

# EnVolunTech

**Vision:** EnVolunTech as a leading partner of different community stakeholders to solve environmental and climate issues

**Mission:** We aim to bridge the gap between the environment and technology through tech volunteerism

**Goal:** To develop digital solutions to environmental and climate issues through the skills of passionate designer and developer volunteers



# The PlasticLoops Project

What comes to your mind when you hear  
**“Trash”?**



**The PlasticLoops  
Project**





**waste**



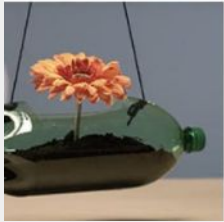
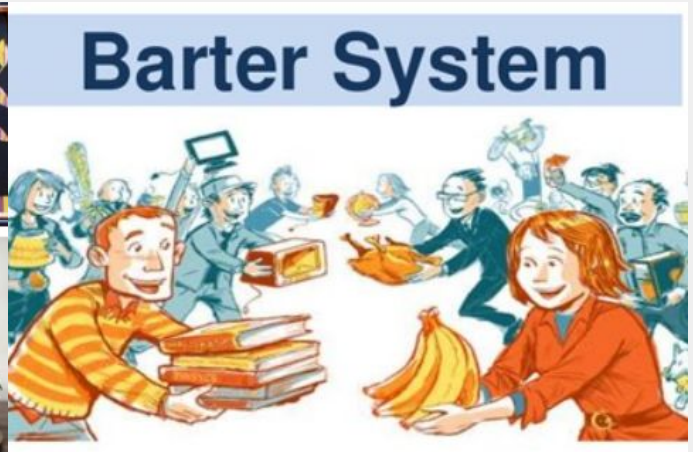
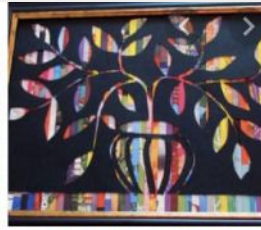
**pollution**



**disease**







opportunity

revenue

enterprise



# What is the present reality?



**The PlasticLoops  
Project**

**Family**



**When?  
Who? How?**

**Junk collector**



**Where? Who?**

**Recycle Shop**



**How? Whom?**



**The PlasticLoops  
Project**



**generation rate**

**0.36 kg/cap/day**

**35,580 tons/day**

**13 Mil tons/year**



**littered waste**

**13,342.5 tons/day**

**13.3 Mil kgs/day**



**62.5%**

**collected  
waste**

**37.5%**

**littered  
waste**

**56.7%**

**residential  
waste**



**43.0%**

**recyclable  
waste**



**school bus weight**



**What are the current situation about plastic pollution?**



**The PlasticLoops  
Project**



plastic generation  
**2.7 Mil**  
tons/year



plastic  
polluter to  
the oceans

ocean leakage  
**386,000**  
tons/year



**75%**  
diversion  
capacity

**20%**  
estimated leakage  
to ocean

**32.4%**  
brgy w/ MRF  
nationwide

**10%**  
sanitary landfill  
operating from  
actual needed

# Impacts of plastic pollution



**pollution**  
**land**  
**air**  
**water**  
**soil**



**deaths**  
**marine**  
**terrestrial**

**microplastics**  
**in the**  
**food chain**



**global**  
**warming**



## **Problem statement #1:**

**What are the root causes why there are low plastic diversion, reduction and recycling rates?**



**The PlasticLoops  
Project**



## **Problem statement #2:**

**How can we promote the circular economy approach to achieve waste reduction and recycling targets in plastic waste management?**



