H_2Optimise

#GOVHACK – UNISC, SIPPY DOWNS

STORY BOARD

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DATA ANALYSIS

- Challenge: **Driving a better way forward.**
- Client: Unity Water
- Jurisdiction: Queensland

- Data Set: Unity Water Vehicle Management
- Data Source: https://www.data.qld.gov.au/dataset/unitywater-telemetry-data
- Carbon Footprint Calculator: https://8billiontrees.com/carbon-offsets-credits/carbon-ecological-footprint-calculators/ford-ranger-co2-emissions/

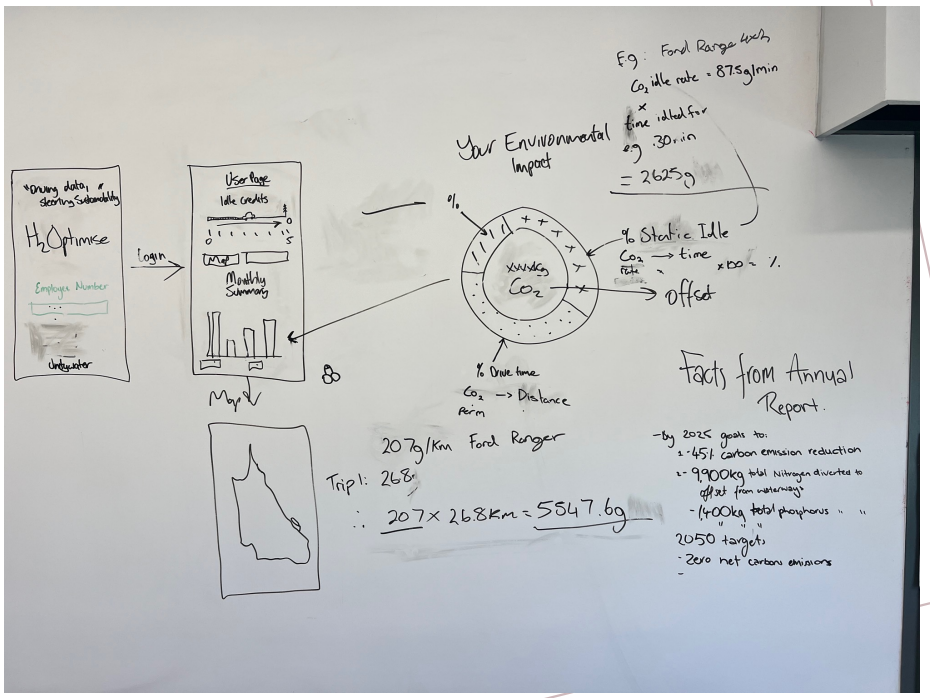
- POI: Idle Times, Addresses, Driving Distance, Vehicle Type.

