

# **GO TO MARKET / SUSTAINABILITY PROPOSAL**

## **Edival (Edible Evaluation)**

### **A. BACKGROUNDER**

- What are you trying to achieve/solve?

The accumulation of Food Loss and Waste in Indonesia from 2000 to 2019 was 115 to 184 kg per capita per year, with the highest accumulation occurring in the consumption stage. Besides that, there is a potential worsening of this situation in 2045, with an estimated 344 kg of food per capita wasted each year. This problem occurs because there's a lack of awareness and guidance on how individuals can reduce food waste and adopt sustainable consumption practices. If we ignore this, this significant amount of food wasted will lead to a significant impact on many aspects. Food waste can contribute to a greenhouse gas that causes climate change. The economic loss amounts to 213 - 551 trillion rupiah per year. Food waste also leads to the loss of valuable nutrients that are essential for human health.

Those facts that the number of food waste keeps increasing made us aware about food sustainability and initiated us to make a mobile application-based strategy that provides condition assessments, recommendations and food reminders. We call it Edival. We hope that Edival can facilitate people to assess suitability of food for consumption and educate users on proper food management.

- Has anything been done before?

Yes, there are several apps similar to Edival, but none offer the same combination of features

### **B. PROJECT INTRODUCTION**

- Why is your capstone project built in the first place?

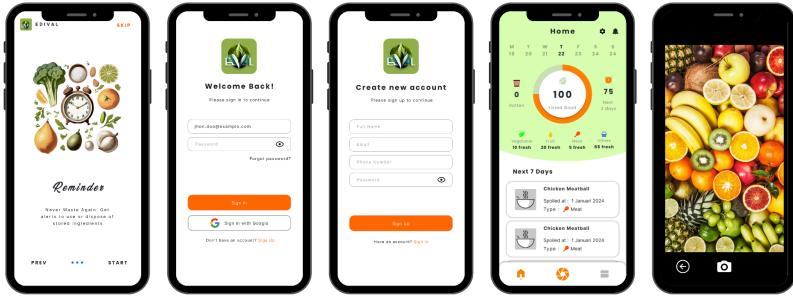
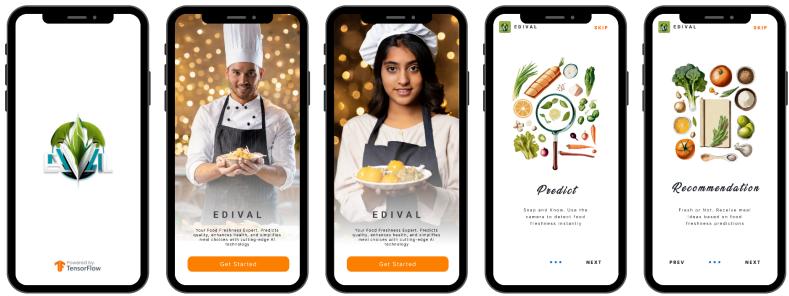
- Increasing Food Waste

- Issue = The world faces a growing problem of food waste, where a significant amount of edible food is discarded, contributing to environmental and economic issues.
    - Solution = Edival is built to actively combat food waste by providing users with a tool to access the condition of food items, encouraging responsible consumption and reducing unnecessary discards.

- Lack of Reliable Food Assessment Mechanisms

- Issue = There is a lack of efficient and user-friendly tools for individuals to access the suitability of food items for consumption, leading to uncertainties and potential wastage

- Solution = Edival fills this gap by leveraging object detection to provide users with a reliable and quick assessment of the condition of their food items.
  - Awareness and Concerns About Food Waste
    - Issue = Many people are becoming aware of the environmental impact of food waste and are looking for practical ways to contribute to sustainability.
    - Solution = Edival not only assesses food items but also raises awareness and educates users on effective food waste reduction practices, fostering a sense of responsibility among consumers.
  - Challenges in Food Inventory Management
    - Issue = Individuals often face challenges in managing their food inventory, leading to items reaching their expiration dates unnoticed.
    - Solution = Edival assists users in managing their food inventory by providing reminders for items nearing expiration, helping users avoid spoilage and reduce waste through better inventory control.
  - Contribution to Sustainable Development Goals (SDGs)
    - Issue = Food waste is a global issue that aligns with the broader goal of achieving sustainability, as outlined in the United Nations' Sustainable Development Goals.
    - Solution = Edival actively contributes to the SDGs by addressing food waste, promoting responsible consumption, and leveraging technology for a positive impact on the environment.
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- What are the advantages of your capstone project?  
Our capstone project, Edival, is trying to solve the problem of food waste. Edival are here to make a dependable assessment mechanism that leads to reduced food waste, increased adoption of sustainable practices, and efficient food inventory management improves resource utilization. Edival uses machine learning to generate results on the suitability of a food condition. The application will offer recommendations on the suitability of food, guide proper food management for unsuitable items, and provide food recommendations along with cooking instructions for suitable items. Application provides reminders for food before the expired date.
  - Screenshot of your app



