## BUSINESS CASE

| | |
|---|---|
| **Proposed Project** | Climate Awareness |
| **Date Produced** | September 21, 2021 |
| **Background** | Climate change is one of many important environmental issues that needs to be addressed. Climate change is caused by the increase of greenhouse gases in the atmosphere. This increase of GHG in the atmosphere is due to various human activities that emit the major GHG such as carbon dioxide, methane, nitrous oxide, fluorinated gases, and water vapour.<br><br>We want to help educate the community about the climate issues we face by developing a knowledge-based content application that provides users with a supportive community, informative resources, and tools to help lower their carbon footprint.<br><br>This application is built to support the United Nations Sustainability Goal 13 Climate Action.<br>Focusing on Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning. |
| **Business Need/ Opportunity** | There are many existing tools and resources out in industry presently that provide ways to reduce their carbon footprint.<br>We want to rebuild and redesign the way these applications are used by adding a community and more functionality to help with information collection and ingestion. |
| **Options** | We will design and develop a knowledge-based content mobile application utilizing the Flutter SDK to build to develop a cross platform application.<br>Utilizing Firebase for the backend and database service.<br><br>Potential Approaches to achieve envisioned application features<br>• Collecting user data: Personal information and location. Verify user for security purposes, this will help with carpooling.<br>• APIs: Carbon Footprint Calculator, maybe utilize Uber API for carpooling. |

## Cost-Benefit Analysis

**Cross Platform Flutter SDK**
Benefits:
- One codebase
- Faster development
- Lower costs
- Easier maintenance.

Cons
- Slower than a natively built application
- Limited user experience

- Limited tool availability.

**Firebase**

Benefits:
- Free basic plan
- Easy to integrate
- NoSQL database structure
- Services and tools available

Cons:
- Costs for additional services
- Limited querying
- More centered to Android than iOS

**Collection of user data**

Benefits:
- This will help verify users and helps with the carpooling feature

Cons:
- Securing the user data from any malicious attacks.

**APIs**

Benefits:
- Increases value of product
- Development time is reduced

Cons
- The APIs might require money to use.
- Open to security risks

## Recommendation

[This section contains the recommended option from the previous section.]
Backend services: Java, Express.js, PHP, Python, Node.js
Other database options: MongoDB, MySQL.