**The PlasticLoops  
Project**

# What are the existing solutions?



**The PlasticLoops  
Project**

# Existing solutions

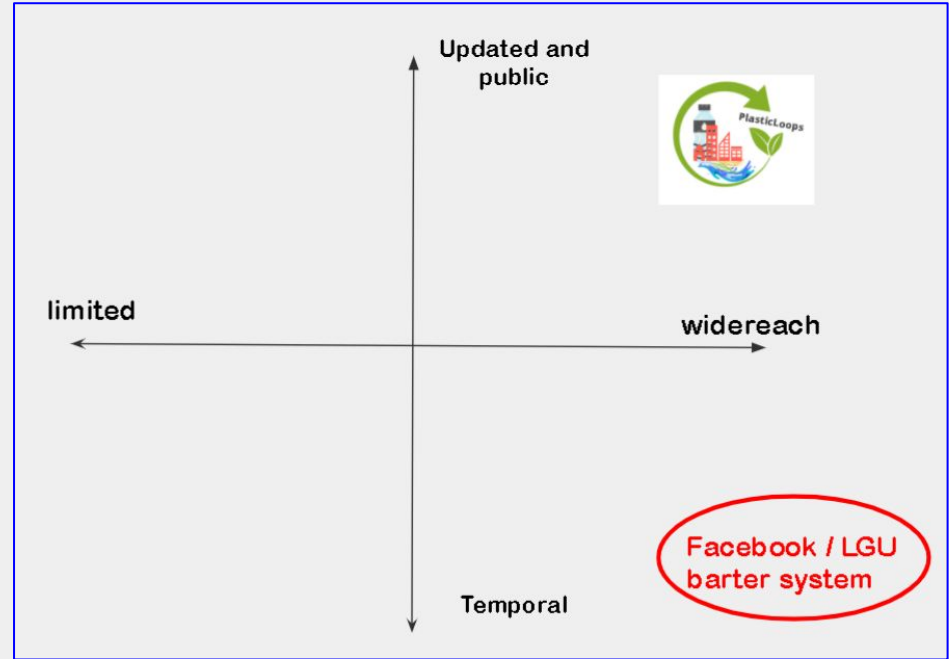
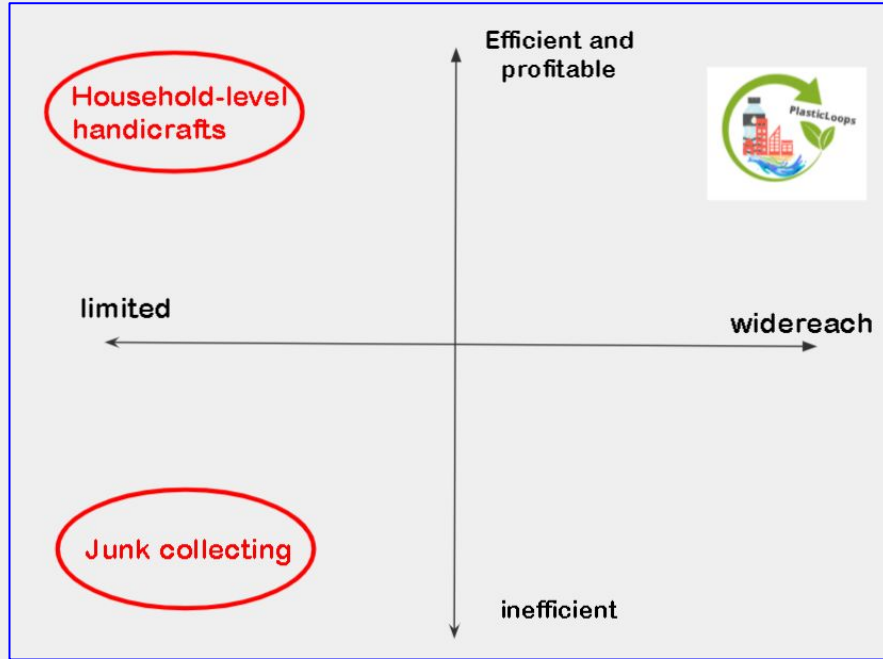


Waste diversion practices	Current practice	Disadvantages	Goal of Project PlasticLoops
Reuse	Facebook Barter System	Limited reach and can be inaccessible after sometime	Wide reach and updated
Reduce	LGU Trash for Goods	Low information drive and participation	Wide reach, inclusive and participatory
Recover	Random junk collection	Inefficient and conventional	Targeted and efficient
Recycle	Household-level handicrafts	Limited reach and low market	Profitable and wide reach