## C. TARGET MARKET

- User Persona

**Sarah** **35 years old** **Housewife** **Jakarta**

<b>BIO</b> A housewife named Sarah regularly shops for groceries for her family. However, she sometimes has difficulty determining exactly when a food ingredient will expire or is no longer suitable for consumption. Apart from that, she often feels confused about how to manage food that is no longer fit for consumption so that it doesn't end up as waste.	<b>MOTIVATIONS</b> • Providing safe and healthy food for her family. • Have limited time to monitor the condition of each food ingredient they have. • Have concern for the environment and want to contribute to reducing food waste and creating a more sustainable lifestyle.
<b>GOALS</b> • Want to ensure that the food given to her family is safe and suitable for consumption. • Want to manage food ingredients more efficiently, avoid waste, and maximize the use of each food ingredient. • Want to gain further knowledge about how to manage food that is no longer fit for consumption so that you can contribute to reducing waste.	<b>FRUSTRATIONS</b> • It is difficult to determine exactly when a food ingredient will expire, especially if the packaging has been opened. • Feeling confused about how to manage food that is no longer fit for consumption so that it doesn't end up as waste, especially with limited knowledge. • Difficulty taking the time to carry out detailed supervision of every food ingredient she has.

- Why does your target market need your solutions?
  1. Purpose-driven
    - a. Reason = Sarah, being a housewife, is motivated by the purpose of providing safe and healthy food for her family. The Edival app aligns with this purpose by offering a reliable solution for assessing the suitability of food items, ensuring that Sarah can confidently provide her family with safe and healthy meals.
    - b. Solution = Edival serves as a purpose-driven tool that helps Sarah make informed decisions about the freshness and safety of food items, contributing to her goal of providing the best for her family.
  2. Data-driven
    - a. Reason = Sarah faces difficulties in determining the expiration of food items, especially once the packaging has been opened. Edival, through its data-driven approach and algorithms, provides accurate assessments based on visual data, helping Sarah overcome the challenge of uncertainty in determining the condition of food.
    - b. Solution = Edival's reliance on object detection, offering Sarah precise information about the freshness of her food.
  3. Government Reasoning
    - a. Reason = Government initiatives often focus on reducing food waste and promoting sustainable practices. Edival aligns with these goals by empowering individuals like Sarah to actively contribute to the reduction

- of food waste, thereby supporting broader environmental and sustainability objectives.
- b. Solution = Edival becomes a valuable tool in supporting government initiatives related to food waste reduction and sustainable living.
4. Stakeholders related to and benefitted from your solutions
    - a. Stakeholders:
      - i. Users (like Sarah) = Benefit from efficient food management, reduction of waste, and access to information on sustainable practices.
      - ii. Food Industry = May benefit from increased awareness and consumer practices that align with reducing food waste.
      - iii. Environmental Organizations = Benefit from individuals like Sarah adopting sustainable practices and contributing to the reduction of food waste.
    - b. Solution = Edival serves as a bridge connecting various stakeholders—users seeking efficient food management, the food industry striving for sustainability, and environmental organizations working towards waste reduction.

#### **D. MARKETING STRATEGY**

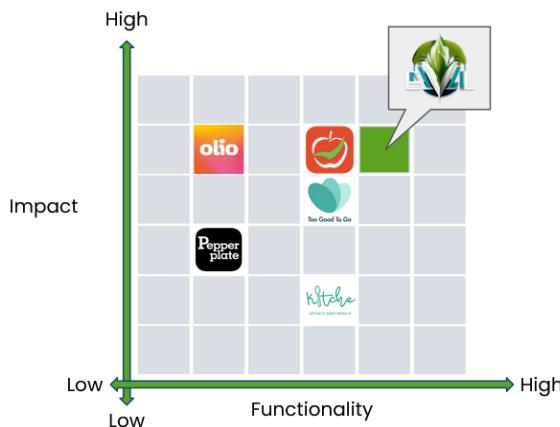
Put your marketing strategy to develop your project.

