<u>GoNow Bicycle app</u>

<u>Initial Ideas</u>

Brainstorming:

Using weather data to create an app to tell people if it is going to rain within the next day or couple of hours. That way people will know the weather situation and be notified whether it is all good to ride down to the beach or shops or their bike. This will then reduce congestion and traffic around the area, reduce pollution and the carbon footprint in the area due to a lower number of cars being within the area. Further to this we can increase the level of public transport within the area around peak traffic times.
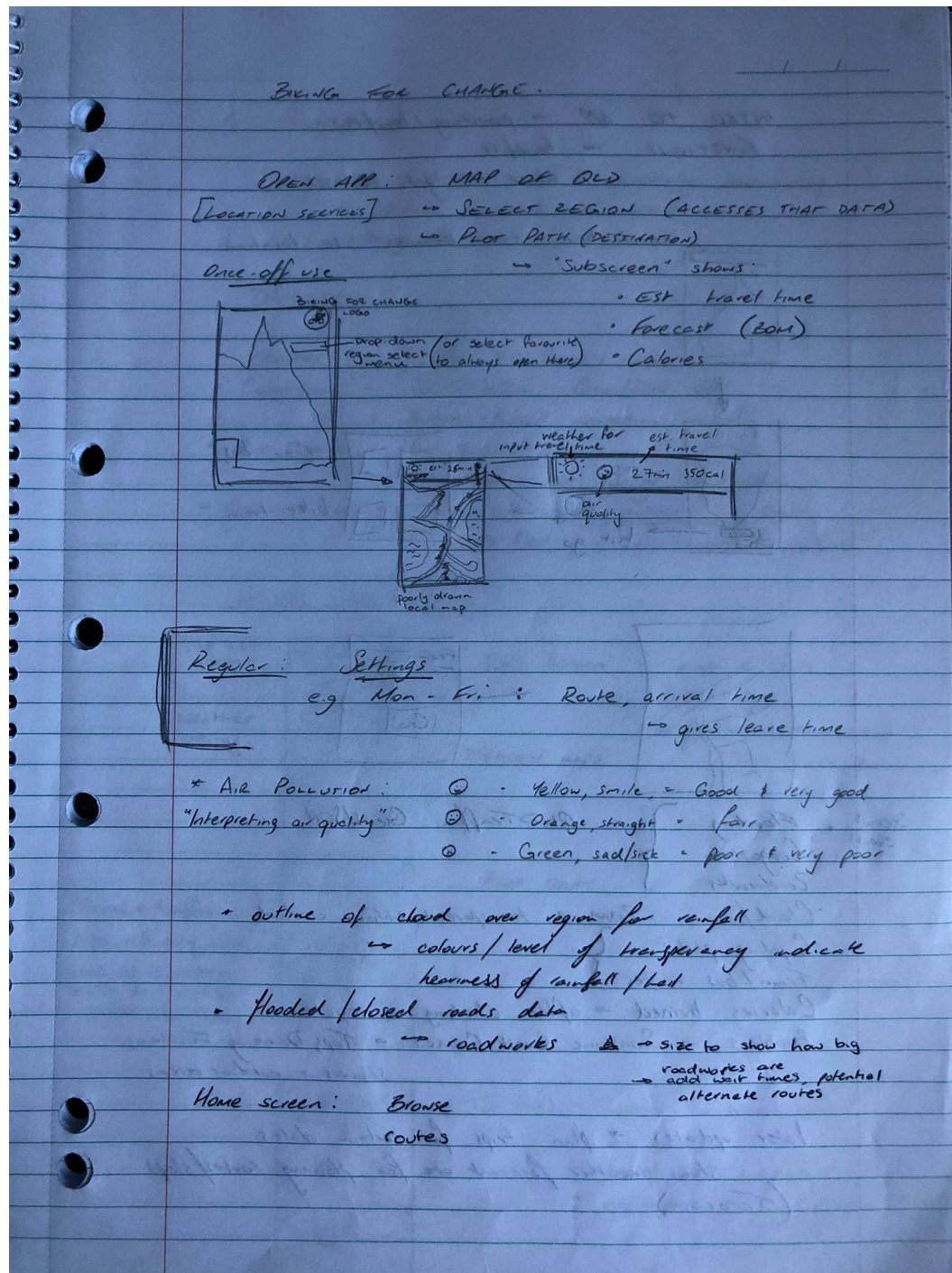
Health and obesity data, due to the increased amount of activity using bikes and getting out doing exercise more.