**The PlasticLoops Project**

# PlasticLoops vs existing solutions



**The PlasticLoops Project**



**There is a missing and ineffective medium  
to intensify waste diversion, reduction and recycling.**

**Project PlasticLoops aims to resolve this.**



**The PlasticLoops  
Project**



## Current State

Limiting platform to barter goods

Low information drive and few participation activity

Inefficient and conventional plastic collection

Limited reach and low market business

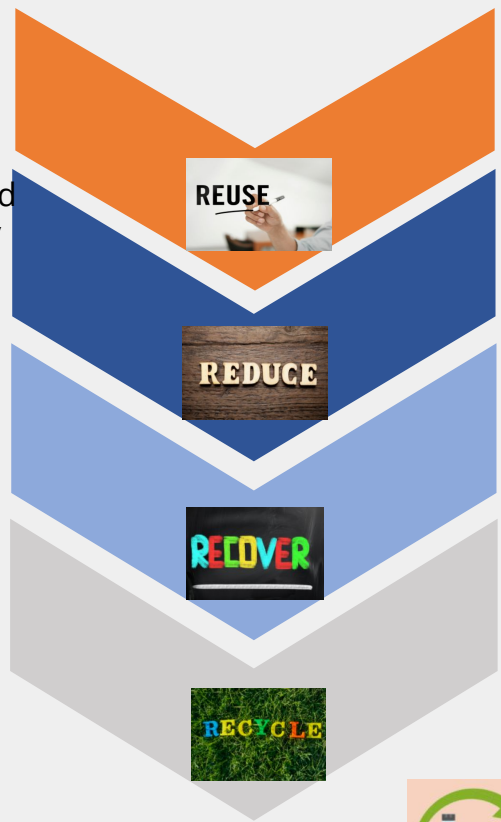
## Target State

Wide reach and versatile online shop

Wide reach, inclusive and participatory activity

Targeted and efficient plastic collection

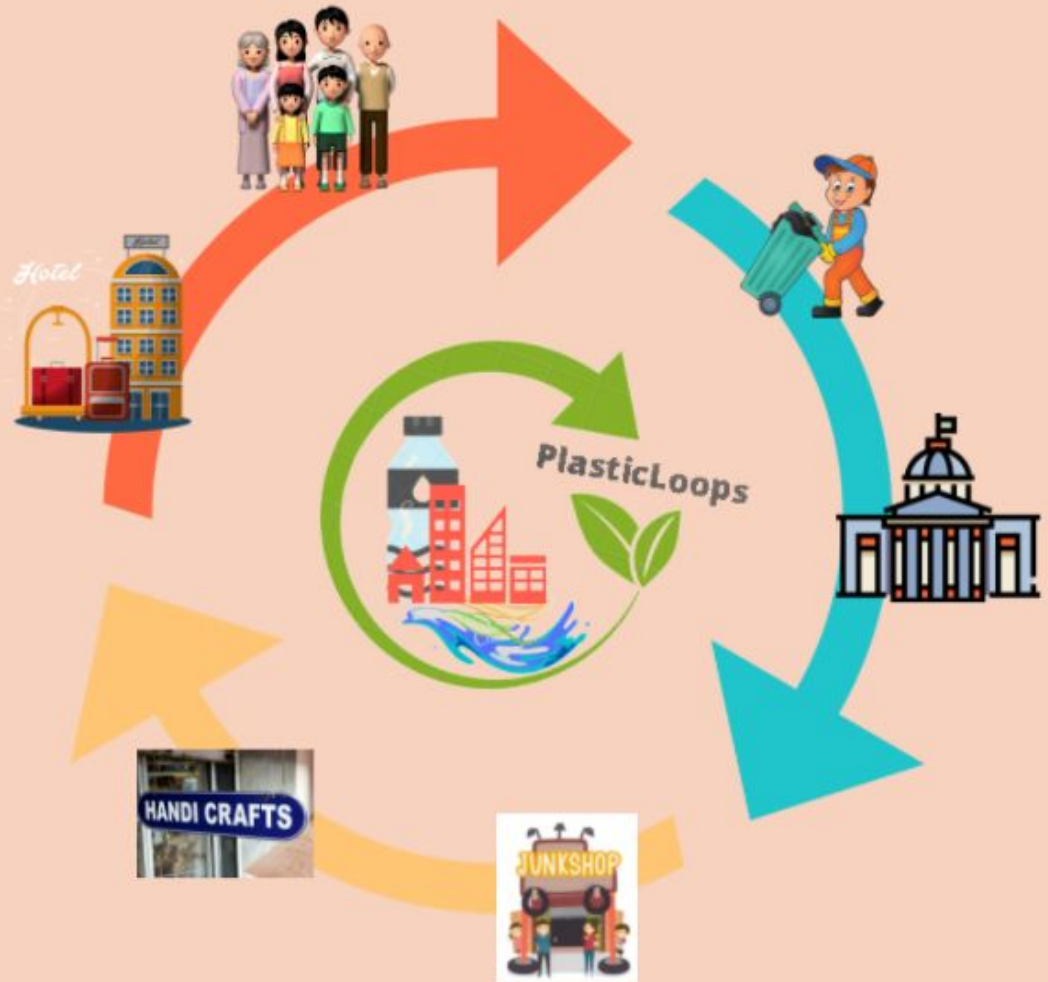
Profitable and wide reach business





# The PlasticLoops Project

- **Vision:** Stakeholders that are partners for waste reduction, recycling and diversion
- **Mission:** To increase the current plastic reduction, recycling and diversion rates of LGUs and other stakeholders
- **Goal:** Develop a robust, centralized communication and transactional application that can support a win-win-win output between and among stakeholders.





# The PlasticLoops Project

A centralized transaction and communication platform for plastic circular economy

## PlasticLoops

Barter

Sell

Search

Learn

### Announcement

July is Disaster Resilience Month!

Let us support government programs geared towards attaining disaster resilience! This year's theme is "Tamang Pamamahala't Kahandaan, Kaalaman at Pagtutuhungan sa Sakuna at Pandemya'y Kalasag ng Baya"

Posted July 16, 2021

CM Chito Miranda



CB Claudine Barreto



NS Nena Salvo



### LEADERBOARD

RANK	NAME	POINTS