- Social Media
  - Objectives = Increase brand awareness, engage with the target audience, and drive app downloads.
  - Tactics =
    - Create and maintain active profiles on popular platforms like Instagram.
    - Share engaging content such as tips on reducing food waste and feature updates.
    - Utilize visually appealing posts showcasing the app's features and benefits.
    - Run targeted paid advertising campaigns to reach engines to reach a wider audience.
- SEO (Search Engine Optimization)
  - Objectives = Improve online visibility and ranking on search engines to attract organic traffic.
  - Tactics =
    - Optimize website content and app store listings with relevant keywords related to food waste reduction and sustainability.
    - Create high-quality, shareable content like blog posts, infographics, and tutorials.

- Build backlinks through collaborations with relevant influencers, bloggers, and organizations in the sustainability space.
- Regularly monitor and update SEO strategies based on changing algorithms and user behavior.
- Email Marketing
  - Objectives = Nurture leads, retain users, encourage app usage through personalized communication
  - Tactics =
    - Segment email lists based on user behavior, preferences, and app interactions
    - Send targeted emails, including onboarding sequences, educational content, and personalized recommendations
    - Run email campaigns promoting new features, updates, or special events.

## E. COMPARISON WITH SIMILAR SERVICE/APPS

- Comparison Positioning



- Similarity percentage

	Food Sustainability Assessment	Cook Recommendations Recipe	Food Waste Processing Recommendations	Reminders Notification
Edival	✓	✓	✓	✓
Too Good To Go	✗	✗	✗	✗
Kitche	✗	✗	✗	✓

Olio	✗	✗	✗	✗
Pepperplate	✗	✓	✗	✗
CoZo	✗	✗	✗	✗

- Analysis of the different or unique

Edival's high functionality and impact stem from its use of object detection technology to assess food conditions. It offers various features, including food recommendations, processing suggestions for unsuitable ingredients, and food expiration reminders, making it an easy and effective tool for users to reduce food waste.

Too Good To Go boasts high functionality and a moderate impact, offering features like a marketplace for purchasing surplus food and a community for sharing. It aids in reducing food waste generated by restaurants and retailers, yet its limitation lies in its exclusive focus on acquiring surplus food from these establishments.

Kitche has moderate functionality with a focus on reducing food waste from leftovers through its meal plan recommendation feature. However, its impact is relatively low as its capabilities are limited to addressing food waste from leftovers, and its main function is to create meal plans.

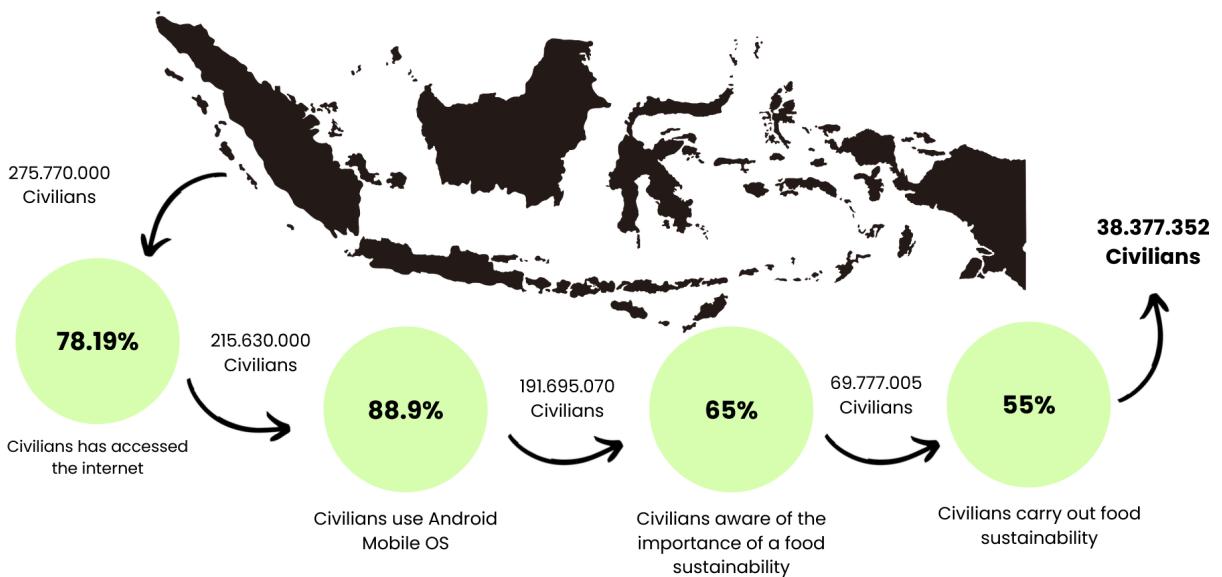
Olio has low functionality but a high impact, as it helps reduce food waste produced by household users. However, Olio relies on user interaction to share food.

