Scope, Epics, and Stories

for

ReClothes

Terrier

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1. DESCRIPTION OF THE PROBLEM IN YOUR WORDS

Waste in the textile from clothes causes a negative effect on the environment. According to Textile & Fashion Waste, the US produces over 17 million tons of textile waste every year, and 50% of customers throw their unwanted clothes in the trash.

The current solution of recycling clothes in the US includes offline second-hand stores such as Goodwill, physical cloth donation boxes, and online platforms such as reGain. However, current solutions do not trigger consumer's initiatives of donating clothes effectively for various reasons, including lack of reward and motivation, and lack of last-mile recycling clothes pick-up options.

To solve the pain point mentioned above, ReClothes provides an end-to-end solution to recycle second-hand clothes. We aim to build an online platform named ReClothes that connects stakeholders including clothes donors, second-hand clothes consumers, recycled clothes processing plants, and charity organizations, second-hand clothes sales platform and sales distributors. In addition, ReClothes also operates as a second-hand clothes marketplace to trade used clothes and products generated from the recycled material. On such platform, users can donate their used clothes, and received awards in the forms of cash, credits, sustainable coins, and awareness from other users in Reclothes community.

2. SCOPE
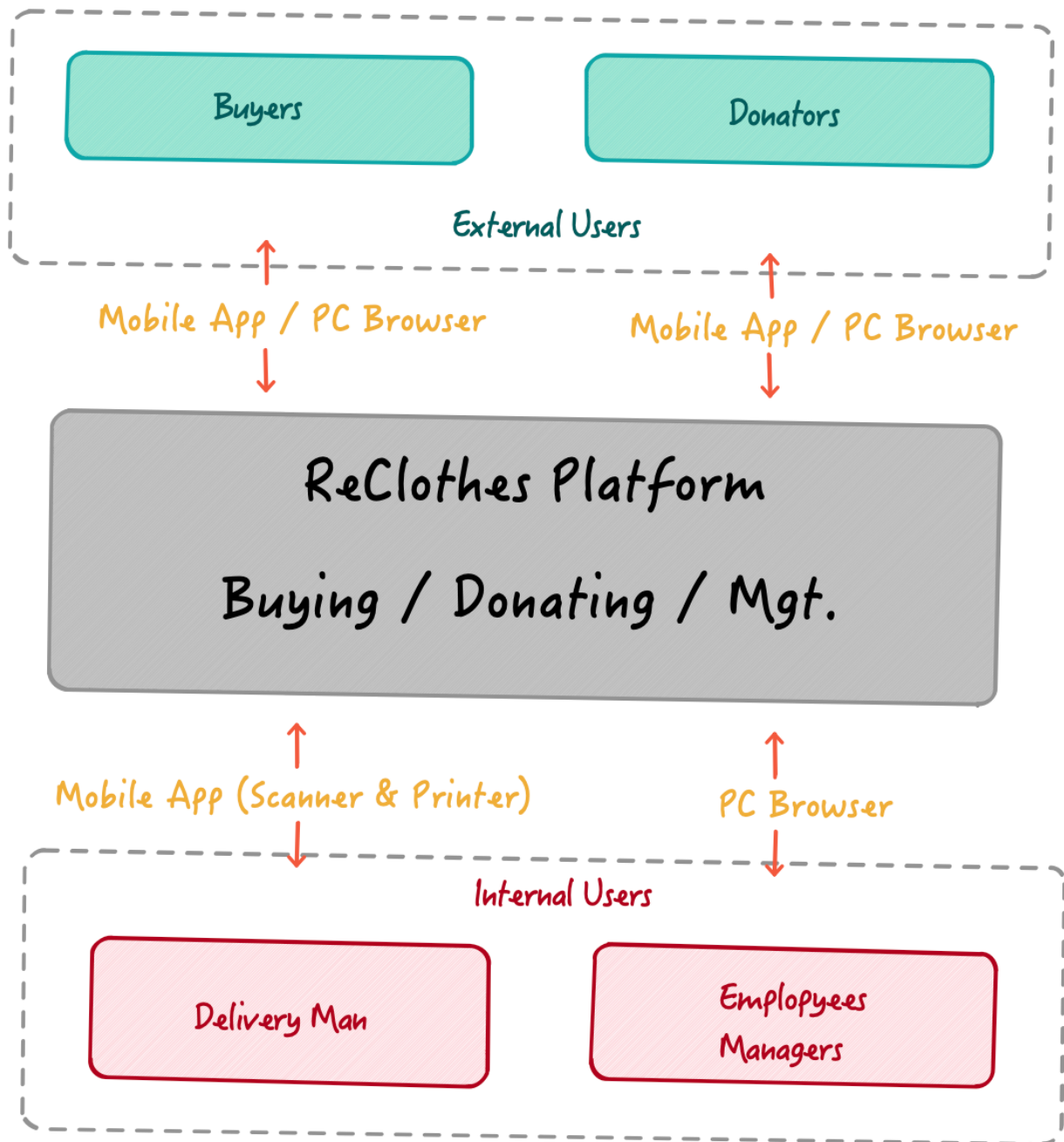
Our platform serves internal users (delivery men, employees, managers) and external users (donators, buyers) as well. And the platform contains three modules, one is donating modules, another is buying modules, and the last one is management modules.