1	Daniel Ebersole	60
2	Rick Vlaaliders	50
4	Nadir Balcká	40
5	Paul Jarvis	30
6	Gillaume	20
7	Radio Pink	10
8	Vadim Sherbakov	5

HM Hope Mot



ND Nestor Dilao



BB Bim Buy



### Events Board

July 24 Coastal Clean-up

July 26 Tree planting

July 27 Climate Change Forum

Aug 02 River Clean-up

Aug Stream Visual

TP Trio Pajo



MD Mark Doda



AI Anton Ibarle





# The PlasticLoops Project aims to contribute to the UN Sustainable Development Goals:



**The PlasticLoops  
Project**

<b>SDG No.</b>	<b>Specific Targets</b>	<b>Circular Economy Target</b>	<b>i-RISE solution</b>	<b>Objectives of Project i-RISE for community development</b>
<b>SDG 10, Reduced inequalities</b>	<p><b>Target 10.1 - Reduce income inequalities</b></p> <p><b>Target 10.3 - Ensure equal opportunities and end discrimination</b></p>	<p><b>Recover</b></p> <p><b>Reduce</b></p> <p><b>Recycle</b></p>	<p><b>Trace and collect functionality</b></p> <p><b>Online shop for recycled handicrafts</b></p>	<p><b>1. Empower low-income earners like junk collectors and recycle shop owners by providing them a platform to increase widen their market</b></p>
<b>SDG 11, Sustainable communities and cities</b>	<p><b>Target 11.6 - Reduce the environmental impacts of cities</b></p>	<p><b>Reuse</b></p> <p><b>Recover</b></p> <p><b>Reduce</b></p> <p><b>Recycle</b></p>	<p><b>Barter system functionality</b></p> <p><b>Trace and collect functionality</b></p> <p><b>Online shop for recycled handicrafts</b></p>	<p><b>1. Enhance RA 9003 implementation and activity participation by improving communication channels</b></p> <p><b>2. Support partner stakeholders and unify common goals to reduce, recycle and divert plastics</b></p>