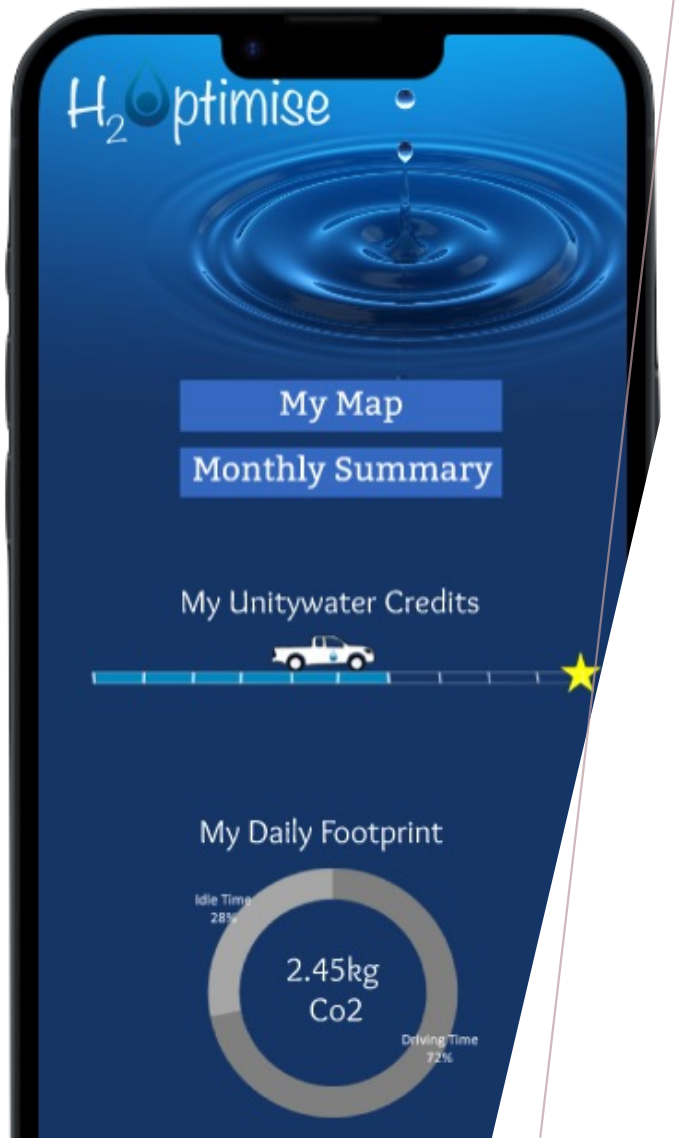
IDEATION PROCESS

- Brainstorming possible solutions.
- Pro's and Con's of each solution.

- Interactive Webmap
- Employee Company App
- User Interface Statistics / Data
- Relevant Policies and Documentation

- Incentive base rewards scheme.