For buyers, they can use a mobile app or pc browser to access ReClothes platform for tracking their

donating orders. In addition, they can also use the mobile app to interact with drop-off boxes to get some AR animation for stimulating sustainability.

For donators, just like buyers, they can also access by mobile app or pc browser for tracking their buying orders. After opening the door of the drop-off box, they can also get AR animation for stimulating sustainability.

Besides AR animation, buyers and donators will get some other rewards, such as sustainability coins, money, offline coupons as well.

For ReClothes delivery men, they can use their mobile app to connect with their portable scanner and printer for tracking a package or printing out tracking codes. In addition, this mobile app also provides functions for reminding new shipping orders or new collecting orders.

For ReClothes employees and managers, they can use pc browser to access the platform for tracking all buying orders, donating orders, packing orders, checking orders, and managing the information of buyers and donators.

Besides this online platform, ReClothes needs to build some drop-off boxes which can connect with ReClothes online platform and put them in some locations that are convenient for buyers and donators. These drop-off boxes contain a bunch of metal boxes piled together, buyers or donators can use the app to scan the QR code on the screen of the drop-off boxes for opening the door to the box. After closing the door of the box, the platform will send out a successful notification.

3. KEY FEATURES AND RELATED BUSINESS PROCESSES
Donating

1. Donators can submit donating orders that consist of basic information about their used clothes including photos. Then donators choose a drop-off location upon their preference. After that, donators pack their used clothes and take them to the drop-off location.

2. When donators come to the location, they can open the app to scan the QR code on the drop-off box. Then the drop-off box will be opened. Donators can put the clothes into the box and close the door of the box. After closing the door, they will receive a notification from their app instantly. Clicking the notification, a well-designed AR dynamic animation will be shown on their phone. This animation shows content based on the historic sustainability coins of the current user or based on the different holidays or different climates the current user locates. Donators can take a photo or video record with this AR animation as well.

3. The company will assign delivery men to collect all used clothes based on how many clothes are stored in the drop-off box. When Reclothes receives the donated clothes, Reclothes will check the condition of the clothes, and then determines whether to put the clothes into Reclothes online store.

4. If the condition of the clothes is poor, Reclothes will drop the clothes into a recycle basket for the next step. Those clothes will be sent to the third-party recycling factories to produce sound isolation cotton or cushioning
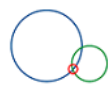
materials. Then Reclothes will send the notification to the donators about the progress and offer some coupons and sustainability coins.

5. If the condition of the clothes is good, Reclothes will send the clothes to the next working procedure.

6. Reclothes will partner with third parties to handle cleansing clothes in relatively good condition.

7. Reclothes will handle picture-taking of the donated cloth that will be posted on the online sales platform.

8. Finally, Reclothes will publish used clothes into our online store with detailed information and photos, along with the stories of those used clothes.

9. When clothes are sold, donators will receive rewards from partial sales of the used clothes they donated in the format of cash/sustainable coins.
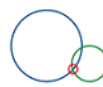
Buying

1. New buyers should type into their basic clothes size data and preferences into our platform for intelligent recommendations.

2. When buyers log into the Reclothes app, they can easily browse and compare with used clothes. They can also click the photo of the used clothes to check the detailed information of the used clothes. After clicking the button "Add to Cart", the clothes will show in the shopping cart.

3. Buyers can review the clothes in the cart, then submit the cart. Before generating the order, buyers need to choose one drop-off location, then choose a suitable payment method (Credit Card / Sustainable Coins) and finish paying. After finishing the payment, they can receive an order confirmation email.