SDG No.	Specific Targets	Circular Economy Target	i-RISE solution	Objectives of Project i-RISE for community development
SDG 12, Responsible Consumption and Production	<p>Target 12.2 - Sustainable management and use of natural resources</p> <p>Target 12.5 - Substantially reduce waste generation</p>	<p>Reuse</p> <p>Recover</p> <p>Reduce</p> <p>Recycle</p>	<p>Barter system functionality</p> <p>Trace/request and collect functionality</p> <p>Online shop for recycled handicrafts</p>	<p>1. Strengthen plastic circular economy by increasing plastic waste collection for raw material</p> <p>2. Trigger a mindset shift for islanders to consider eventual relocation</p>
SDG 13, Climate action	Target 13.3 - Build knowledge and capacity to meet climate change		Learn - climate change education functionality	1. Educate stakeholders about plastic pollution and its role on climate change



# Functionalities by Phase

Functionality	Display	Phase 1	Phase 2	Phase 3
1. Barter to LGU	SMS messaging	✓		
2. Announce	Home page display	✓		
3. Barter to Others	Web app menu	✓		
4. Sell	Web app menu		✓	
5. Learn	Web app menu		✓	
6. Leaderboard	Home page display		✓	
7. Analytics	Home page display			✓
8. Picture display board	Home display	✓		
9. Incentivize and plant	Account profile			✓
10. Events	Web app menu		✓	
11. Trace and collect	Web app menu		✓	



# Phase 1 - Functionalities

Functionality	Features	Purpose	Advantages	Benefits to circular economy
<b>1. Barter to LGU</b>	Localized SMS-based communication tool to inform residents in different barangays of barter schedules	Improve community participation by sending SMS messages to target areas where LGU intend to conduct Trash swap	Residents are updated of the barter schedule thru SMS encouraging wide participation of swapping plastic waste with goods	More participating residents equate to more recovered plastic wastes and more goods beneficiary
<b>2. Announce</b>	Quick display of information and updates on the home page	Improve community participation by displaying announcements and advices on web app home page	All stakeholders are easily-informed about activity schedules and updates	More updated residents mean more collaborating stakeholders and inclusive activities
<b>3. Barter to Others</b>	Online shop of bartered goods	Display all items available for bartering from different people	Easy-transaction of bartering goods through quick filters and tags	More barter transactions mean more potential wastes diverted for reuse
<b>4. Picture display board</b>	Quick display of event photos and transaction clips	Show on home page bartering transactions	Easy update of past events and transpired transactions	Photo visibility encourage other stakeholders to participate



## Phase 2 - Functionalities

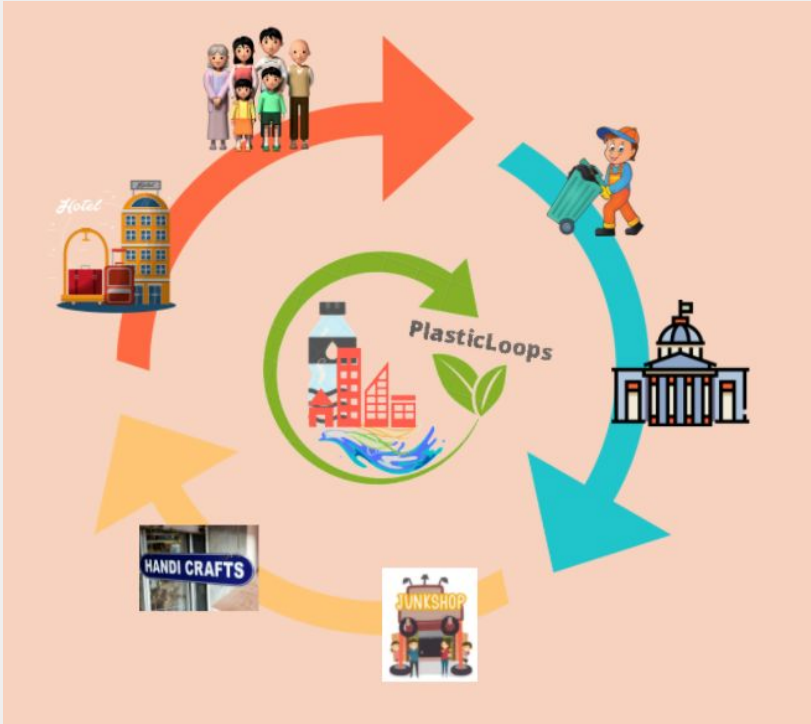
Functionality	Feature	Purpose	Advantages	Benefits to Circular Economy
5. Sell	Online shop of handicrafts and recycled goods	Handicraft sellers can display can their recycled goods for sale	Easy-transaction of selling goods and wider market reach of sellers	With more sales, sellers create more recycled products thus decreasing plastic waste
6. Learn	Online platform for climate change education	Display learning topics about climate change	Easy access of climate change learning modules	Educated stakeholders spread awareness to others
7. Leaderboard	Home page display of most active users	Display ranking of top users with most number of transactions and activities	Merit active users by showing their ranking by points	Encourage more users to join for more transactions on plastic diversion, reduction and recycling
8. Events	Quick display of events and updates on the home page	Show upcoming events where residents can join	All stakeholders are easily-informed about activity schedules and updates	More updated residents mean more collaborating stakeholders and inclusive activities
9. Trace and collect	Instant search and tracing of nearby collectors, residents / establishments with plastics for collections	Account owners can pin themselves and show their location when they have available trash for collection	Quick identification of plastic waste sources mean more collection and more income	More plastic waste collection translates to decreased plastic leakage and higher diversion rates

