# Sustainability Analysis of Requirements Specification

**for**

# SharEat

**Version 1.0 approved**

**Prepared by Group M**

**LUT University**

**12.10.2021**

# Table of Contents

## Contents



# Revision History

| Name | Date | Reason For Changes | Version |
|---|---|---|---|
| Group M | 12.10.2021 | Initial Draft | 1.00 |

# 1. Introduction

## 1.1 Purpose

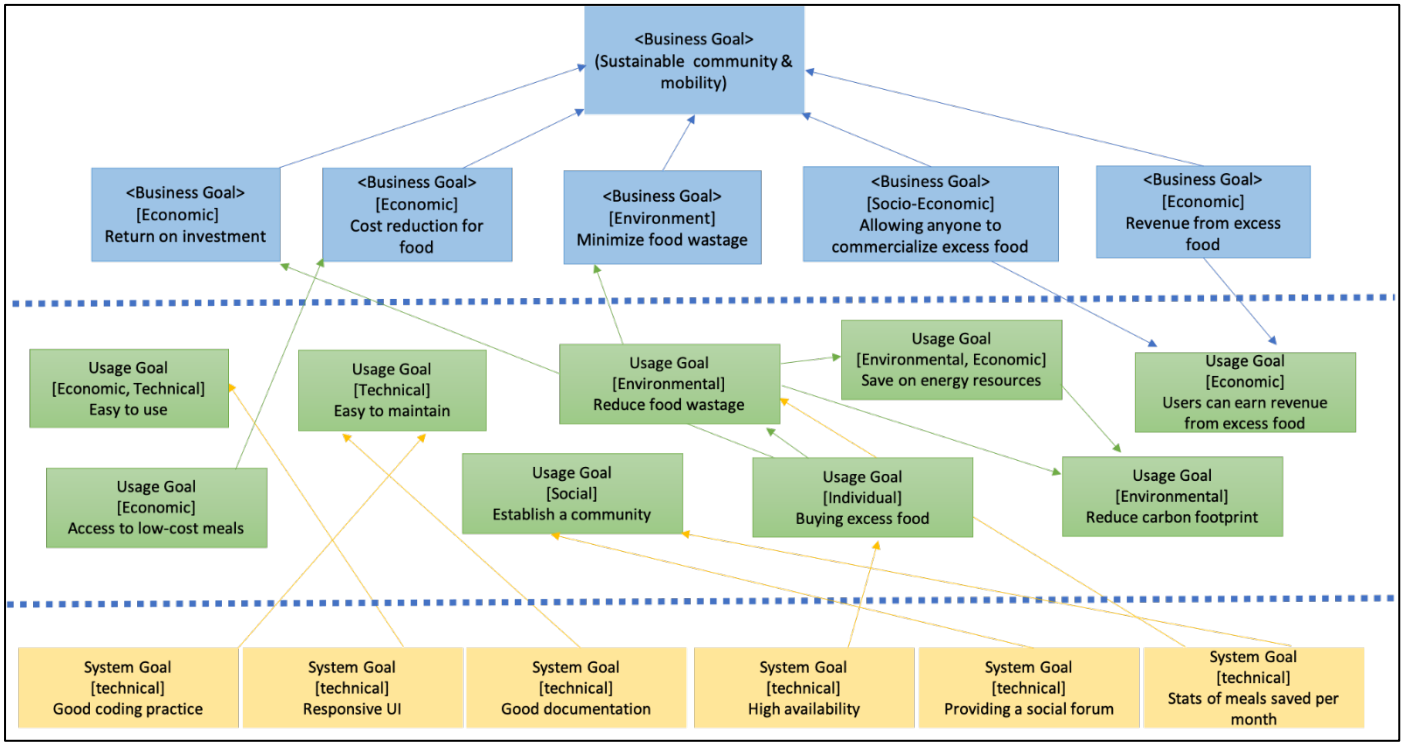
The purpose of this document is to ascertain the ways in which the development of SharEat is committed towards sustainability in its design, implementation, and business model. All around the world a lot of food is being wasted every minute and SharEat aims to combat this problem by providing a platform for restaurants and private individuals to list and purchase their excess meals. SharEat is being designed for its first major release in Q1 2022 with its core features and will be followed by subsequent releases adding additional user features and functionality (refer to Vision and Scope document).