4. When buyers submit their orders, Reclothes will pack the used clothes based on the detailed order information, and deliver them to the specific drop-off location. Once the door of the drop-off box is closed, buyers will receive a notification from the app to take them out.

5. Finally, buyers come to the drop-off location, and bring out their purchased used clothes. Just like the donators, they can also receive an AR animation and sustainable coins from the app.

Stimulation for Donators

1. Types of Rewards:

    1. Sustainable Coins

    2. AR animations

    3. Off-line Coupons

    4. Money Reward

2. Initial donations to our platform will get onboarding rewards.

3. If donators write the story of their used clothes, they can extra more rewards.

Stimulation for Buyers

1. Types of Rewards:
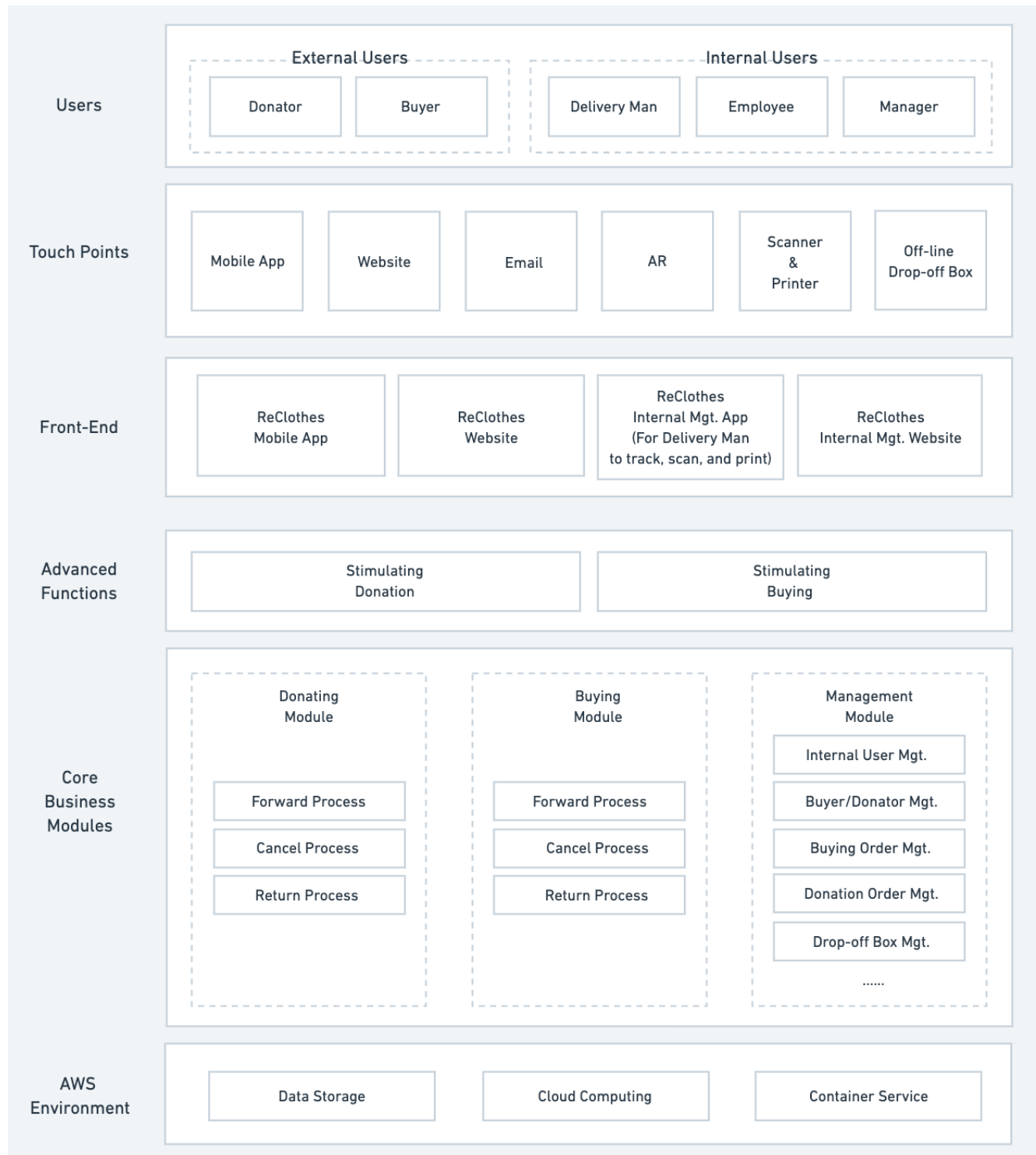
    1. Sustainability Coins

    2. AR animations

    3. Off-line Coupons

    4. Money Reward

2. First-time buyer rewards.
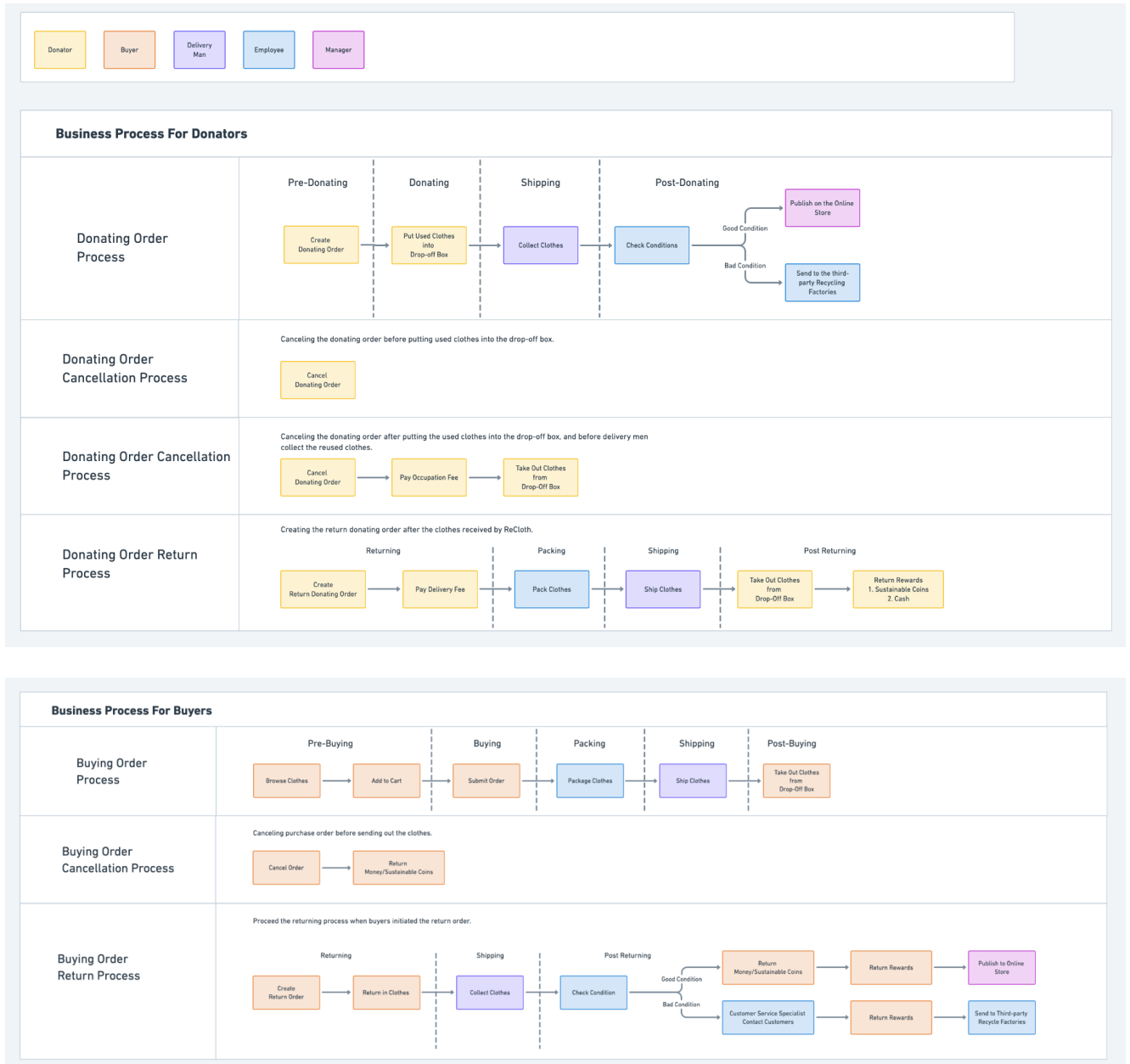
Management

- External User Mgt.

