



Making Recycling Efforts Worthwhile

Presented By
Team GreenHero



User Persona



Auntie Wong is a teacher.

She loves the environment and is willing to spend effort on recycling and she is practicing recycling habits.

Yet, she's frustrated as:

- **Few people around her practicing recycling**
- **Recycling remains a hassle**

Auntie Wong

Auntie Wong represents one of the contributors for **30.67%** of the recycling rate in Malaysia

Influence more people to be like Auntie Wong

Vision Statement

By **2030**, reduce the adverse per capita environmental impact of cities

Goal Alignment

UN Sustainable Development **Goal : 11**
12th Malaysia Plan (2021-2025)

Finding 1: Awareness VS Action

Public awareness study : Malaysia



Out of 1603 respondents

95%

are very concerned
about the natural
environment in general

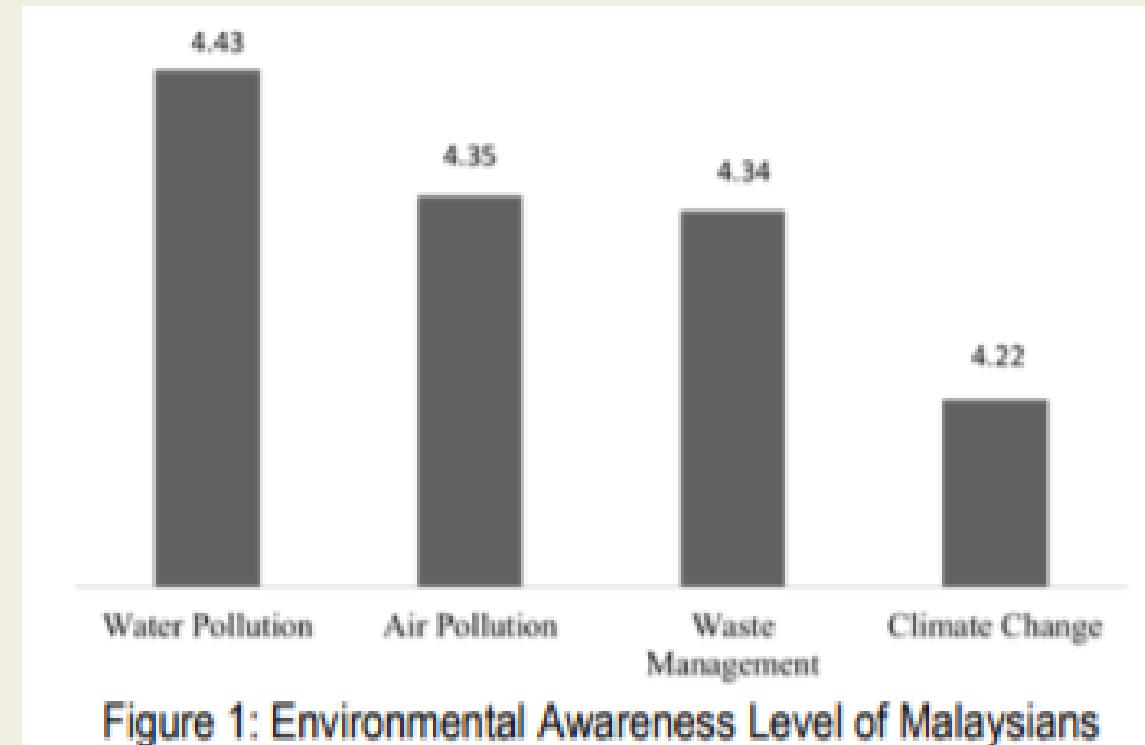
>80%

are concerned with
rubbish not properly
managed / recycled

Which means

Malaysians have high
awareness towards
environmental issues and
proper waste management

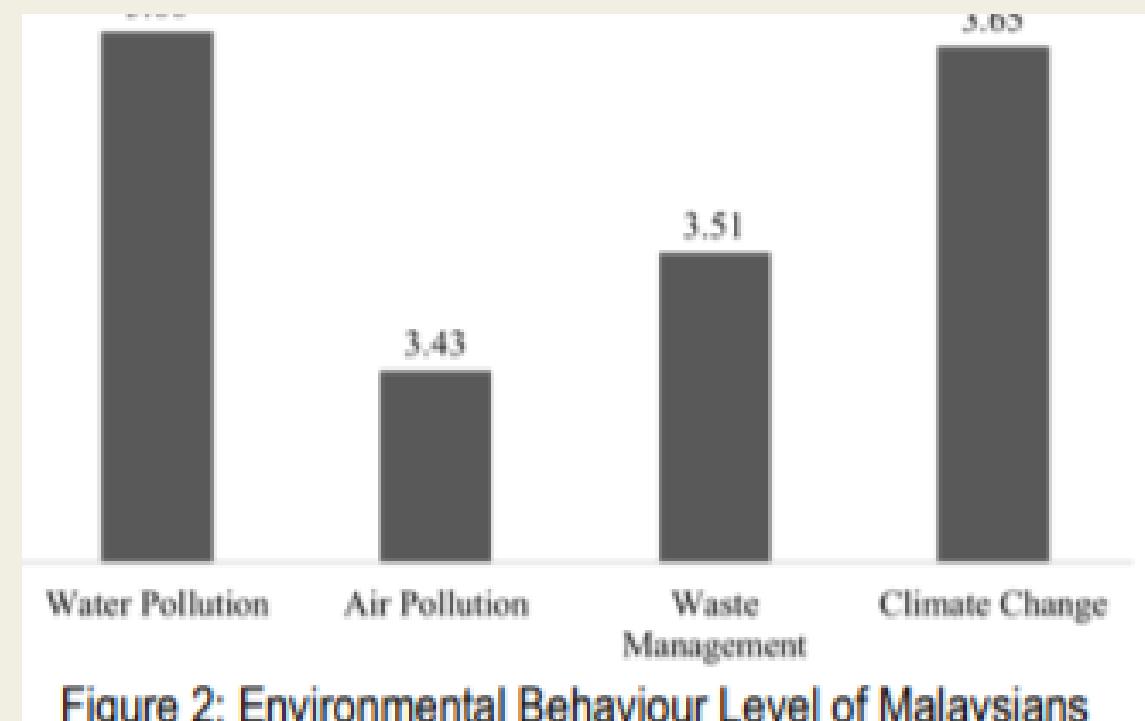
Awareness =/= Action



People are **AWARE** of the need to protect the environment



But why aren't more people **DOING** it?