Use whether data with traffic congestion and peak time data to help people plot a route to where they want to go using public transport and bikes etc…
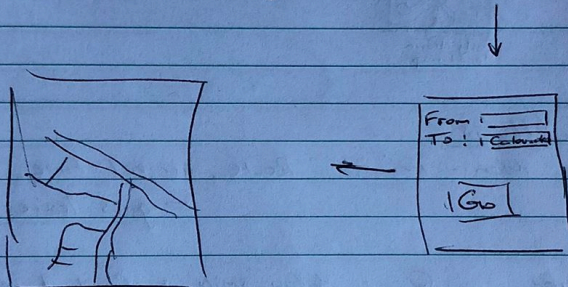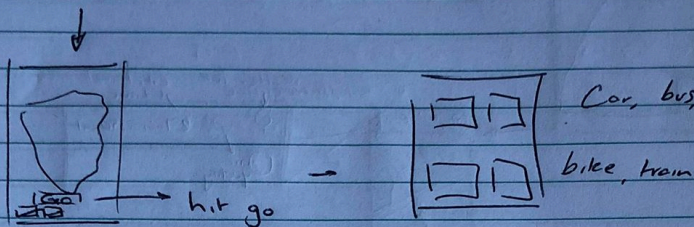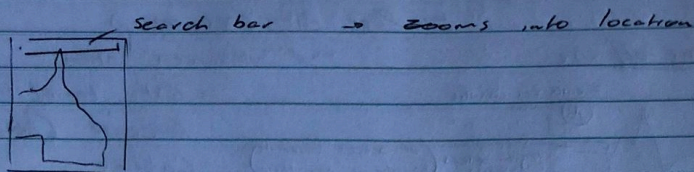
Schedule routes and commutes and that way they can get a notification from the app of ways to get to a place using 'environmentally friendly transport'.

In video show statistics of people obesity and activity levels, congestion statistics

Photos of working and designing:

BIKING FOR CHANGE.

OPEN APP: MAP OF QLD
[LOCATION SERVICES]   ↳ SELECT REGION   (ACCESSES THAT DATA)
                        ↳ PLOT PATH (DESTINATION)
Once-off use   ↳ "Subscreen" shows:
                                • Est   travel time
                                • Forecast (BOM)
BIKING FOR CHANGE
LOGO
            drop-down (or select favourite   • Calories
            region select (to always open Here)
            menu

                        weather for   est travel
                        input travel time   time
            ☀ est 25min   ☀ ☁ 27min 350cal

                                air
                                quality

poorly drawn
local map

Regular :   Settings
        e.g Mon - Fri : Route, arrival time
                        ↳ gives leave time

* AIR POLLUTION :   ☺ - Yellow, smile = Good & very good
"Interpreting air quality"   ☺   Orange, straight = fair
                        ☹ - Green, sad/sick = poor & very poor

    + outline of cloud over region for rainfall
            ↳ colours / level of transparency indicate
                heaviness of rainfall / had
    • flooded / closed roads data
            ↳ roadworks   ⚠ ↝ size to show how big
                                roadworks are
                            ↳ add wait times, potential
                                alternate routes
Home screen: Browse
                routes

INTRO TO APP → promoting / benefits
FUNCTIONS → benefits
→ where we got dataset.

search bar → zooms into location

Car, bus,
bike, train

hit go

From :
To : | Coloured
| Go |

Special + events → Flooding
Congestion
Roadworks   } QLD Traffic GeoJSON

Cloud/rain : BOM → transparent, colour coded
Cycling paths
Train/bus routes }
Calories burned → after clicking on cycle.
Bubblers → Sunshine Coast Council → Taps, Drinking Fountains,
                                        showers + outdoor areas

later updates → plan trips for certain dates
              shows weather forecast etc for planning routes/stops
(Tourism)

1. PRODUCT

BIKING FOR CHANGE - app to encourage bike riding
to reduce emissions and improve health and
wellbeing of locals.

