Smart Shopper

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Business use case

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23-24

### Executive Summary:

* Provide a concise overview of the problem

The problem at hand revolves around optimizing the grocery shopping experience for consumers. Currently, consumers face challenges in finding the best prices, discounts, and optimal purchasing options for their groceries. This process is often time-consuming and can lead to overspending or missed opportunities for savings. The primary issue stems from the lack of efficient tools and real-time information to facilitate cost-effective grocery shopping.

In essence, the problem is about simplifying and enhancing the grocery shopping process by providing consumers with a convenient way to compare prices, identify discounts, and make informed decisions, ultimately saving time and money.

* Briefly explain how your project will address and solve the problem.

### The project aims to address and solve the grocery shopping problem by developing a mobile application. This app will empower users to input their grocery lists and instantly access real-time information about the cheapest prices, ongoing offers, and opportunities for bulk purchases at various supermarkets.

### Key components of the solution include:

### 1. \*\*Data Collection:\*\* Gathering real-time data on grocery prices, discounts, and bulk purchase options from multiple supermarkets.

### 2. \*\*Price Comparison Algorithms:\*\* Implementing algorithms to compare prices and recommend the most cost-effective options for each item on the user's grocery list.

### 3. \*\*Real-Time Updates:\*\* Providing users with live updates on prices and offers to ensure they have the latest information for informed decision-making.

### 4. \*\*User-Friendly Interface:\*\* Creating an intuitive and user-friendly app interface where users can easily input their grocery lists and receive clear recommendations.

### 5. \*\*Savings Optimization:\*\* Offering insights into bulk purchasing opportunities and discounts, helping users optimize their spending and maximize savings.

### By providing a user-friendly tool with real-time data, the project will streamline the grocery shopping process, empower consumers to make informed choices, and ultimately save them time and money.

### Problem:

* What problem does your project address?

There’s currently an open-source dashboard that shows live data, however there is no persistence as the data is not being stored. Currently anyone can plot points on the map, instead the platform should become account based where people can plot their own points and view them on the map. The data is also not being refined currently, not considering weather, it would be beneficial to include this as well.

* Relate this problem to the goals or mission of the organization.

GreenTechLab aims to answer questions on the field of agriculture. The answer to these questions typically come from research conducted by individuals with the help of various sensors that are developed in-house by GreenTechLab. In comes the dashboard that this project proposes which, among other things, allows one to view an easily compiled map of all sensors within a particular area of interest.

### Analysis:

* Provide any research or data you’ve collected.

**Collected data/Research**

* We are free to use any stack/frameworks we want, With the condition that they are big and supported.
* House style does not matter, no requirements on that.
* The application must be able to run on their servers.
* We have the basic requirements which are basically the scope of the project. Later, when those have been implemented, “nice to have” requirements will be given.
* A video of every single use case is desired by GreenTechLab.
* The team has concluded that a common ground can be found within the usage of ReactJS as a front-end framework and Deno with SQL as the back-end frameworks/tools.
* Use this space to explain who is on the project team.

**Project team**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Email** | **Project Role** | **Availability** |
| Ayman Mohsen | a.mohsen@student.fontys.nl | (Scrum Master) | Business hours |
| Duart Snel | d.snel@student.fontys.nl | (Lead Developer) | Business hours |
| Mustafa Noori | m.noori@student.fontys.nl | (Lead Analysis/Design) | Business hours |
| Bas Tomlow | b.tomlow@student.fontys.nl | (Project Manager) | Business hours |

### Finances:

* Explain how much it will cost to conduct the project.
* If applicable, show projections for profits from your project.

The largest costs by order for the project are:

* Hourly rate for both Mr. Warkus and Mr. Schriever for the consulting hours
* Hosting
* Sensors used

Cost reductions:

* Project group hours are free
* Open-source solutions, therefore, no license fees

Profit model:

Profit model has not yet been decided on by GreenTechLab themselves.

### Possible Options:

* Clearly identify the data transmitted by the sensors and store relevant data in an efficient manner. From there on data should be able to retrieve and display, but it should also be possible to correct the data with weather effects.
* Make it possible for people to plot their own account-based points on the map, choosing whether these are visible for visitors or not.

### Risks:

* List any risks in your project and how you will address these
* Description, Risk owner, probability, impact, countermeasure)

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Impact** | **Probability** | **Mitigation Activities** |
| Deployment issues due to origin system | High | Low | Pre-plan the delivery requirements and choose software accordingly and periodically deploy on their test servers. |
| Learning curve of tech stack | Low | Medium | Choose frameworks/tech stack where at least one individual is decent knowledge of so it can guide the others |

### Recommendation:

* Show why the project you selected is the best option.

The projected that has been selected is most in line with the project members interest, experience, and software oriented. It gives a lot of freedom of technology choice and still offers something new in the form of LORA communication. The group thinks that it’s possible to deliver a suitable product in the given timeframe and feels confident in meeting requirements.

* Include any risks in your project and how you will address these.

For the risks, the primary issue at hand is the actual thought process and theory behind the data and sensors. Correlating the given data with weather influence may prove to be hard as certain impacts and unpredictable influences may come up that are not accounted for.