#GoGreen Report

Group 83

Sami Farahi

Lucas van de Geer

Shaan Hossain - 4908058

Alex Shulzycki

Vanessa Timmer – 4728033

# Table of Contents

[Section 1: Product 3](#_Toc5217105)

[1.1 - Technological Choices 3](#_Toc5217106)

[1.1.1 - PostgreSQL 3](#_Toc5217107)

[1.1.2 - JSON 3](#_Toc5217108)

[1.1.3 - JavaFX 3](#_Toc5217109)

[1.2 - Architectural Choices 3](#_Toc5217110)

[1.2.1 - Vegetarian Meal 3](#_Toc5217111)

[1.2.2 - Local Produce 3](#_Toc5217112)

[1.2.3 - Bike Ride 3](#_Toc5217113)

[1.2.4 - Public Transport 3](#_Toc5217114)

[1.2.5 - Temperature Adjustement 3](#_Toc5217115)

[1.2.6 - Solar Panels 3](#_Toc5217116)

[Section 2: Process 4](#_Toc5217117)

[Section 3: Reflection 5](#_Toc5217118)

[3.1 - Reflection on process 5](#_Toc5217119)

[3.2 - Reflection on product 5](#_Toc5217120)

[3.3 - Reflection on course 5](#_Toc5217121)

[Section 4: Individual feedback 6](#_Toc5217122)

[4.1 - Sami Farahi 6](#_Toc5217123)

[4.2 - Lucas van de Geer 6](#_Toc5217127)

[4.3 - Shaan Hossain 6](#_Toc5217131)

[4.4 - Alex Shulzycki 6](#_Toc5217135)

[4.5 - Vanessa Timmer 7](#_Toc5217139)

[Section 5: Value Sensitive Design 8](#_Toc5217143)

[5.1 – Sami Farahi 8](#_Toc5217144)

[5.2 – Lucas van de Geer 9](#_Toc5217145)

[5.3 – Shaan Hossain 10](#_Toc5217146)

[5.4 – Alex Shulzycki 11](#_Toc5217147)

[5.5 – Vanessa Timmer 12](#_Toc5217148)

# Section 1: Product

## 1.1 - Technological Choices

### 1.1.1 - PostgreSQL

Since we are all familiar with PostgreSQL from the Web and Database course we choose to use PostgreSQL.

### 1.1.2 – JSON (TODO: Alex)

To be added

### 1.1.3 – JavaFX (TODO: Vanessa)

To be added

### 1.1.4 – CalculatorAPI (TODO: Sami)

To be added

## 1.2 - Architectural Choices

### 1.2.1 - Vegetarian Meal

To be added

### 1.2.2 - Local Produce

To be added

### 1.2.3 - Bike Ride

To be added

### 1.2.4 - Public Transport

To be added

### 1.2.5 - Temperature Adjustement

To be added

### 1.2.6 - Solar Panels

To be added

# Section 2: Process

# Section 3: Reflection

## 3.1 - Reflection on process

To be added

## 3.2 - Reflection on product

To be added

## 3.3 - Reflection on course

To be added

# Section 4: Individual feedback

## 4.1 - Sami Farahi

### Contribution

To be added

### Weak points

To be added

### Strong points

To be added

## 4.2 - Lucas van de Geer

### Contribution

To be added

### Weak points

To be added

### Strong points

To be added

## 4.3 - Shaan Hossain

### Contribution

To be added

### Weak points

To be added

### Strong points

To be added

## 4.4 - Alex Shulzycki

### Contribution

I wrote the server, both in terms of network communication, and setting up the framework to process requests, which includes authentication (with salted passwords). I also wrote the https client for the application-side, and made the server https compliant. I also had a hand in optimizing the database classes and rewriting some of them to make them more robust, and made sure that everyone was on the same page by writing up a standard and consistent JSON API we would use when communicating between server and client.

### Weak points

I don’t think that some of my explanations were clear enough in terms of what I was doing and how to use the frameworks which I set up, so I wrote up the api list and serverquery how-to guides (in /docs) to illustrate how everything works. I feel like sometimes there were times where I didn’t show enough initiative when I should have did, but I hope that I have learned my lessons and that for future projects I will take more responsibility when I need to.

### Strong points

I made my code as robust and universal as possible, which paid off immensely once we began adding functionality and actually making the whole thing work. I also made sure to thoroughly test (the parts that could be tested) my code and made sure that others knew how to do it as well (once they started writing within my serverquery framework)

## 4.5 - Vanessa Timmer

### Contribution

To be added

### Weak points

To be added

### Strong points

To be added

# Section 5: Value Sensitive Design

## 5.1 – Sami Farahi

## 5.2 – Lucas van de Geer

## 5.3 – Shaan Hossain

##### Design for Environmentalists

The main concept of our project is originally aimed at non-environmentalists. But we need to take into account that environmentalists are actually the ones who can influence our program the most. This is because all of our calculations are based on data that is inspired by their perseverance in making this planet a better place to live on. They are the ones who encourage and motivate researchers to keep investing time, money and effort into

The main focus to improve our application would be retrieving the data that is used to calculate the CO2-emissions. As for right now these calculations are just bare estimations and speculations. To polish these calculations some actual research will have to be done by us, either looking for the more specific data ourselves or looking for someone who has done some research about this. We have also taken far too few factors into account. The amount of CO2 that is saved by eating a vegetarian meal is not a constant but rather depends on many things such as, what are you replacing your meat with and in what season are you eating your vegetarian meal in. Leaving out all these factors might not be relevant all these non-environmentalists, but I can imagine that calculations with large errors might lead to conflicts with actual environmentalists since the number do not represent the environment correctly. The worst-case scenario would be that an ignorant client of our application thinks he is saving up more CO2 that he actually is.

Improving our sources of information and data can have many degrees of improvement. A minor improvement would be to simply extend our research in data and add some of these extra factors to the calculations. By doing this more extensive research we might be able to narrow down our error in CO2 calculation. This research can either be done online. Reading articles and academic papers is a good way to start. The first page after googling ‘reduce co2 footprints’ already shows some very promising articles and even a TedTalk on how to “cut your carbon footprint by 60%”.

For a bigger improvement we will need to dig deeper. We will have to confront an actual environmentalist and/or researcher. They can give us insight on how far the problem branches out and were we should stop finetuning our calculations. These researchers can provide us more accurate data specifically for our application. The Georgetown University seems to have made some progress into the research of the ‘Carbon Footprint’. Also the Dutch government agency RVO (Rijksdienst Voor Ondernemend Nederland) has a good overview of organizations who are doing research on sustainability and innovation. By digging deeper and trying to truly grasp this global issue we can make our application more accurate.

We must not forget the influence we can have on non-users as well. Yes, our application can even change the lifestyle of someone who will never be in touch with our application. Imagine 2 friends sitting at a bar. Friend X has been using our application whereas friend Y has never even heard about it. Friend X is telling Y about how he is eating vegetarian at least once week and goes to work by bike. He has been saving roughly 60kg of CO2 a month. Friend Y is surprised that such a small change in lifestyle can have such a big impact and he decides to change his lifestyle as well. Of course, this is a fictional story and unlikely to happen exactly like that. But the main point is that our application can influence many people, even if they will not use it.

Our application is still very barebones if you think about all the additional features that can be added. And because it is still in its alpha version there is a lot of room for improvement as well. But no matter what we will change to our application, we will always to take all of our stakeholders into account.

## 5.4 – Alex Shulzycki

## 5.5 – Vanessa Timmer