- Internal User Mgt.

- Buying Order Mgt.

- Donating Order Mgt.

- Shipping Order Mgt.

- Collecting Order Mgt.

- Packing Order Mgt.

- Checking Order Mgt.

- Online Product Mgt.

- Drop-Off Box Mgt.

- Offline Coupon Mgt.

4. SYSTEM CONTEXT DIAGRAM

Users

External Users
- Donator
- Buyer

Internal Users
- Delivery Man
- Employee
- Manager

Touch Points
- Mobile App
- Website
- Email
- AR
- Scanner & Printer
- Off-line Drop-off Box

Front-End
- ReClothes Mobile App
- ReClothes Website
- ReClothes Internal Mgt. App (For Delivery Man to track, scan, and print)
- ReClothes Internal Mgt. Website

Advanced Functions
- Stimulating Donation
- Stimulating Buying

Core Business Modules

Donating Module
- Forward Process
- Cancel Process
- Return Process

Buying Module
- Forward Process
- Cancel Process
- Return Process

Management Module
- Internal User Mgt.
- Buyer/Donator Mgt.
- Buying Order Mgt.
- Donation Order Mgt.
- Drop-off Box Mgt.
- ......

AWS Environment
- Data Storage
- Cloud Computing
- Container Service

5. EPICS

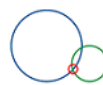## Overall Business Process

Business Process For Donators

Business Process For Buyers

Epic 01: Common Functions

- #c-01, As a Donator, I want to register so that I can donate my unwanted clothes to others.

- #c-02, As a Donator, I want to log in so that I can access my account.

- #c-03, As a Donator, I want to log out so that I can make sure my account is secure.

- #c-04, As a Buyer, I want to register so that I can buy some used clothes and it's good for sustainability.

- #c-05, As a Buyer, I want to log in so that I can access my account.

- #c-06, As a Buyer, I want to log out so that I can make sure my account is secure.

- #c-11, As a Delivery Man, I want to log in so that I can access my account.

- #c12, As a Delivery Man, I want to log out so that I can make sure my account is secure.

- #c-07, As an Employee, I want to log in so that I can start my daily work.

- #c-08, As an Employee, I want to log out so that I can make sure my account is secure.

- #c-09, As a Manager, I want to log in so that I can start my daily work.

- #c-10, As a Manager, I want to log out so that I can make sure my account is secure.

Epic 02: Forward Donating Process

Pre Donating

- #d-pr-01, As a Donator, I want to create a donating order so that I can start to donate my used clothes and get some rewards.

- #d-pr-02, As a Donator, I want to add detailed information of my used clothes into the donating order so that buyers can get to know the clothes quickly.

- #d-pr-03, As a Donator, I want to choose a nearby drop-off location so that I can drop by that location conveniently.

- #d-pr-04, As a Donator, I want to submit the donating order so that I can make sure that the donating order is under processing.

Donating

- #d-do-01, As a Donator, I want to scan the QR code on the drop-off box so that the door of the box can open automatically.

- #d-do-02, As a Donator, I want to receive a notification after putting my used clothes into the box so that I can track the progress of the donating order.

- #d-do-03, As a Donator, I want to get some AR animation rewards after putting my used clothes into the box so that I can get the incentive to continue sustainability.

Shipping

- #d-sh-01, As a Delivery Man, I want to receive collecting orders so that I can easily track all collecting orders.

- #d-sh-02, As a Delivery Man, I want to scan the QR code to open the box so that I can take out used clothes.

- #d-sh-03, As a Delivery Man, I want to print a tracking code so that I can stick the tracking code on top of the package for later process.

- #d-sh-04, As a Donator, I want to receive notification after my used clothes are collected by the delivery man so that I can track the progress of the clothes.

Post Donating

- #d-po-01, As an Employee, I want to receive checking orders so that I can easily track my all checking orders.

- #d-po-02, As an Employee, I want to scan the tracking code on top of the package so that I can choose the result of checking and notify the donators.

- #d-po-03, As a Donator, I want to receive a notification after checking the condition of my used clothes so that I can know the status of my donating order.

- #d-po-04, As a Donator, I want to receive some rewards when my used clothes can only be used in some third-party recycle factories so that I can know the status of my donating order.

- #d-po-05, As an Employee, I want to choose a third-party recycling factory so that I can ship used clothes to a specific factory for recycling.

