

# Glade

A sustainable epilator design  
Group project  
5 weeks | 2021

Designed By  
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## The approach

Glade is a sustainable solution for hair removal by creating a low waste, high life span epilator. We created a multi-purpose head from a single piece plastic that tackles maintenance and repair, making the process self

sufficient and convenient. Glade uses materials, textures and interfaces to provide smart and simple sustainable alternatives.

## Product Context

Who are the users?

While hair removal is gender neutral activity, epilators are often used by young urban women who are exhausted by waxing appointments and repeated razor uses.

What is the user context?

Epilation is done in completely dry or soapy wet skin. Often times used in the bathroom, any area that is private and easy to clean after at your home, is the ideal place.

Why this Product needs an Intervention?

Covid has increased the demand for self grooming products significantly. With salons being shut due to the lockdown, there is a surge in demand for alternative at home methods.



## What is the product usage?

A journey map of the target user



1. Right before, the user washes and exfoliates their target part.



2. The epilator is then held at 90° and the other hand tightens the skin.



3. The user takes roughly 15 seconds in each direction.



4. To clean, remove the head from the epilator. Brush off visible hair.



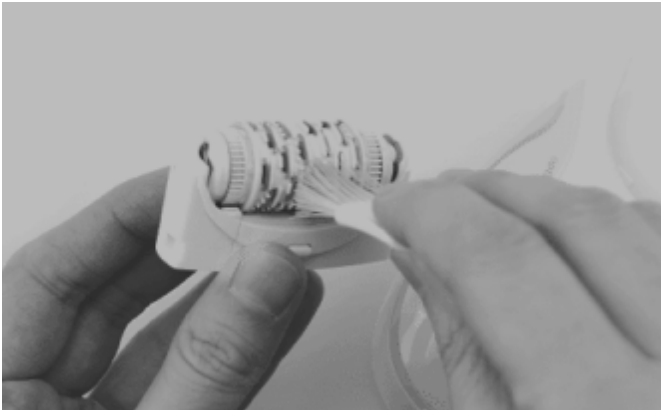
5. In a cup of warm water with a few drops of dish soap, soak for 30 mins, then rinse with warm water.



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## What makes the lifespan shorter?

Challenges to solve in the current life-cycle



### Lack of Maintenance

Hair falls and collects into the bottom components, gets stuck & reducing life of the product.



### Excessive Bits & Bobs

Each activity of similar needs requires an entirely new product with limited function.



### Individual Dependency

A hygiene product restricts its use to hyper-personal and prevents shared use.

