What is Hyperlocal Rainfall?

Hyperlocal Rainfall

This project is looking to deliver a brand new phone app that will help people to make informed decisions about travel around Peterborough by providing route planning with immediate and accurate local rainfall predictions.

Reasons for this project:

The Hyperlocal Rainfall app is a new way to encourage and support more walking and cycling around Peterborough.

By combining an easy route planning tool with real-time local weather data we aim to inspire confidence in our rainfall predictions and allow users to take up more active sustainable travel and improve their health and wellbeing.

Differences to other weather services:

Whilst existing services can identify how far rain is away from your location they do not provide any information on which direction rain is travelling or accurately how quickly it might arrive at a location. Hyperlocal Rainfall will, in a simple and informative way.

The innovation of this project is to provide accurate rainfall predictions in 5 minutes intervals for the hour ahead (not available elsewhere) applied to route planning, so you have all this information you need in one easy place to plan your journeys and get outside.

Our rainfall predictions:

This service will work using real-time rainfall radar data, along with weather data from local stations throughout Peterborough. By using all of this we can 'groundtruth' the data and provide more accurate predictions with a 1km^2 resolution of when and where it will rain for the following hour.

This information from various datasets will be gathered to deliver a 'rolling' rainfall prediction every 5 minutes for the next 1 hour using the core Meniscus Analytics Platform (MAP).

MAP is an engine, developed by Meniscus, that drives the data processing for a defined model. Raw data is imported into the model, and meaningful, purposeful data can be pulled back out using the web service.
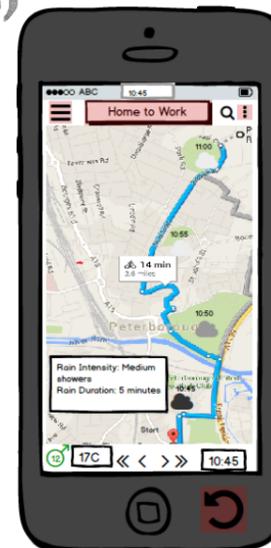
How the mobile app will work:

1)
Input the start and end of your trip using current location, address or by selecting a point on the map.

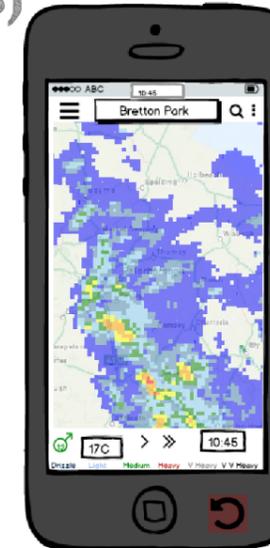Routes can be saved and ready for the next time you make the journey.

2)
Google maps will provide your route, giving an estimated journey time based on how you are travelling.

Rain information for the route will be displayed based on your start time.

3)
You will also be able to see rainfall prediction for areas across the city.

These can be selected by using your current location, address or selecting a point on the map.

The app will provide personalised information to each user dependent on their needs and we will also be working with local businesses to provide app user offers, such as a coffee on your route to work.

Peterborough Environment City Trust

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