Reasons for inaction



Financial Cost



Time



Convenience

Therefore, we present you...



Transform awareness into action

Gamify each individual's journey to make the environment a greener place by creating a digital **green identity** that records milestone & achievement

Causes

Few people practice recycling

Financial Cost

Time

Convenience

How we solve it

Incentive and reward system

Nearest recycling center map

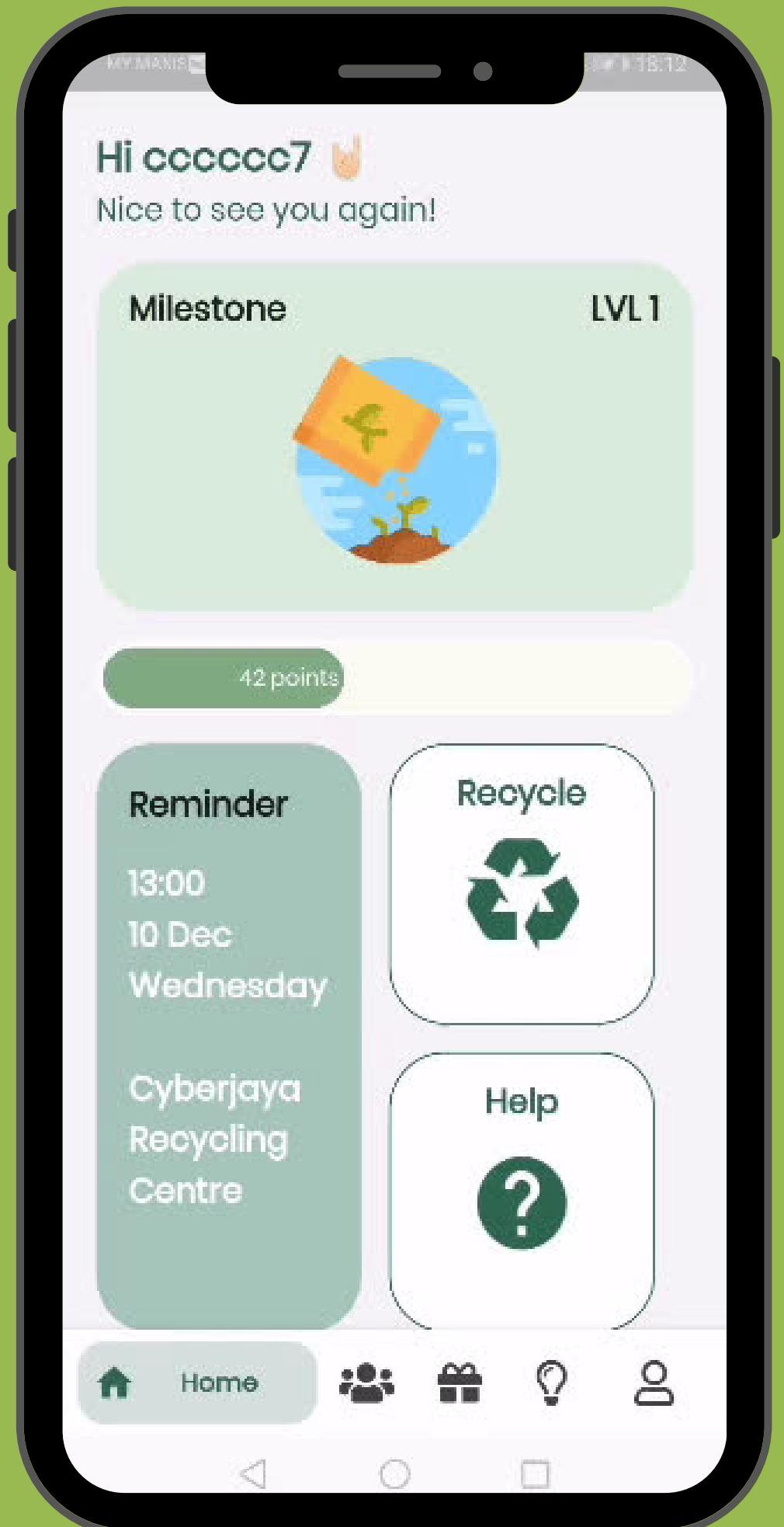
Appointment Booking system

Our Mission

We want to tackle the larger
sustainability issues with a
larger community

This is where gamification comes in....