## Points of Failure



### Maintenance

1. High frequency
2. Time consuming
3. Requires disassembly



### Repair

1. Can't be repaired at home
2. External body is brittle
3. Frequent disassembly makes product vulnerable



### Re-manufacturing

1. Small and lack of standard parts
2. Dismantling often will lead to demolition



### Recycling

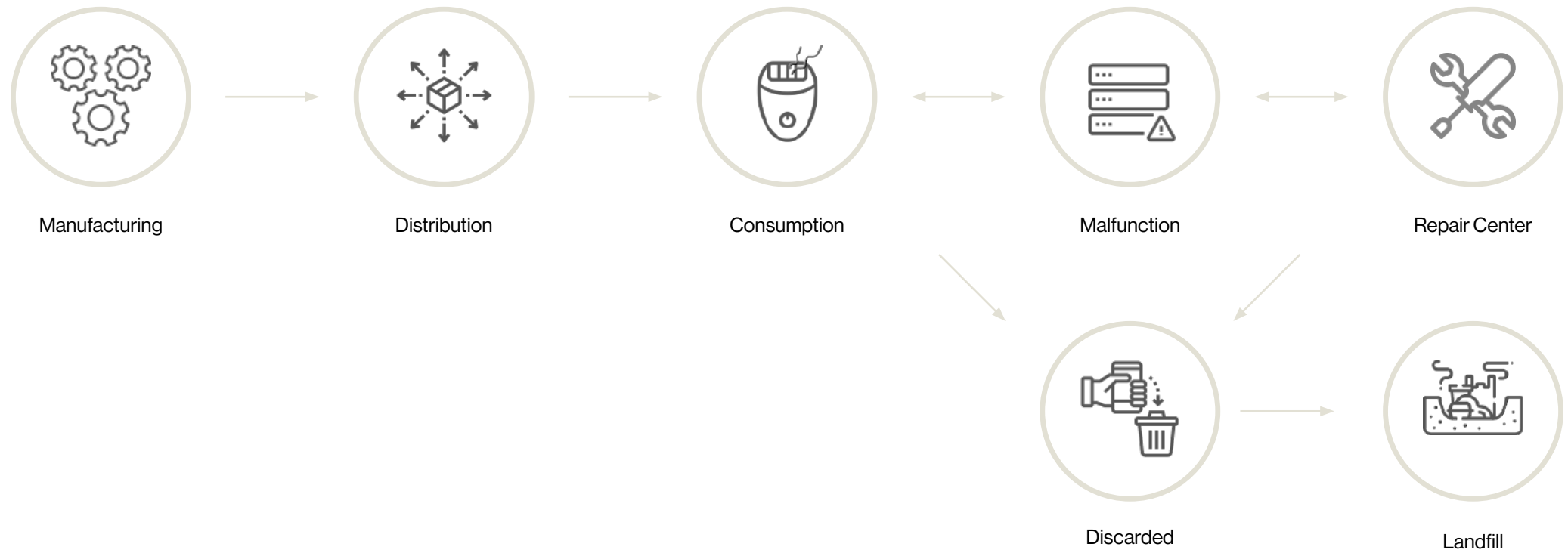
1. Materials are too small to recycle
2. Hygiene product
3. Lack of awareness



### Landfill

1. Materials are too small to recycle
2. Hygiene product
3. Lack of awareness

## Current Linear Model



## Design Opportunities



Reduce number of steps and frequency of cleaning.



Efficient collection of hair from tweezers to prevent blockage.



Reduce part numbers, Combined functionality of multiple into one.



Make a self cleaning product that cleans while usage.



Make tweezers easily replaceable (like razor blades).



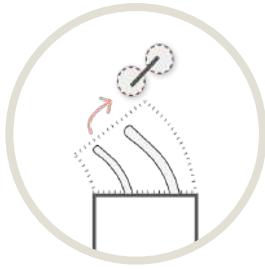
Rechargeable battery; charged using USB cable.



Proposed Concept

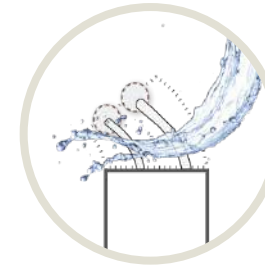


## Design Details



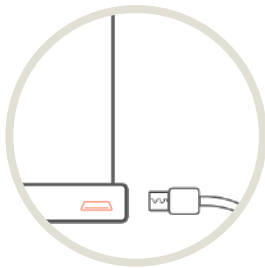
### Roller Replacement

Epilator roller can be replaced as easily as the blades of razor instead of replacing the whole head assembly.



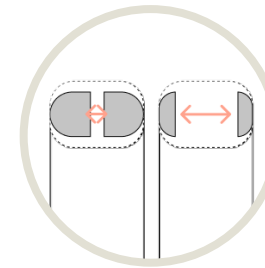
### Preventive Maintenance

The space provided underneath the tweezer of the epilator allows the plucked hair to fall off easily and facilitates easy cleaning.



### Universal Recharging

Universal recharging reduces the waste produced by disposable batteries and eliminates the use for an additional charger



### Expandable Usage

Opening of the head can be made adjustable so that the user can epilate in different body parts. This reduce the number of additional parts in the product.

## How to Clean the Epilator Roller

Changing the design of roller epilator assembly facilitates the cleaning of the epilator while it is being used. It prevents blockage by providing space for the gunk to fall off easily.





**Making cleaning convenient**

Changing the design of roller epilator assembly facilitates the cleaning of the epilator while it is being used. It prevents blockage by providing space for the gunk to fall off easily.



