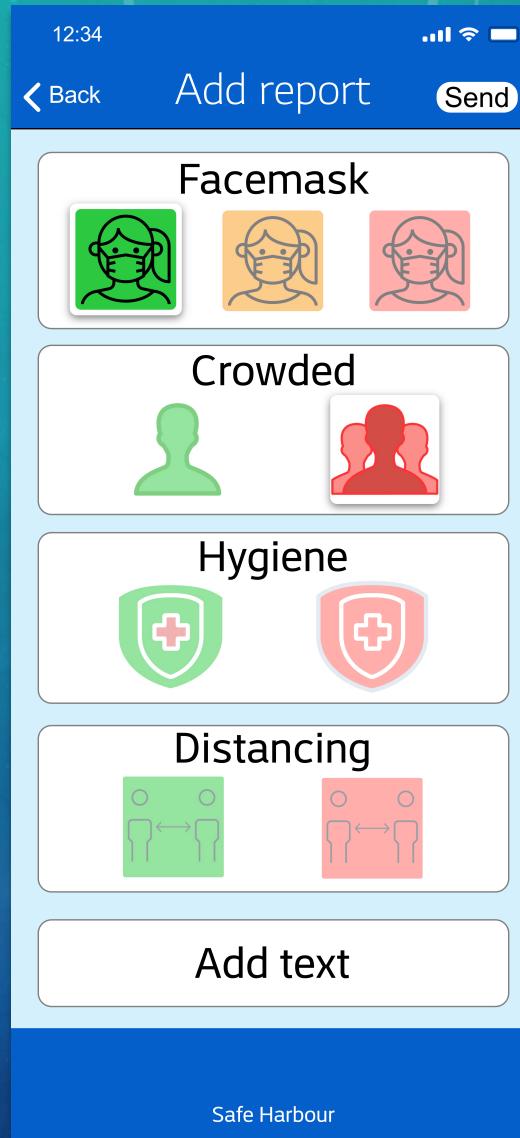
HOW DOES IT WORK?

- Log in with your Google account
- Tap a generic point or a specific place on the map
- Some brief **information** about the safety measures in the selected place are shown
- You can decide whether to add your personal **report**, view the comments of other users, check the **statistics** about the safety of the place or **get directions** to the location



HOW DOES IT WORK?

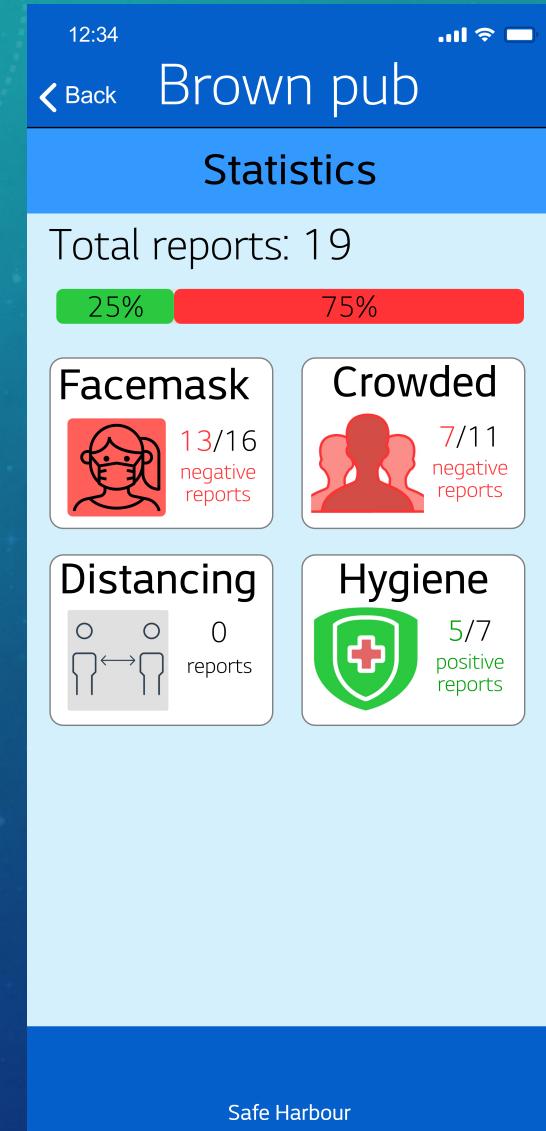
- To **add your own report** you can select from a list of common behaviours but you can also add a text comment
- The user can also decide if his review is a **positive or a negative** one
- Any report can remain **anonymous** but there is the necessity to log in with your account to add reports in order to **prevent from fake warnings**.