Pepperplate has moderate functionality and impact due to its recipe saving features, shopping reminders, and expiration date tracking. It facilitates an easy and effective way for users to reduce food waste.

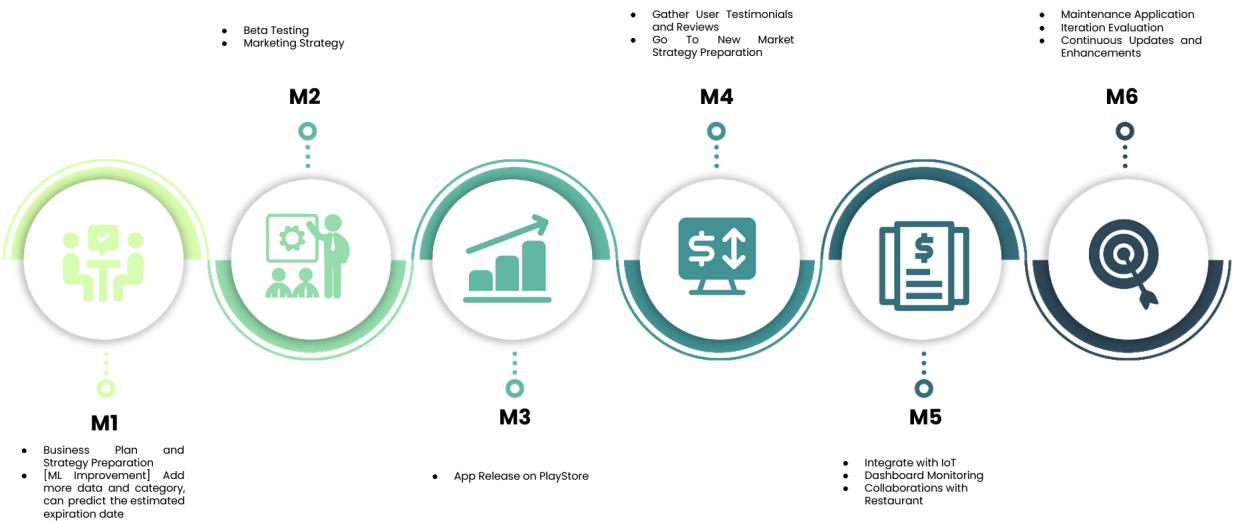
CoZo has medium functionality and a high impact, offering features such as recipe saving, shopping reminders, and expiration date tracking. It provides an easy and effective way to help reduce food waste.

## F. POSSIBLE PILOT/TRIAL IN THE NEXT 6 MONTHS

- Actual local (Indonesia) implementation of the project you've done for the next six months



- Timeline and Project Milestones



- Structural/ Member's Role

- Project Manager = The Project Manager oversees the entire development process, ensuring that the project stays on schedule, within budget, and meets its objectives.
- Developer = Developers are responsible for building the technical components of the Edival app, including the front-end and back-end functionalities.
- UI/UX Designer = UI/UX designers focus on creating an intuitive and visually appealing user interface and overall user experience.
- Business Consultant = A Business Consultant provides strategic guidance to align the app development with business goals and market needs.

- Quality Assurance = QA professionals focus on ensuring the Edival app meets quality standards by testing its functionality, performance, and usability.
- Marketing Team = The Marketing Team is responsible for promoting the Edival app, creating awareness, and driving user adoption.