Gamification Mechanism

Green Identity



Personal milestone

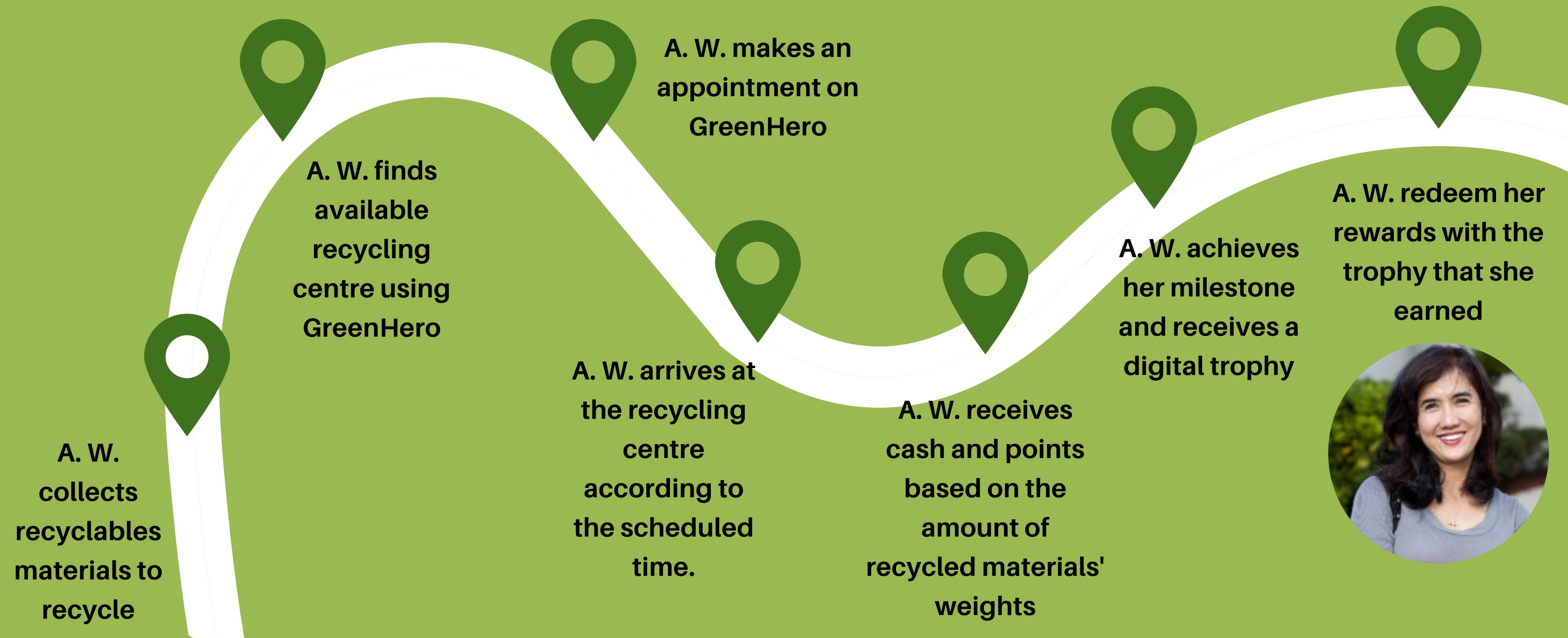


Community milestone



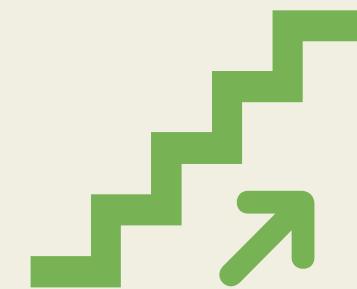
Leaderboard

User Journey

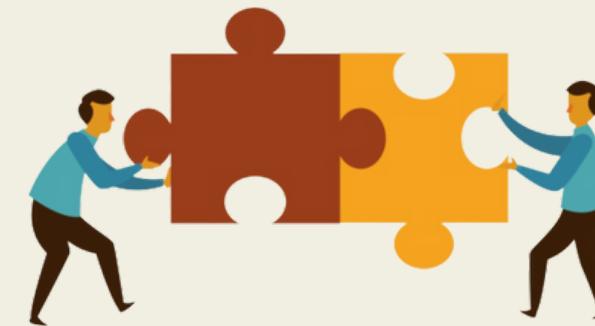


Utility

Tiered reward system



Easy business integration



Connection to open market



Customizable giveaways



Benefits (Green Identity)