# Phase 3 - Functionalities

Functionality	Feature	Purpose	Advantages	Benefits to Circular economy
10. Analytics	Display of data metrics and analyzed information to monitor application KPI and achievements	Display analyzed data of bartered items, active users, estimated diverted waste, estimated finances	Data-driven analysis that may serve as basis for decision-support activities and policy making	More validated information to monitor a localities waste reduction, diversion and recycling rates
11. Incentivize and plant	A point system that incentivizes each transaction	Incentivize and give points to users for each transaction and equate to a planted mangrove / tree	Encourage social responsibility of residents to use the application to help mitigate climate change	The incentive program encourage users to create more transactions for more activities on plastic diversion, reduction and recycling



# Entity Boundary Descriptions



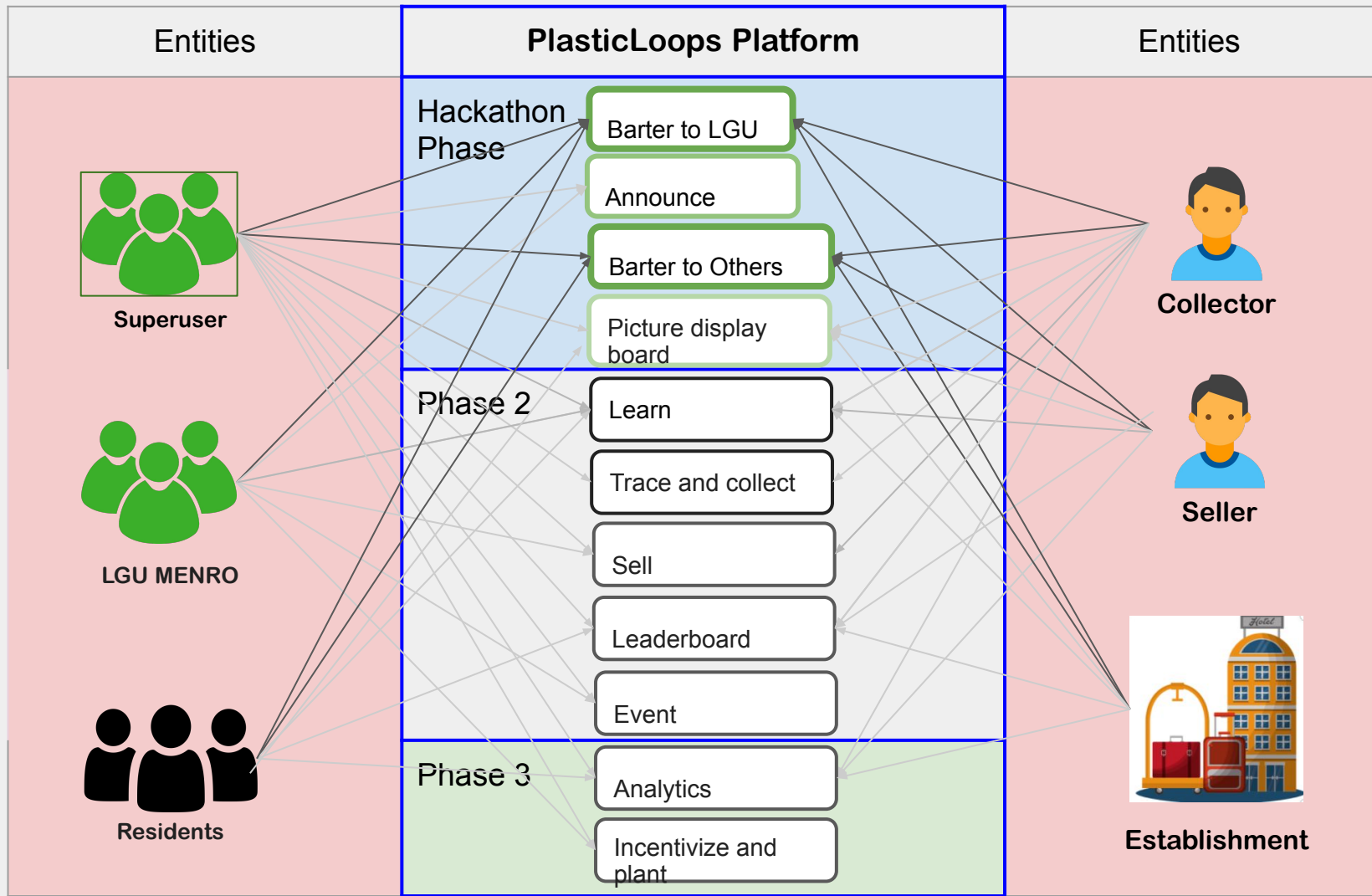
Entity Category	Description
Superuser	Application developers and admins
LGU	Local government unit heads
Normal User	Application-registered residents
Guest	Website visitor
Establishments	Business establishments
Collector	Junk collectors
Seller	Recycle shop, handicraft sellers



# Entity roles per Functionality

Functionality	Display	Superuser	LGU	Resident	Establishment	Collector	Seller
1. Barter to LGU	SMS messaging	✓	✓				
2. Announce	Home page display	✓	✓				
3. Barter to Others	Web app menu	✓		✓	✓	✓	✓
