Show you care. Park elsewhere

Challenge Rating: 4/5

Cars are parked everywhere. Our neighbourhoods are becoming so congested, people are starting to become blind to the needs of others when they park. We'd like to empower people to give a gentle nudge when they find that a car is parked thoughtlessly. Here's how it might go:

Alice buys a pack of bright yellow vinyl stickers from a shop. £1 for 20, say.
Each sticker has a QR code, and a little message: "Whoops! Near miss!". Or something like that.
Alice puts the stickers in her handbag and goes home.

True story:
Alice is walking home from shopping with her baby in a pram. Under the pram is her shopping. It's heavy, and it's raining.
Alice finds gets to a junction, where a smaller road is joining the main road she is walking next to. A car is parked on the path on the junction, blocking her way across the road.
Behind the car is another. Parked bumper to bumper. Behind that car is another. There is a queue of cars going right up the small street.
Alice can't cross the small road, without walking a little way on the main road. And she can't see what is coming down the small road.
She pushes the pram on to the main road, and begins to walk around the front of the parked car...

OK! OK! Alice is fine. but she shouldn't have to put herself in danger, just because someone couldn't be bothered looking elsewhere for a parking space.

In this scenario, Alice can make her voice heard.

Alice takes out a sticker. She uses her ShowYouCare... app, and scans the sticker's QR code. There's a beep. She holds her phone's camera to the car's number-plate. Another beep. All done! She then places the sticker on the windscreen of the car, and leaves.

Alice's app has done several things: it has recorded an incident, using the unique QR code on the sticker. It has recorded the location. It has recorded a unique vehicle. It has recorded the push notification ID of Alice's app.

The phone has sent the QR code, location and a hash of the registration to the back end service, ensuring that Alice is anonymous, and the vehicle is anonymous.

Alice returns home, dries off, and makes a cuppa. She goes to the ShowYouCare... website.

The website shows a map of the area. Alice zooms-in to the location of her incident today. There is marker on the location, showing the number '37'. This means there have been 37 incidents reported in this location in the past week.

Meanwhile, Bob returns to his car. He finds a yellow sticker on it, with a "Whoops! Near miss!" message, and a QR code. It's irresistable. He points his phone at the sticker, and the phone automatically scans the QR code. It takes him to a webpage which explains that someone has been inconvenienced by his parking.

The website then gives Bob an option. Bob can press a button to apologise, or a button to ignore. Which will he choose?

Bob chooses the 'apologise' button.

A notification from the website is sent to Alice's phone.

The message reads 'Someone knows you were put at risk by their poor judgment, and they're really sorry. Hopefully they won't do it again! Thanks for supporting us!'

Alice smiles and drinks her tea.

Note: All is anonymous. Neither Alice or Bob have to create an account.

Experience Areas

This project will allow members to gain and exercise knowledge and experience in the following areas: Ionic / Cordova cross platform application OR Android QR Codes, ANR Push notifications Database : SQL RESTful APIs Single page web app

Possible costs

Free Tier server. Libraries and licenses

Equipment or Accounts needed

Printer, to print out test stickers!