GreenGamer



GreenGuardian



GreenHero

Free food and drinks in retail stores

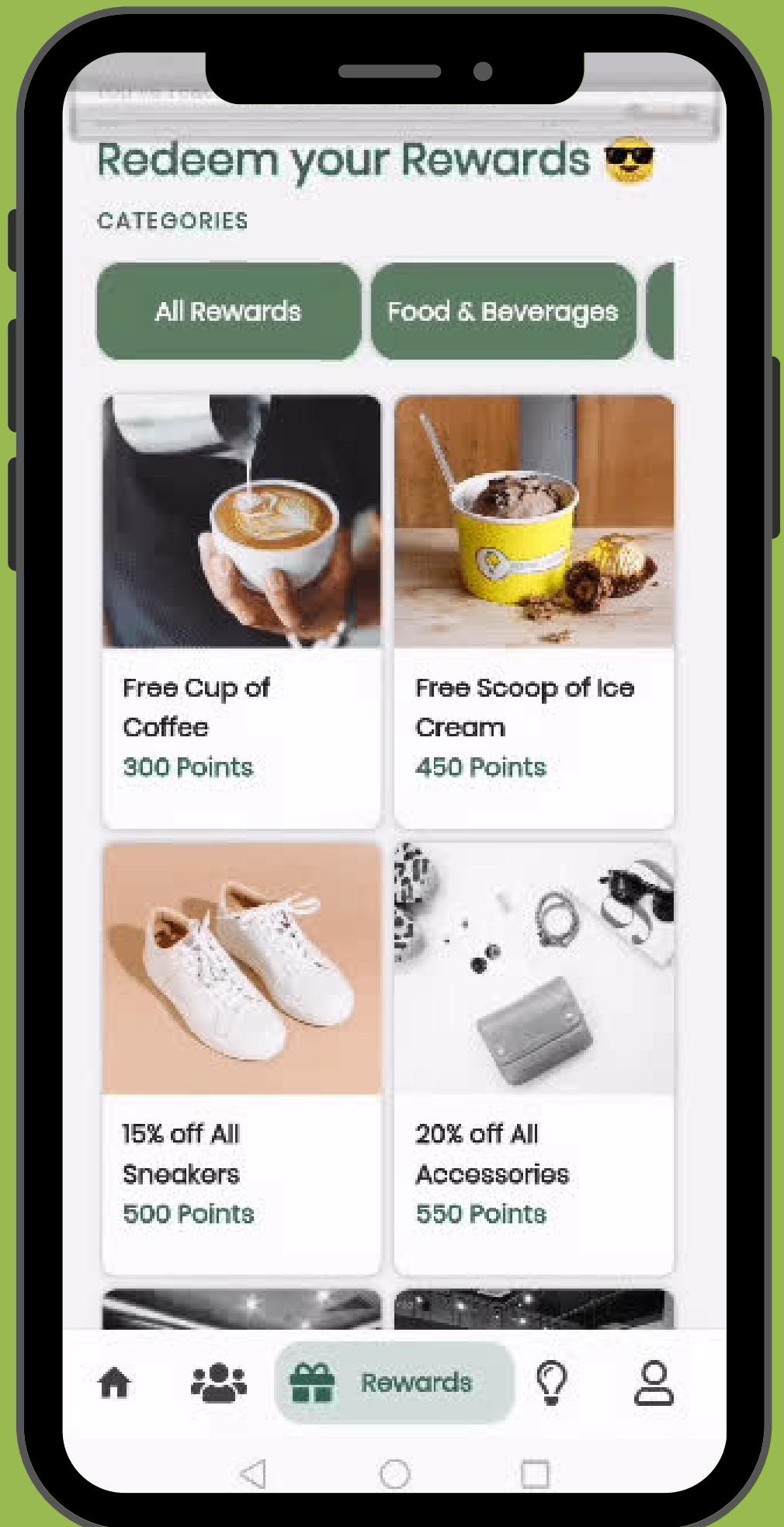


Discount and purchase voucher in eco-stores



Limited edition swags
Community monthly gathering,
More valued discounts





How to win trophy benefits



Collect as many trophies as possible



Achieve the minimum required amount of trophy



Redeem a mystery gift

Unique perks from the Community Challenges



My Clean Beach
Movement



Hike and Clean



The Sampah Ride

What you will get:

- Unique Trophy
- Free vouchers
- Free souvenirs
- New friends!