## G. BUDGET PLAN

- **Budgeting - USD 10k / IDR 140m**

No	Description	Total
<b>INCOME</b>		
1	Cash	USD 10,000.00
<b>Total Income</b>		
<b>EXPENSES</b>		
<b>A</b>	<b>Additional Budget for Human Resources</b>	
1	Project Manager	USD 645.62
2	Developer	USD 516.50
3	UI/UX Designer	USD 258.25
4	Business Consultant	USD 839.31
5	Quality Assurance	USD 440.32
<b>B</b>	<b>Additional Budget for Research/Ops</b>	
1	Survey and Research Cost	USD 2,000.00
2	Operational Cost	USD 800.00
3	Infrastructure Cost	USD 1,000.00
<b>C</b>	<b>Additional Budget for Marketing and Sales</b>	
1	Marketing Team	USD 1,000.00
2	Go-to-new Market	USD 1,000.00
<b>D</b>	<b>Additional Budget for Other Expenses</b>	
1	Unexpected Cost	USD 1,000.00
2	Taxes and Legal Cost	USD 500.00
<b>Total Expenses</b>		<b>USD 10,000.00</b>

- **Summary**

No	Description	Total
1	Additional Budget for Human Resources	USD 2,700.00
2	Additional Budget for Research/Ops	USD 3,800.00
3	Additional Budget for Marketing and Sales	USD 2,000.00
4	Additional Budget for Other Expenses	USD 1,500.00
<b>Total Expenses</b>		<b>USD 10,000.00</b>

- **Sustainability: Profit Projection per Year**

No	Description	Total
<b>INCOME</b>		
1	Cash	USD 120,000.00
2	Sales (penjualan)	USD 60,000.00
3	Project (proyek)	USD 12,000.00
4	Subscription (langganan)	USD 36,000.00
5	Grants (hibah)	USD 12,000.00
6	Soft Loan (pinjaman)	USD 0
<b>Total Income (A)</b>		<b>USD 240,000.00</b>
<b>EXPENSES</b>		
<b>A</b>	<b>Additional Budget for Human Resources</b>	
1	Project Manager	USD 7,747.44
2	Developer	USD 6,198.00
3	UI/UX Designer	USD 3,099.00
4	Business Consultant	USD 10,071.72
5	Quality Assurance	USD 5,283.84
<b>B</b>	<b>Additional Budget for Research/Ops</b>	
1	Survey and Research Cost	USD 24,000.00
2	Operational Cost	USD 9,600.00
3	Infrastructure Cost	USD 12,000.00
<b>C</b>	<b>Additional Budget for Marketing and Sales</b>	
1	Marketing Team	USD 12,000.00
2	Go-to-new Market	USD 12,000.00
<b>D</b>	<b>Additional Budget for Other Expenses</b>	
1	Unexpected Cost	USD 12,000.00
2	Taxes and Legal Cost	USD 6,000.00
<b>Total Expenses (B)</b>		<b>USD 174,000.00</b>
<b>Total Revenue (A-B)</b>		<b>USD 66,000.00</b>

## I. SWOT Analysis The Project

- Strengths

- Innovative Concept = Edival introduces a novel concept by using object detection for assessing the suitability of food items, making it a unique and innovative solution.
- Contribution to SDGs = Edival aligns with Sustainable Development Goals (SDGs), demonstrating a commitment to addressing global challenges related to food waste and sustainability.
- Educational Aspect = Edival not only identifies unsuitables food items but also provides valuable recommendations and tips on food waste reduction, contributing to user awareness and education.
- Weaknesses
  - Limited Category = Edival has a limit in recognizing and assessing a comprehensive range of food categories so it doesn't cover all types of food items.
  - Inefficient Tensorflow Models = The models in Edival are inefficient which can slow down processing times and increase resource consumption.
- Opportunities
  - Partnerships = Collaborations with food industry stakeholders, government agencies, or non-profit organizations could enhance the app's reach and impact.
  - Global Reach = Eduval has the potential to expand globally, addressing food waste issues on a larger scale and adapting to diverse cultural and culinary contexts.
  - Continuous Technological Improvements = Regular updates and improvements in object detection can enhance the accuracy and efficiency of the app over time.
- Threats
  - Competition : The emergence of similar apps or technologies addressing food waste may pose a competitive threat to Edival