HOW DOES IT WORK?

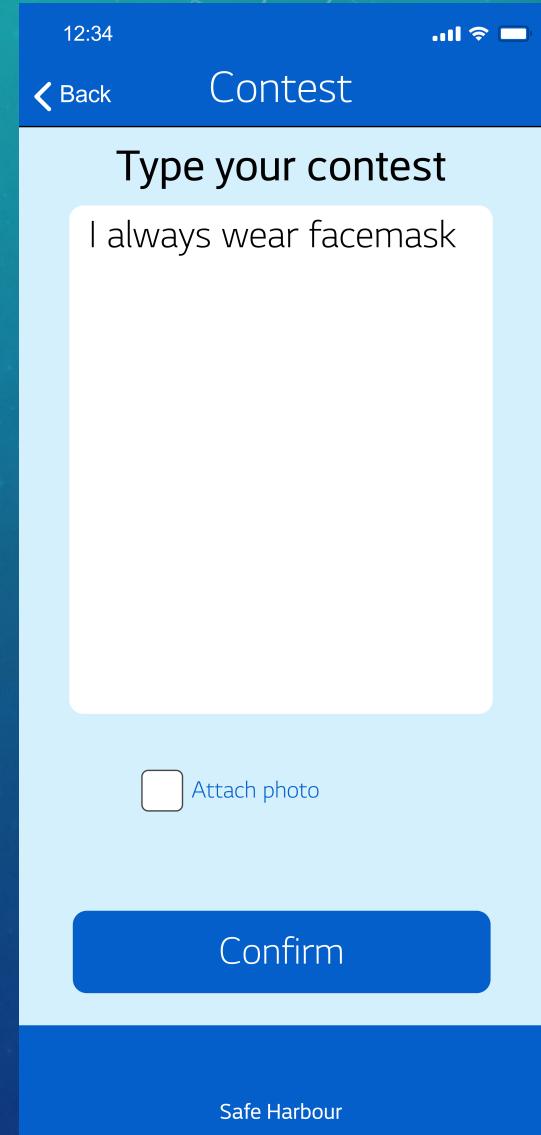
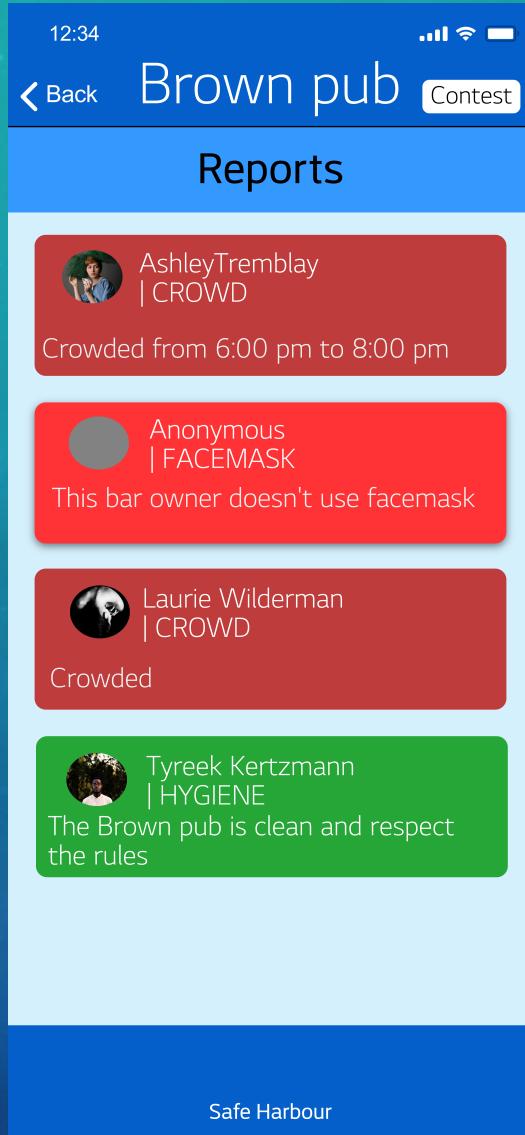
- In the **statistics** section you can see the evaluation of the **safety level** based on reports