Our impact

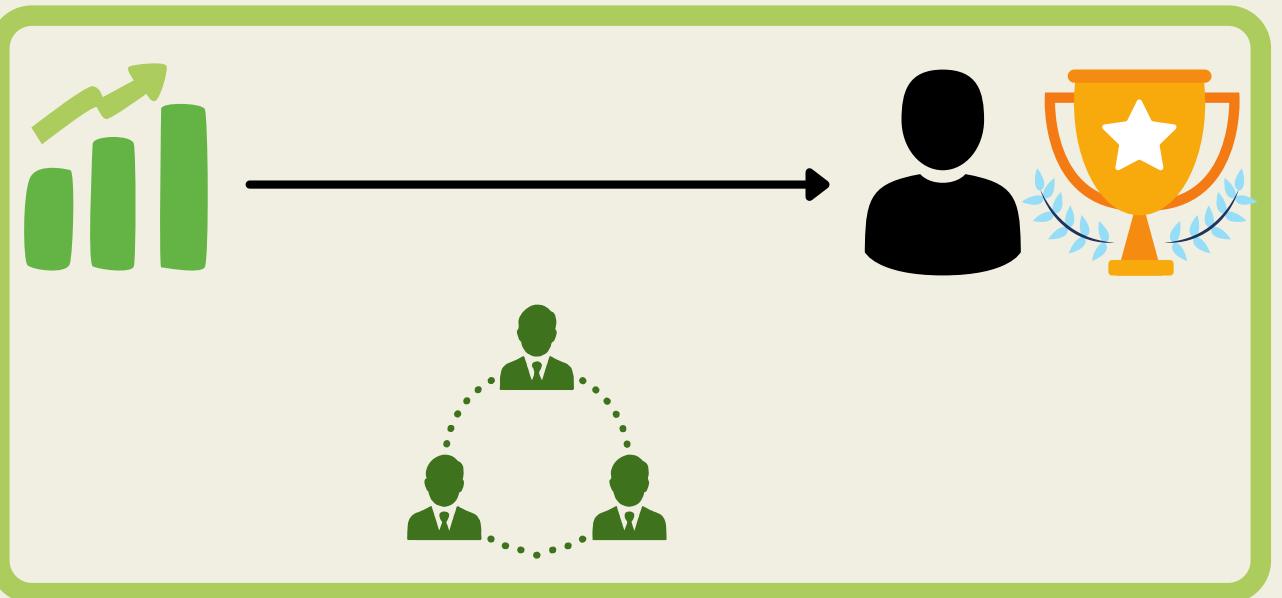


Cultivate Green Behavior

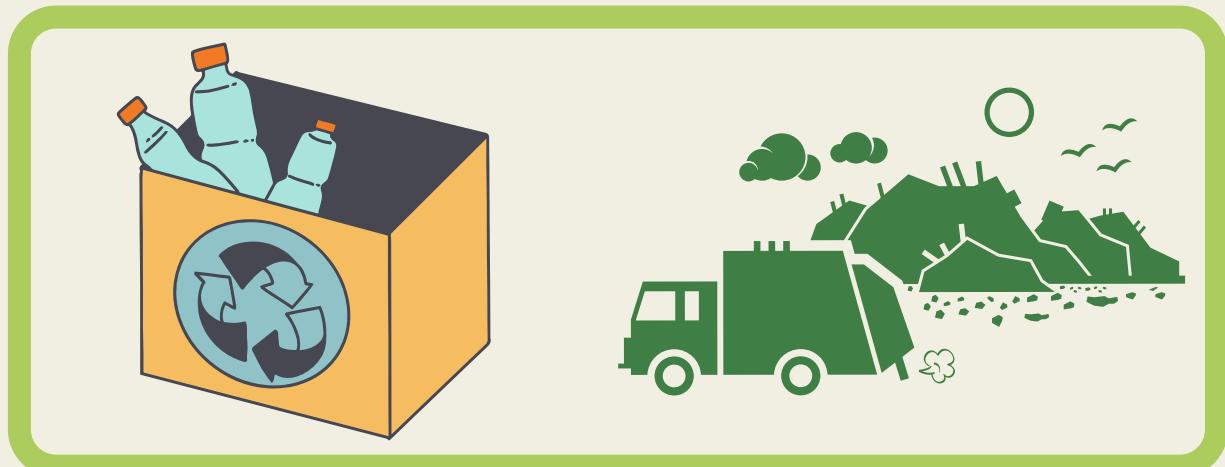
Triple Bottom Line Sustainability



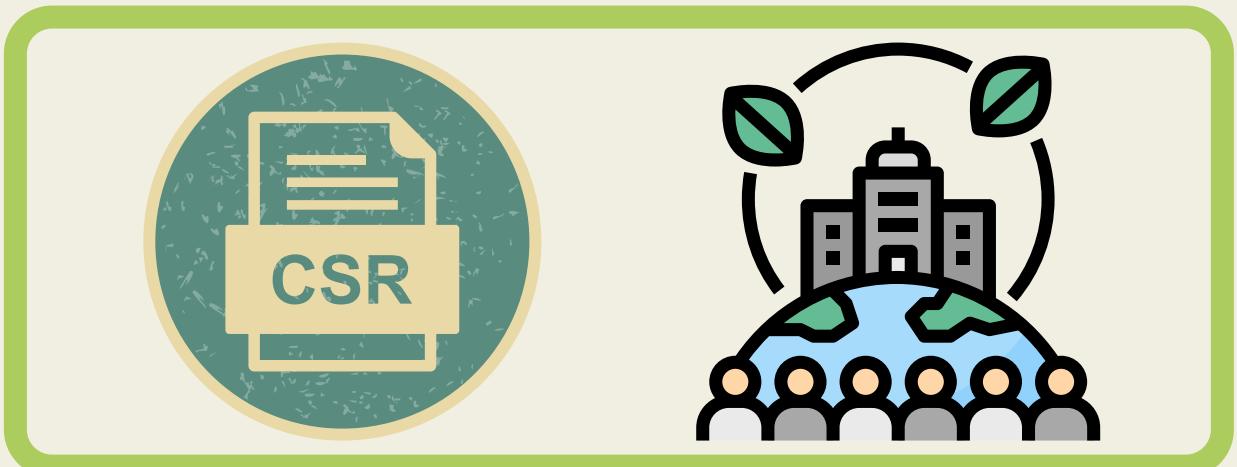
People



Planet



Profit



REVENUE STRUCTURE



Ad revenue from third party to be featured in app



Affordable commission rate for involved recycling centres



Goverment and CSR funding

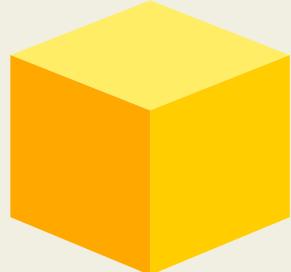


Crowdfunding

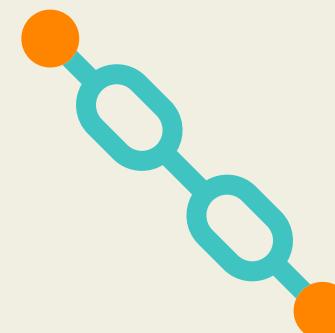
Value of our solution

**Strengthening GreenHero Gamifying Mechanism with
Blockchain Technology (NFT)**

Scalable



Traceable



Interoperable



Proof of ownership

Project Timeline

Phase 1: Building

Build a strong community base by onboarding people with recycling routines

Phase 2: Influencing

More semi-recyclers or people who didn't recycle before joining by influence of the base users

Phase 3: Sustaining

More people joining + existing base moving to a higher tier
= create a multi-tier reward system

Join us to solve the problem together as a community. You are not alone.

Potential Partners



KPKT



OUR TEAM



LEE TECK YUAN
Team Leader



CELINE WONG LEE JING
Designer



CHEE AN NIE
Developer



LOKE RUI KEE
Hustler

**Join Our Community
Be a GreenHero Today!**

**Download GreenHero.apk Now
(Android)**

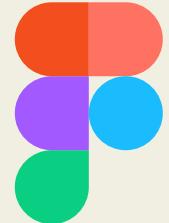


Appendix

Reference

1. Mei, N. S., Wai, C. W., & Ahamad, R. (2017). Public Environmental Awareness and Behaviour in Malaysia. *Asian Journal of Quality of Life*, 2(5), 43. <https://doi.org/10.21834/ajqol.v2i5.10>
2. Malaysia Versus Waste | Brunel University London. (2020). Brunel.ac.uk. <https://www.brunel.ac.uk/news-and-events/news/articles/Malaysia-Versus-Waste>
3. Creating zero-waste awareness. (2021, June 13). NST Online; New Straits Times. <https://www.nst.com.my/opinion/letters/2021/06/698464/creating-zero-waste-awareness>
4. Poll shows voters most concern with pollution of rivers and seas. (2021). Wwf.org.my. <https://www.wwf.org.my/?25445/Poll-shows-voters-most-concern-with-pollution-of-rivers-and-seas>
5. Recircle. (2017). Recircle.com.my. <https://www.recircle.com.my/>
6. Riiicycle | Home. (2019). Riiicycle.com. <https://www.riiicycle.com/>
7. shahril. (2020, July 10). Sustainable Waste Management in Malaysia : Opportunities and Challenges. MIDA | Malaysian Investment Development Authority. <https://www.mida.gov.my/sustainable-waste-management-in-malaysia-opportunities-and-challenges/>
8. Nielson, B. (2018, August 6). Gamification of Problem Solving | Your Training Edge ®. Yourtrainingedge.com. <https://www.yourtrainingedge.com/gamification-of-problem-solving/>
9. Daniels, B. (2020, March 3). How Does Gamification Drive Engagement | StriveCloud. StriveCloud. <https://strivecloud.io/blog/app-gamification/how-gamification-drives-engagement/>

Project Submission Links



Figma Design

<https://www.figma.com/file/18F9GNBv0MOCc3SFBWJ69g/GreenHero-Design?node-id=524%3A377>



Github Link

<https://github.com/ninniann/GreenHero>



APK File

https://drive.google.com/file/d/1EBVevKN17yRA3FkjJ-5sav_dLBmjiLbI/view?usp=sharing



Survey response

https://docs.google.com/spreadsheets/d/1TkaNg2bwsV3Xxx_j5Ej_emigT3k_khfXMXqmnlh-F4Rc/edit?usp=sharing

Survey Response Summary

Why do you recycle?