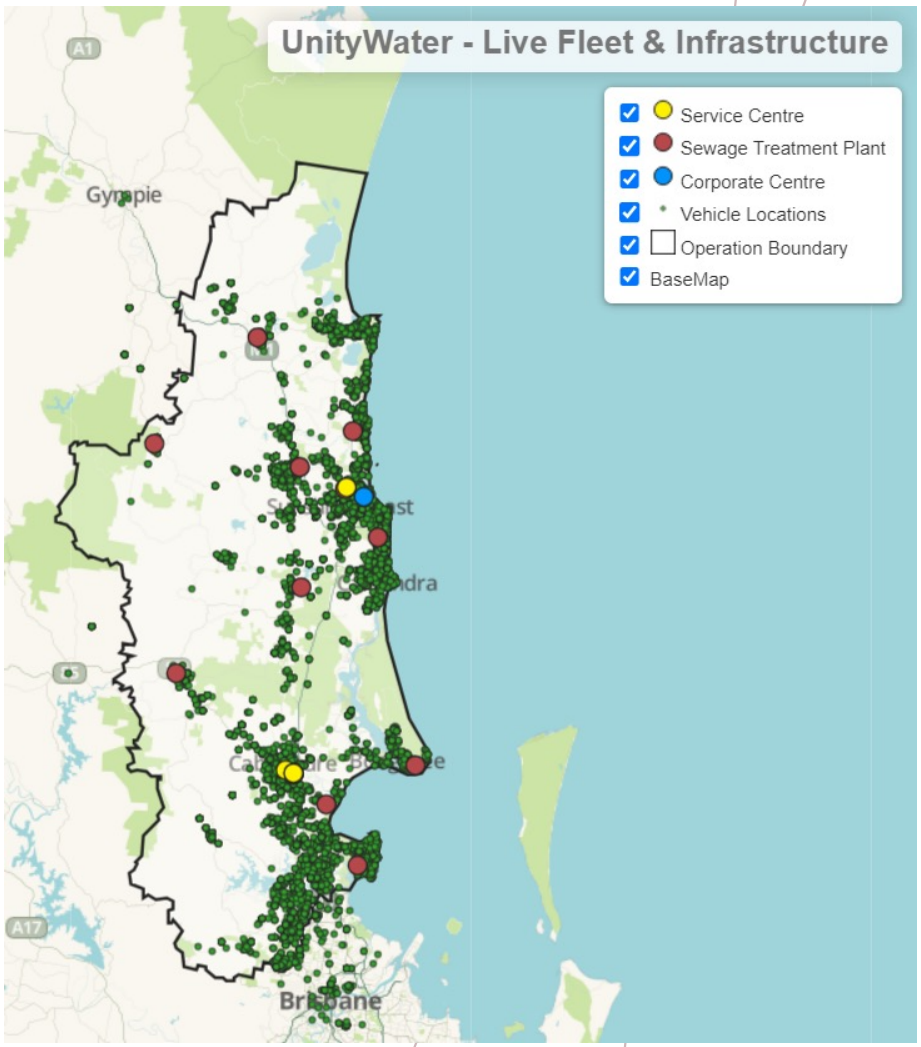


APP – PROOF OF CONCEPTS

- Software: R Studio, Figma.com
- Prototype App
  - Figma WebApp replicate features and design goal of H2Optimise app.
  - Modelling idea without complex coding.
- Functional App
  - Complex 'R' code created a functional app displaying the fundamentals of the app design.
  - Performs data analysis and calculations to provide Carbon Emissions based on Idling times.
- Combining Apps
  - Should time permit the aesthetics of our Figma mobile app would be coded into the functional R app.

QGIS WEBMAP

- Software: QGIS: Free Open-Source Geographic Information Software
- Georeferenced Data Points: Unity Water main infrastructure, fleet vehicles starting locations.
- Internal and Interactive Web map with toggling layers, title, abstract, servicing boundary.
- Intent / Purpose: Have an updating live map using GPS data to assign new jobs to technicians based on nearest proximity and competency to reduce unnecessary travel times and emissions.



H2Optimise Privacy and Security Policy

Last Updated: 20 August 2023

Thank you for using the *H2Optimise* app ("App") developed by *H2Optimise* in association with *Unity Water*. Your privacy and data security are of utmost importance to us. This *Privacy and Security Policy* outlines how we collect, use, store, and protect your data when you use the App. **By using the App, you consent to the practices described in this policy.**

1. Data Collection and Usage:

a. Employee Information: The App collects and stores employee numbers, addresses, and contact details to personalize user experience and facilitate communication.

b. Driving Data: The App tracks employees' carbon emissions based on driving data, including trip duration, distance, speed, and location, to assess and improve environmental impact.

c. Unity Water Statistics: We collect and store Unity Water specific statistics to measure the App's effectiveness and contribution to our environmental goals.

2. Data Storage and Security:

a. Data Storage: All collected data is securely stored on our servers with stringent access controls and encryption measures.

b. Third-Party Access: We do not share your personal data with third parties without your explicit consent, except when required by law.

3. Access and Control:

a. Access to Data: You can access your personal data stored in the App by logging in to your account. This includes driving data, employee details, and Unity Water statistics related to your account.

b. Data Deletion: You have the right to request the deletion of your data from the App. Deleted data will be removed from our servers following appropriate data retention practices.

4. App Development:

a. R-Studio Software: The App was developed using R-Studio software. This software has been chosen for its reliability and data analysis capabilities.

POLICY DOCUMENT -

- **AI Generated Document:** ChatGPT was used a generative artificial intelligence to create a theoretical Privacy and Security Policy Document.

- **Contents of Document:** outlines and "protects" owners for Data Protection and Privacy Assurance, Legal Compliance, User Consent, Transparency, Access and Control

VIDEO

Duration: 3-minutes

Software: iMovie

Contents: Introduction to challenge and team. Figma and R coded app designs. App functionality and user interface displays. Live tracking QGIS map concept.

Video References:

https://www.unitywater.com/

https://www.figma.com/

GITHUB – CLOUD SOFTWARE

- All H2Optimise documentation storage location.
  - Code Chunks
  - QGIS Webmap Zip Folder

- Allows data to be accessed remotely using a file URL.

- Access File URL: https://github.com/qnmaf/Govhack_Files.git

H2Optimise

DRIVING DATA, STEERING SUSTAINABILITY

GovHack
empower. enable. connect.
Hackerspace