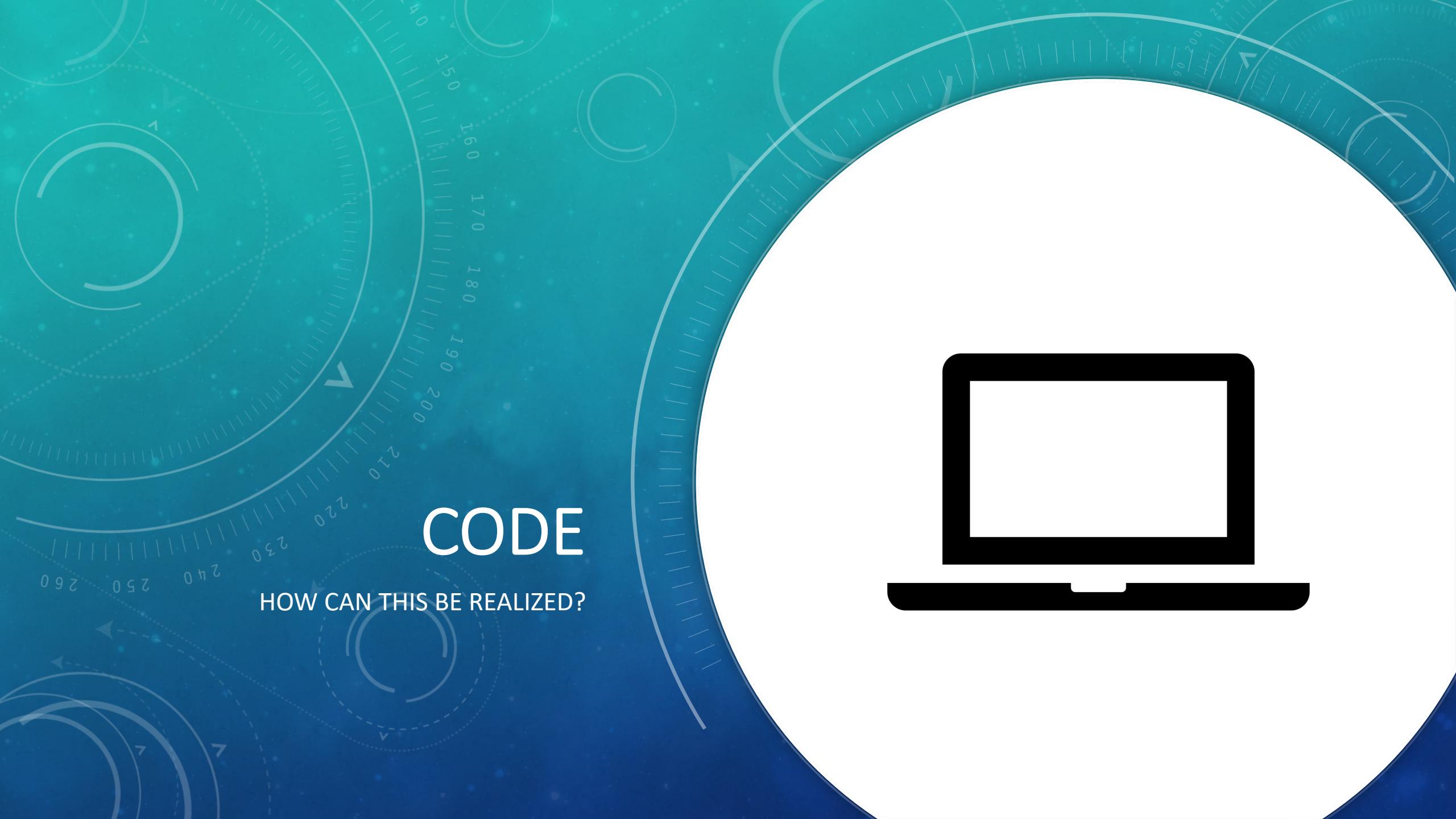
You have now the opportunity to contribute to social and personal safety



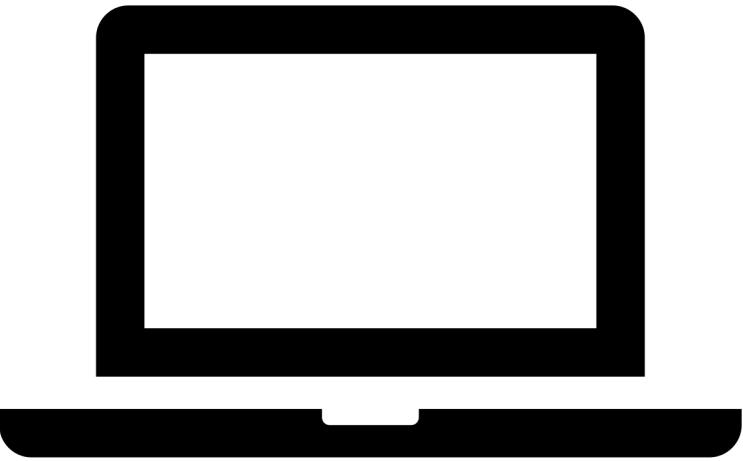
OWNER'S MODE

- The **owner** of a particular activity can register on our app to view the **feedbacks of his clients** and **contest** any eventual incorrect reports