- #d-po-06, As an Employee, I want to create a new online product after the used clothes are in a good condition so that I can put this product online for selling.

- #d-po-07, As a Manager, I want to edit the price of the created product so that buyers can buy it at an affordable price.

- #d-po-08, As a Manager, I want to publish the created product so that I can choose a suitable period for showing this new product online.

- #d-po-09, As a Donator, I want to receive notification after an employee published my used clothes into an online store so that I can know the status of my donating order.

- #d-po-10, As a Donator, I want to get some rewards after an employee published my used clothes into an online store so that I can get the motivation to donate next time.
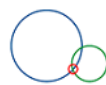

Epic 03: Forward Buying Process

Pre Buying

- #b-pr-01, As a Buyer, I want to browse all available used clothes based on my body size so that I can quickly make a smart decision.

- #b-pr-02, As a Buyer, I want to add suitable clothes into the cart so that I can submit this order later.

Buying

- #b-bu-01, As a Buyer, I want to submit the cart so that I can start the process of buying.

- #b-bu-02, As a Buyer, I want to choose the delivery info in reviewing the cart so that I can get my clothes nearby my location.

- #b-bu-03, As a Buyer, I want to submit the order after I confirm the clothes in the cart so that I can complete this order later.

- #b-bu-04, As a Buyer, I want to choose a payment method (third party payment method or sustainability coins) so that I can buy these clothes with my favorite payment method.

- #b-bu-05, As a Buyer, I want to receive a receipt email notification so that I can cancel this order or return this order by this receipt.

Packing

- #b-pa-01, As an Employee, I want to receive packing orders so that I can easily track my all packing orders.

- #b-pa-02, As an Employee, I want to print out the tracking code for the wait-to-send clothes so that I can stick it on the top of the package and track it later.

- #b-pa-03, As a Buyer, I want to receive notification after my package is under packing so that I can know the progress of my order.

Shipping

- #b-sh-01, As a Delivery Man, I want to receive shipping orders so that I can easily track my all shipping orders.

- #b-sh-02, As a Delivery Man, I want to scan the QR code on the drop-off box so that I can open the door of the box and put the package into it.

Post Buying

- #b-po-01, As a Buyer, I want to receive notification after the delivery man puts the package into the box so that I can drive to the location and take it out.

- #b-po-02, As a Buyer, I want to scan the QR code on the drop-off box so that I can open the door of the box and take the clothes out of it.

- #b-po-03, As a Buyer, I want to receive a notification after my package took out from the box so that I can know if my package was taken by me.

- #b-po-04, As a Buyer, I want to receive some rewards after I bought used clothes from ReClothes so that I can have more interest to buy them next time.

Epic 04: Reverse Donating Process

Cancel Donating Order

- #rd-c-01, As a Donator, I want to cancel the donating order so that I can have a chance to change my mind.

- #rd-c-02, As a Donator, I want to pay the occupation fee so that I can have the right to open the door of the drop-off box.

- #rd-c-03, As a Donator, I want to receive a notification after opening the door of the drop-off box.

Returning

- #rd-r-re-01, As a Donator, I want to create a return donating order so that I can track the progress of the returning.

- #rd-r-re-02, As a Donator, I want to pay the delivery fee so that I can continue the return.

Packing

- Reuse user story #b-pa-01

- Reuse user story #b-pa-02

- #rd-r-pa-01, As a Donator, I want to receive a notification after my package is under packing so that I can know the progress of my order.

Shipping

- Reuse user story #b-sh-01

- Reuse user story #b-sh-02

Post Returning

- #rd-r-po-01, As a Donator, I want to receive a notification after the delivery man puts the package into the box so that I can drive to the location and take it out.

- #rd-r-po-02, As a Donator, I want to scan the QR code on the drop-off box so that I can open the door of the box and take the clothes out of it.

- #rd-r-po-03, As a Donator, I want to return all rewards that I acquired from donating process so that I can complete the return donating process.

- #rd-r-po-04, As a Buyer, I want to receive a notification after my package took out from the box so that I can know if my package was taken by me.


Epic 05: Reverse Buying Process

Cancel Buying Order

- #rb-c-01, As a Buyer, I want to cancel the buying order so that I can have a chance to change my mind.

- #rb-c-02, As a Buyer, I want to get my paid money or sustainability coins back so that I can use this for other purposes.