DATASETS

- Weather - BOM live feed / radar
- Congestion - QLD Traffic GeoJSON API
  - Noosa Council congestion maps?
- Air Quality - Air quality Monitoring
  - Interpreting air quality (QLD Gov)
- Calories Burned - Principle cycle network - QLD
  → Add own calculations for calories
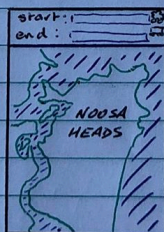
USING THE APP

Top left
sidebar

Weather
overlay.

region
route
region
traffic — confirm
→ National maps
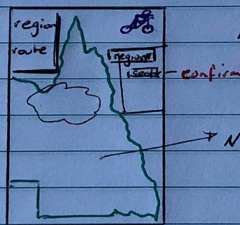
Home Screen - map of QLD
- BFC logo
- region select drop menu
→ or pinch + zoom

start:
end:
NOOSA
HEADS

Road + traffic
info will only show
once at a certain
scale to minimize
clutter/overcrowding.

Plot route - Start + end
- map of region
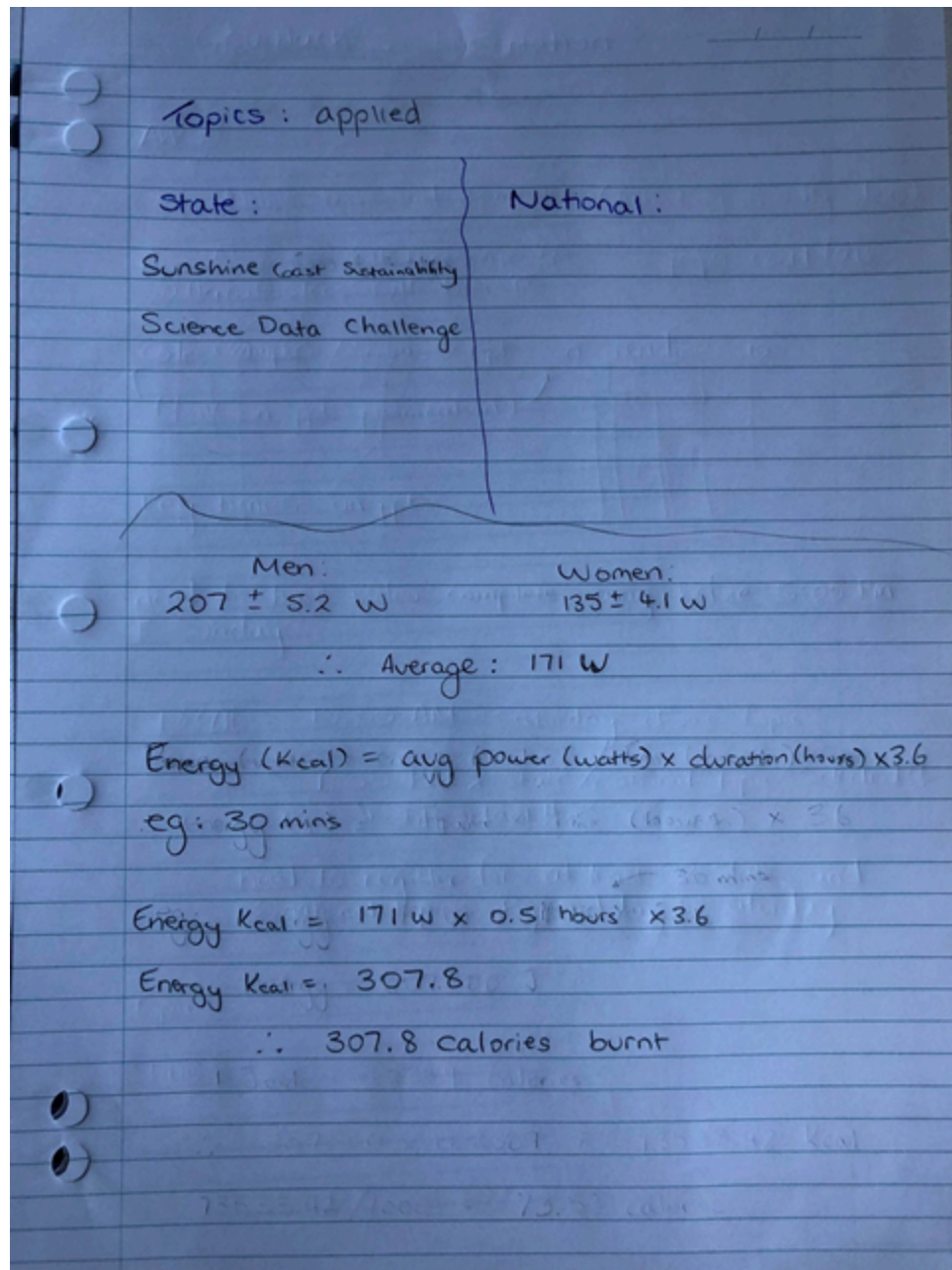- Required arrival time?
→ regular settings?