CODE
HOW CAN THIS BE REALIZED?



ANDROID STUDIO PROJECT

The screenshot shows the Android Studio interface with the following details:

- Project Structure:** The left sidebar shows the project structure for "Safe harbour". It includes the main module "Safe harbour [Safe harbour]", sub-modules "gradle", "idea", and "app", and various build variants like "release" and "test".
- MainActivity.java:** The code editor displays Java code for the MainActivity. The code implements two methods: `loadData` and `saveData`. Both methods interact with EditText views to get coordinates and comments, then save this data to a Firebase database using a `Map<String, Object>`.
- Toolbar:** The top toolbar has icons for File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help.
- Status Bar:** At the bottom, it says "Gradle sync finished in 5 s 239 ms (from cached state) (3 minutes ago)".

- On Android Studio we implemented some basic functions that allow us to **see the map** and to **load data on Firebase**
- In order to get access to all the functions we needed, we generated the **API key** and the **client ID** from the Google developers console
- Then defined **classes** and **methods** in Java for all the interactions importing **Google Maps** and **Firebase packages**

WHAT WE HAVE ALREADY IMPLEMENTED

Information protection:

- Google log in activity in order to connect to the application
- We also implemented the sha code and made all the specific keys for this project

Data:

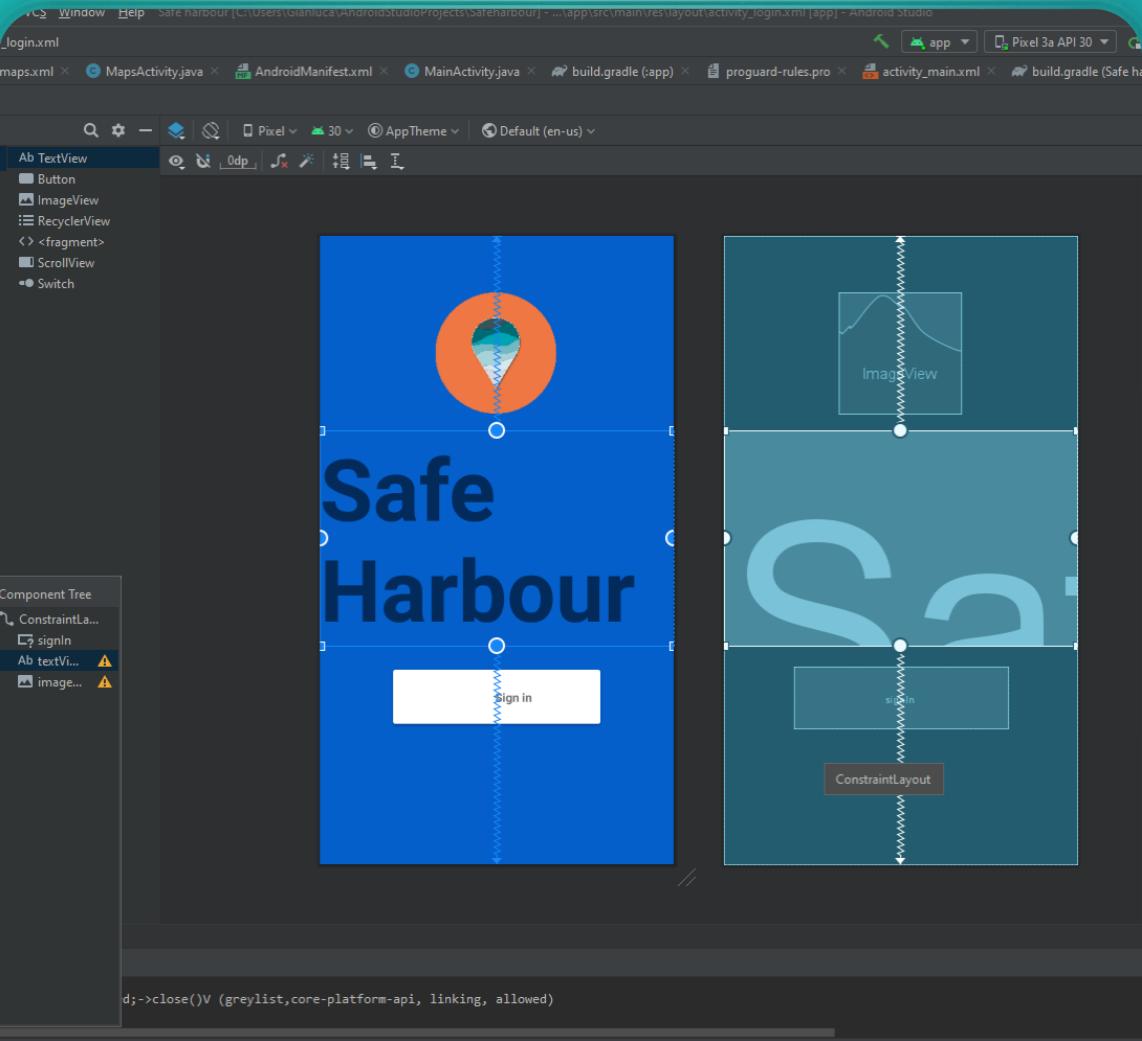
- Firebase connection (read and write from the app)