Returning

- #rb-r-re-01, As a Buyer, I want to create a return buying order so that I can track the progress of the returning.
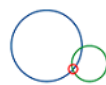
- #rb-r-re-02, As a Buyer, I want to scan the QR code on the drop-off box so that I can open the door of the box and put the clothes into it.

- #rb-r-re-03, As a Buyer, I want to receive a notification after putting my used clothes into the box so that I can track the progress of the return buying order.

Shipping

- Reuse user story #d-sh-01

- Reuse user story #d-sh-02

- Reuse user story #d-sh-03

- #rb-r-sh-01, As a Buyer, I want to receive notification after my used clothes are collected by the delivery man so that I can track the progress of the clothes.

Post Returning

- Reuse user story #d-po-01

- Reuse user story #d-po-02

- #rb-r-po-01, As a Buyer, I want to receive a notification after checking the condition of my used clothes so that I can know the status of my donating order.

- #rb-r-po-02, As a Buyer, I want to return rewards acquired from buying process so that I can complete my return buying order process.

- #rb-r-po-03, As an Employee, I want to contact the buyer after finding the condition of the clothes is bad so that I can know the reason and make sure how much money or sustainability coins the buyer should return.

- Reuse user story #d-po-05

- #rb-r-po-04, As an Employee, I want to resume the product that was created before so that I can edit the information and my manager can publish it again.

- Reuse user story #d-po-07

- Reuse user story #d-po-08

Epic 06: Management Functions

External User Mgt.

- #mf-eu-01, As an Employee, I want to forbid a specific buyer or donator after they can't follow the rule of the platform so that I can make sure the interest of other buyers and donators will not be infringed.

- #mf-eu-02, As an Employee, I want to resume a specific buyer or donator after they correct their behaviors so that I can make sure the interest of other buyers and donators will not be infringed.
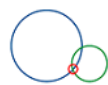
- #mf-eu-03, As an Employee, I want to reset the password for buyers or donators so that I can help them to access our platform again.

- #mf-eu-04, As a Manager, I want to assign some rewards for a specific buyer or donator so that I can stimulate a buyer or donator to continue sustainability on our platform.

- #mf-eu-05, As an Employee or a Manager, I want to check how many buying orders or donating orders are related to a specific external user so that I can monitor their buying orders or donating orders.

- #mf-eu-06, As a Manager, I want to know the top 10 buyers or donators so that I can assign some rewards to them for their sustainability.

Internal User Mgt.

- #mf-iu-01, As a Manager, I want to CRUD(create, read, update, and delete) internal users so that I can manage all internal users easily.

- #mf-iu-02, As a Manager, I want to reset the password for a specific internal user after they forgot their login password so that I can quickly help them to access the platform again.
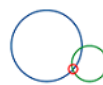
Buying Order Mgt.

- #mf-bo-01, As an Employee or a Manager, I want to monitor all buying orders so that I can track the progress of all buying orders.

- #mf-bo-02, As a Manager, I want to check all detail of a specific BO (such as related payment information, packing orders, or shipping order) so that I can do some intervention for it.

- #mf-bo-03, As an Employee, I want to monitor all return buying orders (RBO) that related to buying orders so that I can track the progress of all return buying orders.

Donating Order Mgt.

- #mf-do-01, As an Employee or a Manager, I want to monitor all donating orders so that I can track the progress of all donating orders.

- #mf-do-02, As a Manager, I want to check all detail of a specific DO (such as related to collecting the order or checking the order) so that I can do some intervention for it.

- #mf-do-03, As an Employee, I want to monitor all return donating orders (RDO) that related to donating orders so that I can track the progress of all return donating orders.

Shipping Order Mgt.

- #mf-so-01, As a Delivery Man, I want to receive a notification for assigned shipping order so that it will remind me to monitor this order.

- #mf-so-02, As a Delivery Man, I want to scan the QR code on the screen of the drop-off box so that I can open the door of the drop-off box for putting the package into it.

- #mf-so-03, As a Delivery Man, I want to monitor all assigned shipping orders so that I can track the progress of all shipping orders.

- #mf-so-04, As a Delivery Man, I want to scan the tracking code on top of the package so that I can change the status of the shipping order.

Collecting Order Mgt.

- #mf-co-01, As a Delivery Man, I want to receive a notification for assigned collecting order so that it will remind me to monitor this order.