Save the environment

What do you recycle?

Plastic, paper, tins, glass

How often do you recycle?

From weekly, to yearly

Do you have friends with same recycling habits?

70% has friends with same
recycling habits

How to influence friends to recycle?

Setting an example

Survey Response Summary

Motivation to recycle

Save the environment

Track carbon footprint?
nope

Frustrations

It's a hassle & lack of instructions

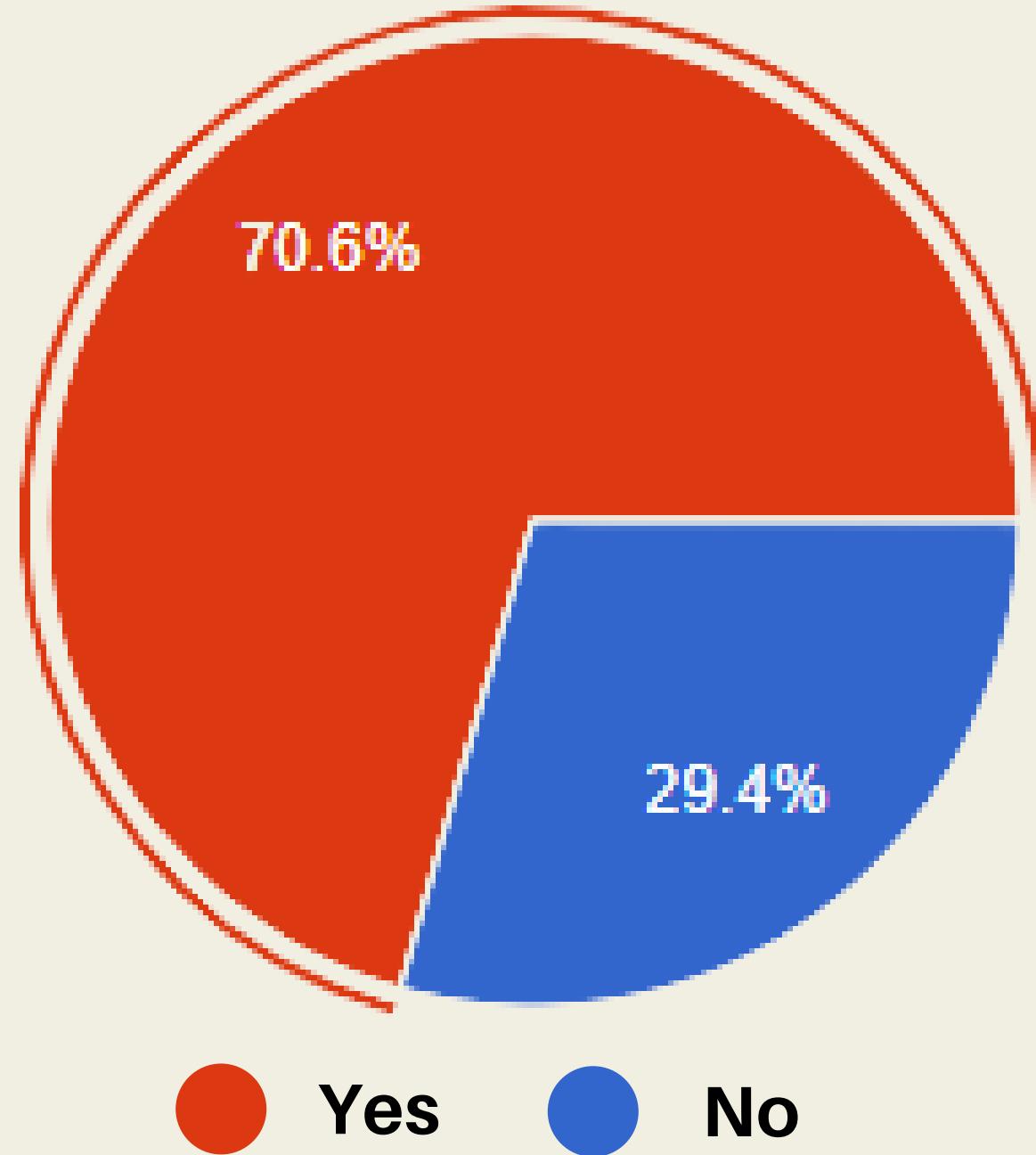
Feedback on our app
convenient, keeps recycling
process fun & exciting

Improvements?

more involved in the recycling
process

Recycling app user?

5%



According to the survey

All of the respondents **care** for the environment, **knows** they are **making positive impacts**, but they are **unaware of how much impact** they are having.