4. Sell - recycled goods	Web app menu	✓		✓	✓	✓	✓
5. Learn	Web app menu	✓	✓	✓	✓	✓	✓
6. Leaderboard	Home page display	✓					
7. Analytics	Home page display	✓					
8. Picture display board	Home page display	✓	✓				
9. Incentivize and plant	Account profile	✓		✓	✓	✓	✓
10. Event	Web app menu	✓	✓				
11. Trace and collect	Web app menu	✓	✓	✓	✓	✓	✓





# What is the business model?



**The PlasticLoops  
Project**

# Social Entrepreneurship Business Model



WIN!



WIN!



WIN!



**The PlasticLoops Project**

# Social Entrepreneurship Business Model

Transacting Entity		PlasticLoops functionality	Features	Revenue source	Potential revenue
LGU	Residents, Establishments	Barter to LGU	One button communication dissemination platform	Monthly subscription fee per LGU	P1,000 per month x 1000 LGUs = P1Million
Residents	Other residents	Barter to others	Online shop bartering	Advertising	
Collector	Residents, Establishments	Trace and collect	Instant search and locate of residential / shop waste sources	Advertising	
LGU, collector	Junk shop	Trace and collect	Instant search and locate of nearest junk shops	Advertising	
LGU, collector	Recycle shop seller	Trace and collect	Instant search and locate of nearest recycle shops	Advertising	
Recycle shop seller	Residents, Establishments	Sell - recycled goods	Online shop selling of recycled goods and crafts	Monthly subscription fee per shop	P1,000 per month x 100 shops = P100,000



# The PlasticLoops Project

**The place where all things are valued.**