- #mf-co-02, As a Delivery Man, I want to scan the QR code on the screen of the drop-off box so that I can open the door of the drop-off box for taking the used clothes out of it.

- #mf-co-03, As a Delivery Man, I want to monitor all assigned collecting orders so that I can track the progress of all collecting orders.

- #mf-co-04, As a Delivery Man, I want to print out the tracking code so that I can stick the tracking code on top of the package.

- #mf-co-05, As a Delivery Man, I want to scan the tracking code so that I can change the status of the collecting order.

Packing Order Mgt.

- #mf-po-01, As an Employee, I want to receive a notification for the assigned packing order so that it will remind me to monitor this order.

- #mf-po-02, As an Employee, I want to monitor all assigned packing orders so that I can track the progress of all packing orders.

- #mf-po-03, As an Employee, I want to print out the tracking code so that I can stick this tracking code on top of the package.

- #mf-po-04, As an Employee, I want to scan the tracking code so that I can change the status of the packing order.

Checking Order Mgt.

- #mf-cho-01, As an Employee, I want to receive a notification for assigned checking order so that it will remind me to monitor this order.

- #mf-cho-02, As an Employee, I want to monitor all assigned checking orders so that I can track the progress of all checking orders.

- #mf-cho-03, As an Employee, I want to scan the tracking code so that I can change the status of the checking order.

Online Product Mgt.

- #mf-op-01, As an Employee, I want to create a new online product so that my manager can publish this product for selling.

- #mf-op-02, As an Employee, I want to edit the detailed information of the online product so that I can change the description of the product.
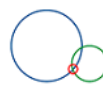
- #mf-op-03, As a Manager, I want to edit the price of the online product so that buyers can buy it at an affordable price.

- #mf-op-04, As a Manager, I want to publish online products so that buyers can see this product on our platform.

- #mf-op-05, As an Employee, I want to resume an online product so that buyers can buy this product on our platform again.

Drop-Off Box Mgt.

- #mf-dob-01, As a Manager, I want to monitor the status of all assigned drop-off boxes so that I can do some intervention for them.

- #mf-dob-02, As a Manager, I want to assign a specific drop-off box to a specific delivery man so that the delivery man can receive related shipping orders or collect orders.

- #mf-dob-03, As a Manager, I want to assign a geographical area for a specific drop-off box so that buyers or donators can see that drop-off location.

- #mf-dob-04, As a Manager, I want to set a threshold of the capacity of drop-off so that it will remind the delivery man to collect automatically.

Off-line Coupon Mgt.

- #mf-oc-01, As an Employee, I want to monitor all generated offline coupons so that I can know the status of each one.

- #mf-oc-02, As an Employee, I want to know who received each off-line coupon so that I can do some intervention to it.

- #mf-oc-03, As a Manager, I want to assign a specific offline coupon to a specific external user so that I can stimulate their sustainability.

6. RISKS

Off-Line Operations:

- Locations of drop-off boxes. The drop-off location must be convenient to buyers and donators.

Tech:

- AR tech choices. (ARKit / ARCore / WebAR)

- How to create an AR model? Unity? Or just using ARKit or ARCore?

- The choice of portable printer and scanner for delivery man.

- How to connect a portable scanner and printer to the mobile app?

Business:

- Third-party recycling factories.

- The standard of determining used clothes is in good condition or bad condition.

- The cost of one drop-off box. (It contains manufacturing cost and rental fee of putting it in a specific location)

- The cost of human resources (Delivery Man / Employee / Customer Service Specialist / Manager).

- Contacting off-line stores to cooperate for off-line coupons.

7. DEFINITIONS, ACRONYMS, INITIALISMS, AND ABBREVIATIONS (DAIAs)

DAIAs	Term	Definition
BO	Buying Order	The order for tracking buyers to buy the used clothes.
DO	Donating Order	The order for tracking the progress of donating the used clothes.
SO	Shipping Order	The order for helping the delivery men to track the progress of shipping the used clothes to the drop-off location.
CO	Collecting Order	The order for helping the delivery men to track the progress of collecting the used clothes to the ReClothes company.
CHO	Checking Order	The order for reminding the employee to check the quality of used clothes that donors donate to the ReClothes.
PO	Packing Order	The order for reminding the employee to pack the used clothes for sending to buyers.
RDO	Return Donating Order	The order was created for tracking the return progress of donated clothes.
RBO	Return Buying Order	The order was created for tracking the return progress of bought used clothes.