30min 310 cal

Top bar - weather for travel time
- air quality
- travel time estimate
- estimated calories burned

Calculation of Calories for a sample bicycle ride: (equation to be coded to use in application)

Topics : applied

State :   National :

Sunshine Coast Sustainability
Science Data Challenge

Men :   Women :
207 ± 5.2 w   135 ± 4.1 w

∴   Average : 171 W

Energy (Kcal) = avg power (watts) x duration (hours) x 3.6

eg : 30 mins

Energy Kcal =   171 w x 0.5 hours x 3.6

Energy Kcal = 307.8

∴   307.8 calories burnt

Content to be covered in video and more idea formulation:

Purpose:

      App that incorporates multiple datasets to provide people with an easier way to travel.

Sub goals:
- Encourage cycling to improve health and well-being of locals and reduce emissions.
- Make travelling less stressful, and allow accessibility for all required information within one easy to use app
- Increase tourism in local areas due to the ease of trip planning

App functions:

- Cycling
  - Bike paths
  - Estimated calories burned
  - Bubbler/public bathroom locations etc
- Car/general
  - Congestion
  - Roadworks
  - Flooding
  - Special events
  - Clouds/rain (both overall and for cycle route specific)
  - Air quality (more important if we go national, people may not want to cycle if the air is bad

Datasets:

- General maps will come from *National Maps** (is that what it's called?)
- Flooding, congestion, roadworks and special events will come from *QLDTraffic GeoJSON*
- Calories burned data: *Principle Cycle Network* will give paths and travel time, and a calculation is done from that

- Air quality: *Air Quality Monitoring - QLD*
- Bubblers etc: *Taps, drinking fountains, showers and outdoor areas (Sunshine Coast Council)*
- Cloud/rain: *BOM live feed/radar*

Script for video:

Smartphones are becoming an increasingly prevalent part of society, with reliance on digital data over what was once a physical task.

Contacts, calendars, and even calculators are all standard features, let alone the thousands of apps available to improve the convenience of everyday life.

Both maps and weather are two apps that come standard with smartphones, yet for those planning to travel a route, a comprehensive app that combines the two is yet to exist.

Heart disease is the leading cause of death in Australia, with lack of exercise and obesity the highest associated risk factors.

Because of this we propose to create an app that encourages cycling, bringing together multiple datasets to provide users with all the essentials they need to make their commute hassle free. From this we hope to improve the health and wellbeing of Australians, as well as the added benefit of reducing greenhouse gases emitted by cars.

App Experience

Users will open the app to find simple, easy to use features with minimal clutter. From the home screen they will be able to use the search bar to find a destination. They will then be zoomed into the location, and certain map features will begin to appear. Cloud cover provided by the Bureau of Meteorology will be transparent, showing users an initial overview of the area to decide whether they want to travel by car should the weather be too bad.

After this point they will be able to select their travel route, and further features will be shown. Flooding, congestion, roadworks, and other special events will be provided from QLDTraffic GeoJSON.

Since our primary focus is on encouraging bike travel, data from the Principle Cycle Network will provide cycle pathways as well as travel time. For those wishing to track their exercise goals, average calories burned for the selected cycle route will be calculated and clearly displayed. Bubblers, taps and other public water features will be accessed from the Sunshine Coast Council for the local area.

All general maps will come from National Maps, and though it is not so much an issue in Australia, Air Quality Monitoring will provide data so users can determine whether they wish to travel by bike or use a car instead.

While still catering for those driving a car, this app aims to promote healthy living, encouraging exercise for daily commutes or general use in order to reduce the risk of heart disease, as well as lowering carbon emissions through providing an intuitive app that allows users to always be ready to GoNow.