# 2. Framework for Sustainability of Software System Design (FSSSD)

| SDLC Phases and Karlskrona Manifesto Principles | Sustainability Goals | Sustainability Concepts, Methods and Tools | Indicators /Measure / Metric |
|---|---|---|---|
| **Phase 1.** Project Definition<br>• Provide a platform for connecting users in order to buy and sell excess meals at a subsidized price<br>• Provide an easy to navigate UI to make ordering meals as simple and as accessible as possible<br>• Use internal data to educate users about sustainability through social media channels | Design for: Reusability, Maintainability, User satisfaction, Developer work satisfaction. | The app has been designed in such a way that anyone can have access to this app and reach the "avoiding food wastage" goal. | Developer work satisfaction measurements<br>Tracking the expenditure on subsequent releases<br>Tracking the active users/ conversion rate (i.e., the number of registered users who are regularly ordering food) |
| **Phase 2.** User Requirements Definition<br>• Users should be able to list their excess meals for purchase<br>• Users should be able to purchase excess meals through the application<br>• Users should be able to earn revenue from selling their meals<br>• Providing a dark mode | Designed for: Reduced expenditure, reduced food waste, passive income | Individual, Social Environmental, Technical and Economic dimensions referred in the sustainability requirements template | Tracking successful listings, transactions etc. |
| **Phase 3.** System Requirements Definition<br>• Have the application track the total number of meals "saved" in kilograms across all users<br>• Providing confirmation notifications on successful actions<br>• Giving the user feedback whenever they make a mistake or input false information<br>• Responsible data collection and management | Design for: efficiency, ease-of-use, user-friendliness, reliability, maintainability | Environmental and Technical dimensions referred in the sustainability requirements template | Provide social media and homepage updates on how many meals and kilograms of food have been "saved" by using the application<br>Track the number of requests for user data removal |

# 3. Goal Model

This diagram provides the grouping of the SharEat application goals into business goal, usage goal and system goals which are addressing the sustainability dimensions (Individual, Social, Economic, Technical and Environmental). It illustrates the distinct levels of abstraction of the system behavior by modeling them.




# 4. Sustainability Requirement Template

| Requirement | Sustainability Dimension | Explanation |
|---|---|---|
| **USER REQUIREMENTS** | | |
| User registration | Individual | User exercises rights – to share his/ her data |
| Default language | Social | Allowing users to engage with the application in whatever language they are most comfortable with |
| List-a-meal functionality | Economic | Presenting individual users with the opportunity to generate revenue |
| Dark mode | Individual, Social, Environmental, Economic, Technical | Dark mode is better for the health of users' eyes, so it improves individual sustainability. Darker colors also reduce light pollution and energy consumption and therefore it has environmental impact. Social dimension comes from being able to be part of dark mode culture.<br>Dark mode reduces the device's overall battery consumption, thereby improving device life and the cost savings from reduced energy usage can help the business and individuals save money.<br>Adding the dark mode option to the system will help the application to be more easily maintained, customized, and updated, since custom themes can |

| | | |
|---|---|---|
| | | be more easily added. If the application had only light mode, the customization of themes would be harder. With the dark mode the theme switching is already built in. |
| Premium subscription ads | Economic | Generates revenue |
| Premium service registration | Economic, Individual | Generates revenue<br>Users exercise their rights to upgrade membership plan |
| **SYSTEM REQUIREMENTS** | | |
| Payment processing | Economic | With this requirement, the economic sustainability goal is achieved as processing payments make it possible for users to do transactions. |
| Generic Ads | Economic | Generates revenue |
| Camera access | Individual | User exercises rights – to share his/ her data |
| Location data usage | Individual | User exercises rights – to share his/ her data |
| User database | Individual, technical, | Giving users the right to have all their individual data removed from SharEat systems.<br><br>Designing the system in a way that makes the removal and addition of datasets easier later down the line. |
| Support for aspect ratios | Technical | Modular code that is adaptable for varying aspect ratios, allows for future modification, and addition of any new device (new aspect ratio) |
| Collection of meals "saved" data | Environmental, technical | Collecting statistics on meal transactions to educate users on how big an impact the application is having, and how important reducing food wastage is.<br><br>Designing user data management in a way that enables future data collection and processing to make further updates easier and more manageable |

# 5. Requirements Sustainability Analysis Radar Chart