Map:

- Google Maps navigation functionalities implemented

Analytics:

- Basic Firebase analytics (crashlytics, user location...)



DATA ANALYSIS

WHY DATA ANALYSIS IS NEEDED?



AIM

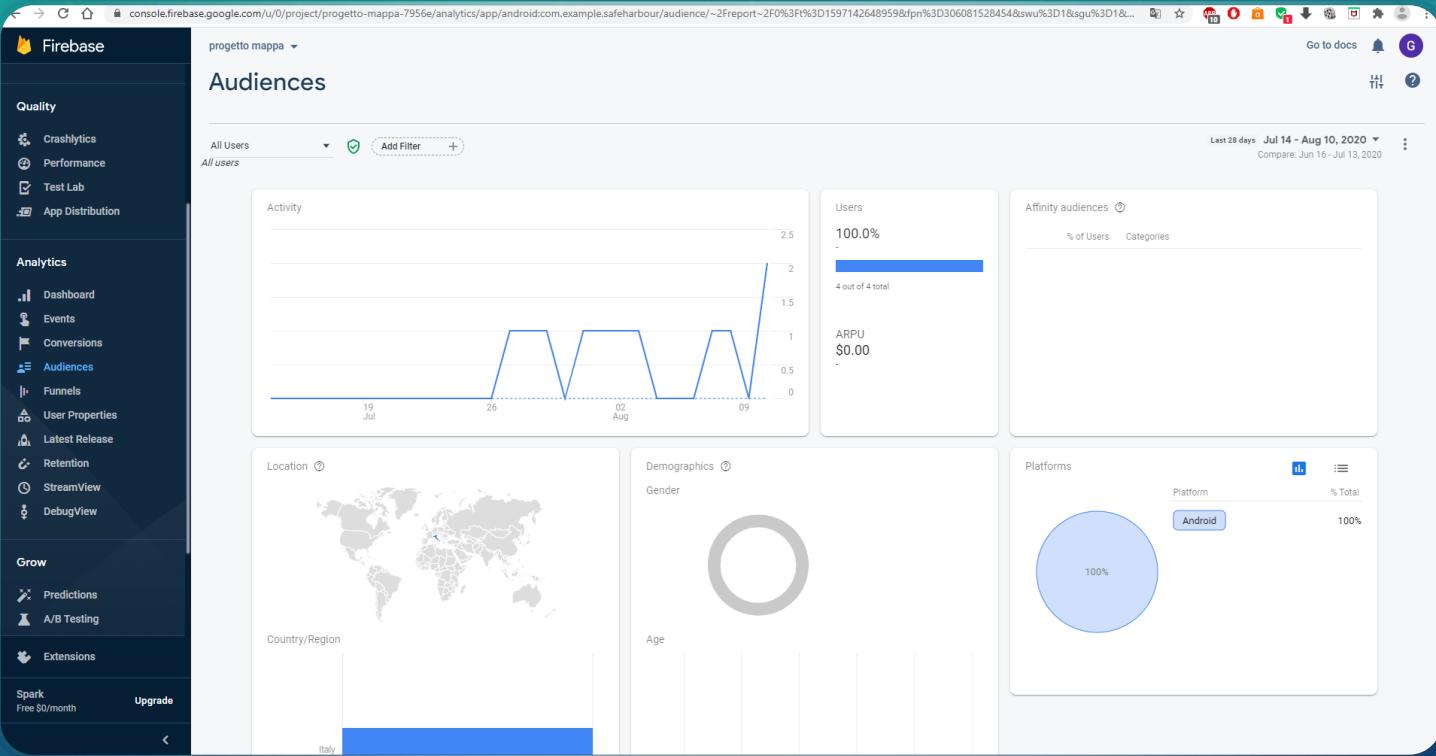
- We are going to **collect specific data** through the app, in order to have an indirect point of view on the **safety level** of a specific place of the world