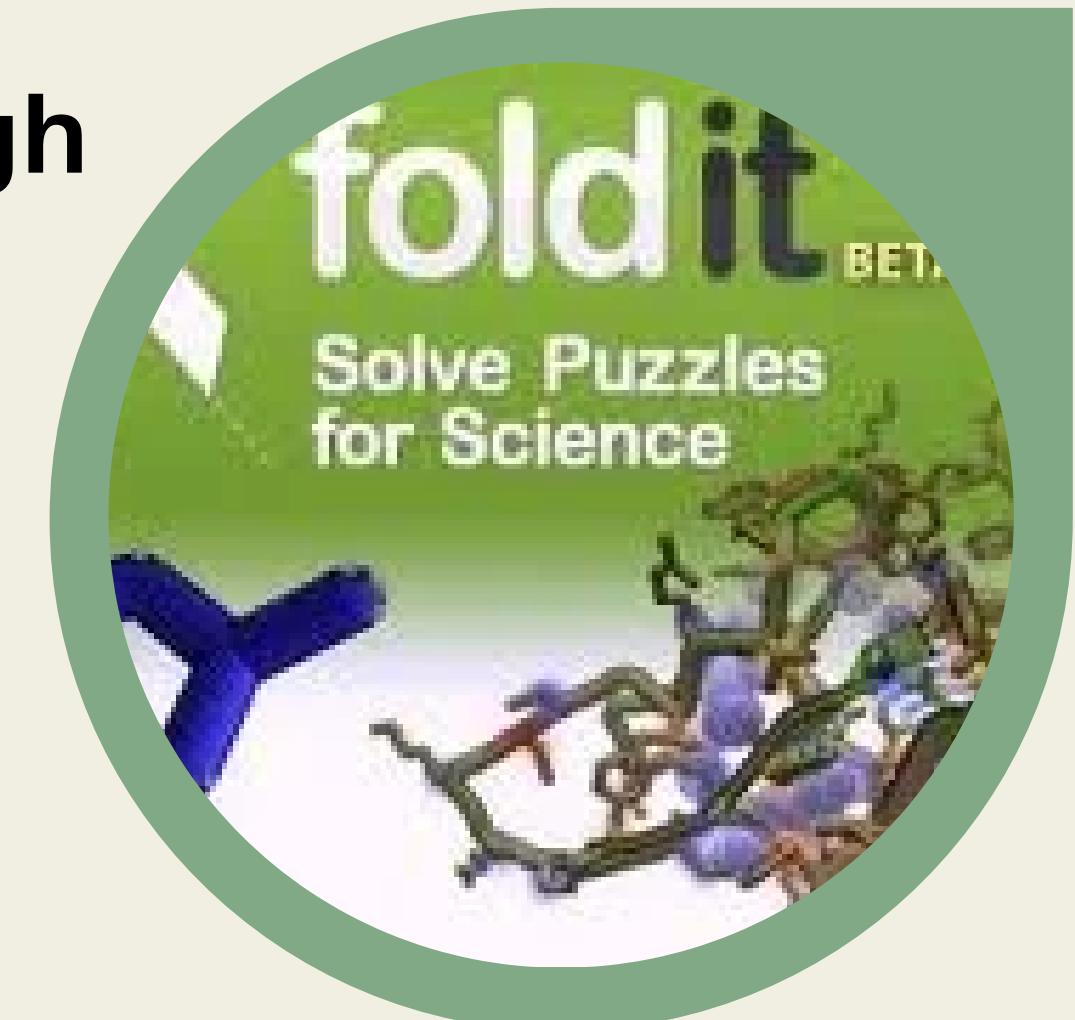
Why

Gamification?



The Foldit Gamers for AIDS Breakthrough

- Solved riddle of HIV Enzyme within
3 Weeks
- Of what took scientists **15 years** to
figure



Reward system

Attract new users



Autodesk has **54%** increase in trial usage, **15%** increase in conversion rate, and **29%** increase in sales of more expensive products

Retain existing users



Electronics industry has **44%** more re-visits by fully engaged customers and **63%** lower customer attrition

Blockchain Application

Using Non-Fungible Token (NFT) As A Trophy



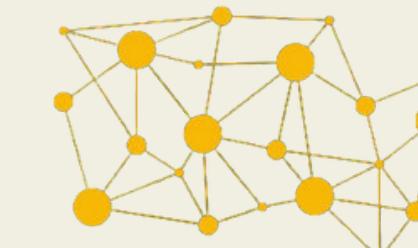
1 VERIFIED

Traceable and Tamper-Proof



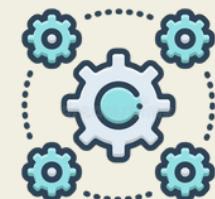
2 DIGITAL PROOF

of efforts & milestones that a user has achieved over time



3 DECENTRALIZED NETWORK

so that anyone can easily verify & trust the journey behind the trophy



4 HIGH INTEROPERABILITY

between applications



5 EASY INTEGRATION

with other apps & businesses

Transparency along our recycling journey.

Our competitors

Feature	Recircle app	Riiicycle app	GreenHero app
Recycle for cash	✓	✓	✓
Convenient	✓	✓	✓
Redeem non-cash rewards		✓	✓
Green effort tracking	✓		✓
Engaging community			✓
Unique Green Identity			✓

PROJECT MILESTONES





But why do these problems still exist?

- RM430m (US\$100m) has been spent on closing just 17 out of **165** existing dumpsites
- Malaysians generate more than **38,000 tonnes** of waste daily on average in 2021 with **30.67%** of it getting recycled

Things will only get worse

in developing countries like Malaysia...



Waste generated in 2005 was **19,000** tons per day at a recycling rate of 5%.



The quantity rose to **38,000** tons per day in 2021, despite the increased recycling rate of 30.67%.

Budget Plan

Starting

Description	Cost
App store	100
Software	1,600
Users & accounts	200
User generated accounts	600
Social engagement	400
External API and integration	1,000
Total	3,900

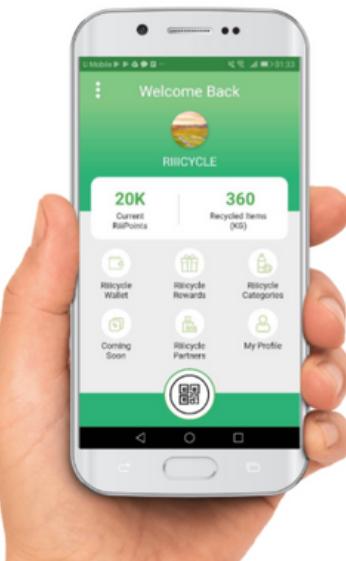
Maintenance per month

Description	Cost
App maintenance	3,000
Total	3,000

Other potential cost

1. User testings
2. Community management
3. Team salary

Competitor 1: Riicycle



HOW TO SOLVE?

Introducing RIICYCLE APP

Riicycle is a mobile app, providing you with a cutting-edge incentive and reward system when you recycle solid wastes like plastic, aluminium and steel cans and paper.

It is also a platform that rewards you when you learn how to go green. By encouraging you to recycle almost all the recyclable wastes, this revolutionary solution leverages on mobile app to also help inspire environmental change.

RIICYCLE

HOME ABOUT US NEWS & UPDATE HOW IT WORKS OUR TEAM CONTACT US OUR PARTNERS LOGIN

Riicycle creates an ecosystem which starts from recycling/green partners giving out points to users to redeem vouchers which can be spent at our merchant's premise.