This could be useful for:

- Improving **safety measures** in order to lower the risk in a post lock down scenario where needed
- Modelling the infection dynamic behavior in a more accurate way, you could see where it has a **higher probability to spread**
- Modelling **other virus behaviors** that spreads in a similar way
- Having a point of view on which businesses respect safety standards, in order to **give benefits** to whom deserves it



WHAT WE HAVE IMPLEMENTED IN OUR ANALYTICS



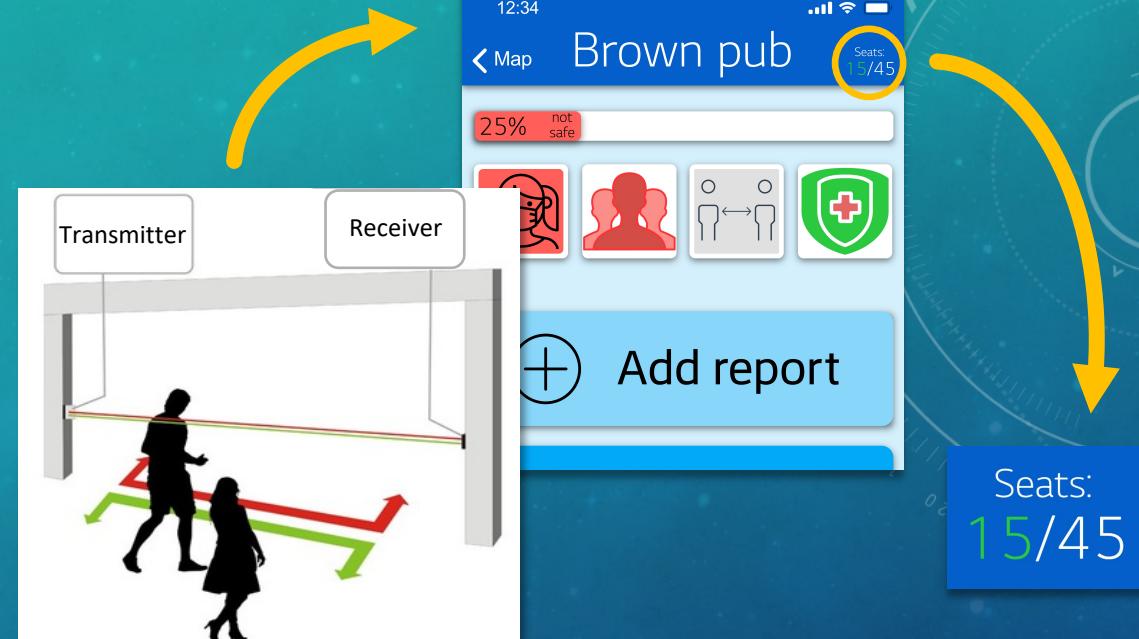
- Number of **reports** per Nation
- When the reports are made
- **Stream view** of the reports
(we don't have enough data because the app has not been released yet)

UTILITY OF SAFE HARBOUR

- Can help people to feel more **safe** to go outside and enter in locals
- Owners are supported to convey to their clients to know **they can trust them**
- Police has the opportunity to **make specific investigations** on such places that users report as dangerous
- It gets **meaningful data** from the users

FUTURE DEVELOPMENTS

- Add a **people counter** at the entrance of the shop to update the **number of seats** occupied so that users can know if the place is full or if there are **enough empty seats**
- Add **QR code** to place at the entrance of a shop to instantly connect to its Safe Harbour profile and **check the safety level**
- Add a **machine learning tool** to find a relation between bad reports data



THANKS FOR THE
ATTENTION

SAFE HARBOUR TEAM