Segregation at source

Households to segregate the dry waste at their home into recyclables and non-recyclables.



Affiliate Recycling Center

You can bring the recyclable waste to our nearby affiliate recycling center where our friendly staff will assist you in weighing the waste.



Recycle & Earn Points

Our affiliate recycling center will then credit Riipoints to your Riicycle wallet accordingly.



Green Merchant

By using Riipoints, rewards can be redeemed and used at any of our extensive list of green merchants' premises.

Competitor 2: Recircle

The image shows the homepage of the Recircle website. At the top is a teal header bar with the Recircle logo on the left and navigation links for Home, About, Features, Top Sales, Partners, Contact, and Shop on the right. Below the header is a large, bold teal text "CHECK THE FEATURES". Five rounded rectangular cards, each containing a smartphone icon displaying the Recircle app interface, are arranged horizontally. The cards are: 1) "RECYCLE EASILY WITH JUST A FEW TAPS ON OUR MOBILE APP" showing two iPhone screens; 2) "AN ONLINE RECYCLING PLATFORM THAT CONNECTS BUYER & USERS IN MALAYSIA" showing two iPhone screens; 3) "UP TO 8 CATEGORIES YOU CAN RECYCLE IN THE APP" showing a single iPhone screen; 4) "EARN CASH + POINT" showing a smartphone screen with a menu and a second screen showing "Energy Saving" stats; 5) "TRACK YOUR CARBON FOOTPRINT" showing a smartphone screen with "Energy Saving" stats.

RECYCLE EASILY
WITH JUST A FEW TAPS
ON OUR MOBILE APP

AN ONLINE
RECYCLING
PLATFORM
THAT
CONNECTS
BUYER &
USERS IN
MALAYSIA

UP TO 8 CATEGORIES
YOU CAN RECYCLE
IN THE APP

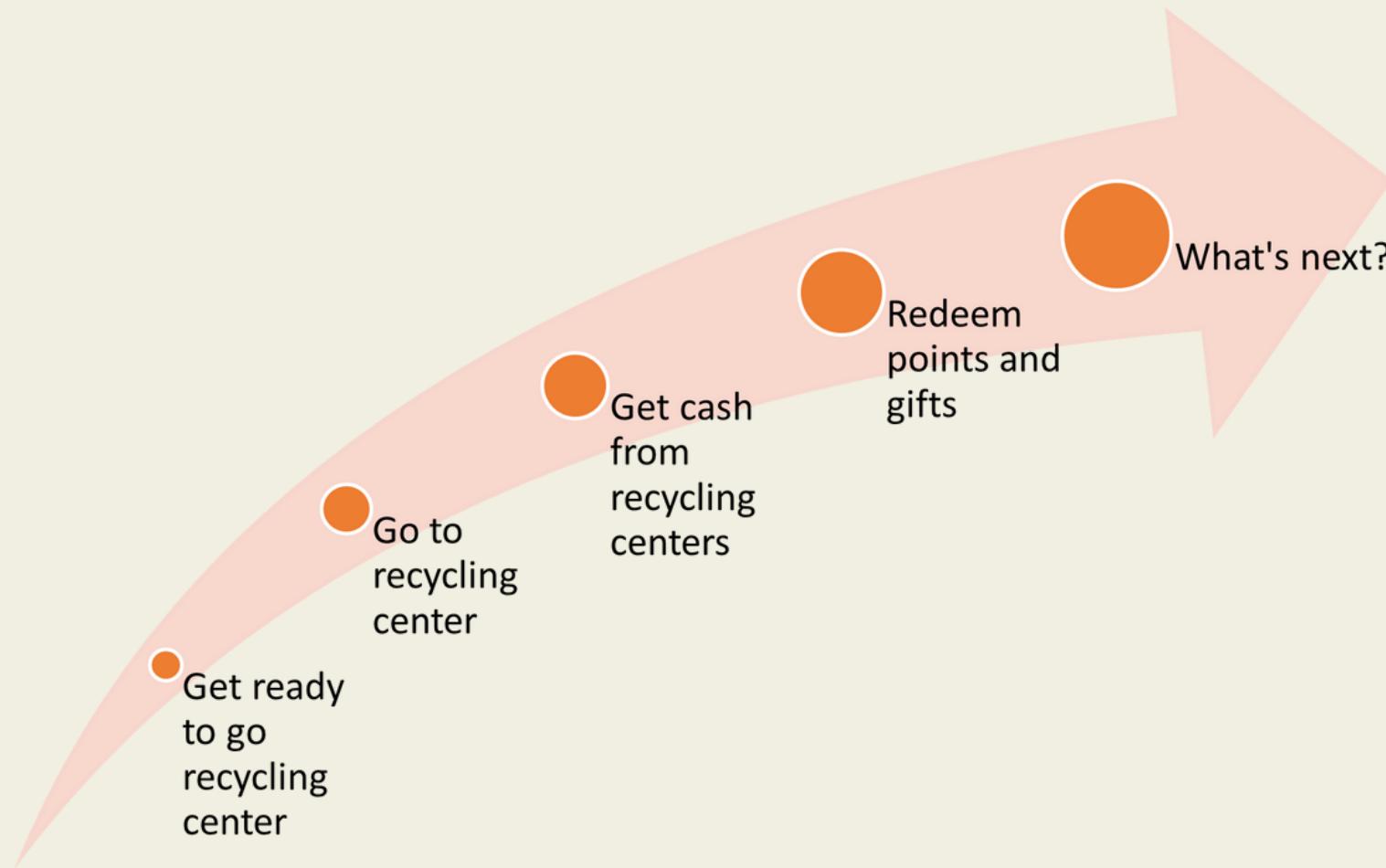
EARN
CASH
+
POINT

You can transfer
your points to other
users or CASH OUT!

TRACK YOUR
CARBON
FOOTPRINT

What makes us different?

Usual traditional way



GreenHero way



More details: <https://docs.google.com/document/d/1NmOV1KG0yyAGpypH9KdjhEm5ZsZ48ElH/e>



Full App Demo