## Universal Charging

Using a USB-C port makes the product adaptable with the current standard of chargers in the market. Users can use a charging stand, Cleaning station or simply plug in your phone cable.



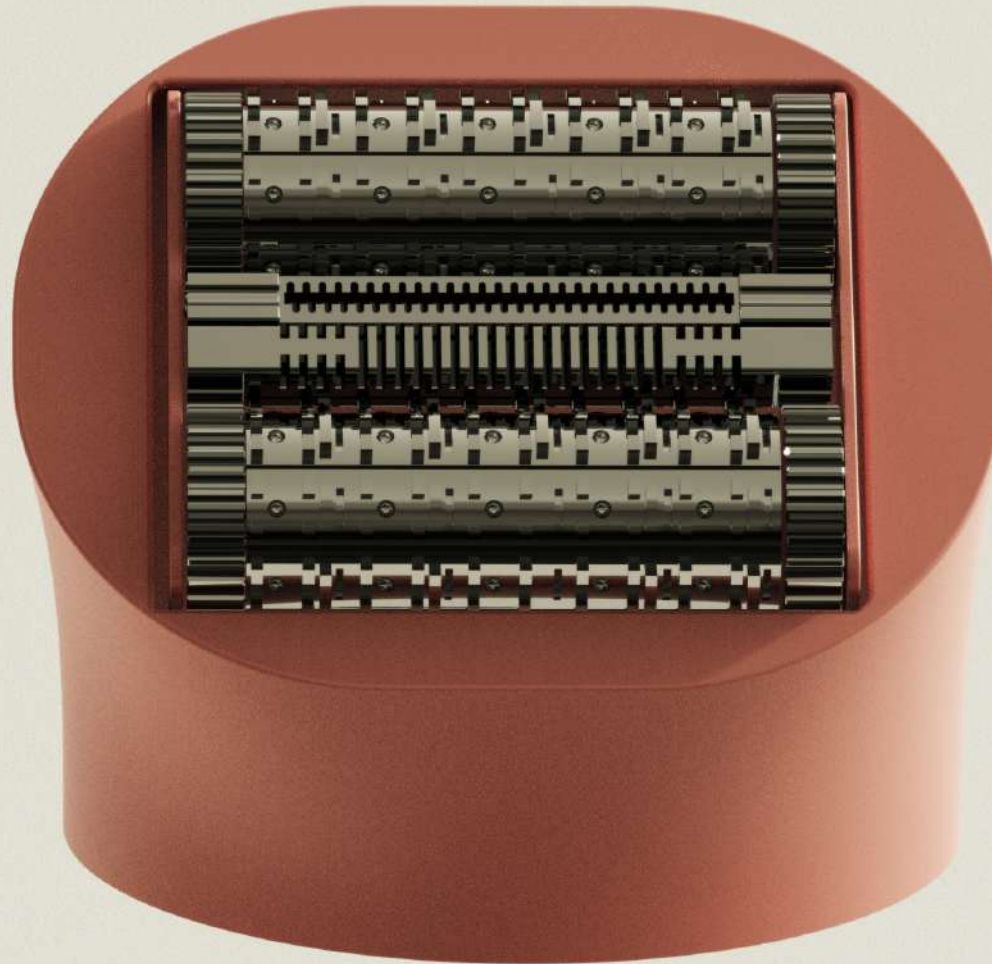


### **Informed Interfaces**

Using a battery indicator gives user feedback, avoid over charging and in turn reduces the chance of damaging the product unknowingly

## Gender Fluidity

Making the product more inclusive of different types of blades increases the usability across all genders.



**Designed for a new life**

Our classic colours endure the test of time along with the single part plastic encasing, easy to manufacture, assemble, dismantle and recycle. The finish even includes a texture to replace rubber overcoat grip.





## Additional Accessories

Charging Station takes away the load of cleaning the device from the users to an automated process. Simply Immerse the body in the station and the machine performs the complete cleaning action.

### Signifiers

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Flashing white: charging in progress

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White for 5 seconds: fully charged

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Yellow: approx. 15 min charge left

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Flashing yellow: please recharge

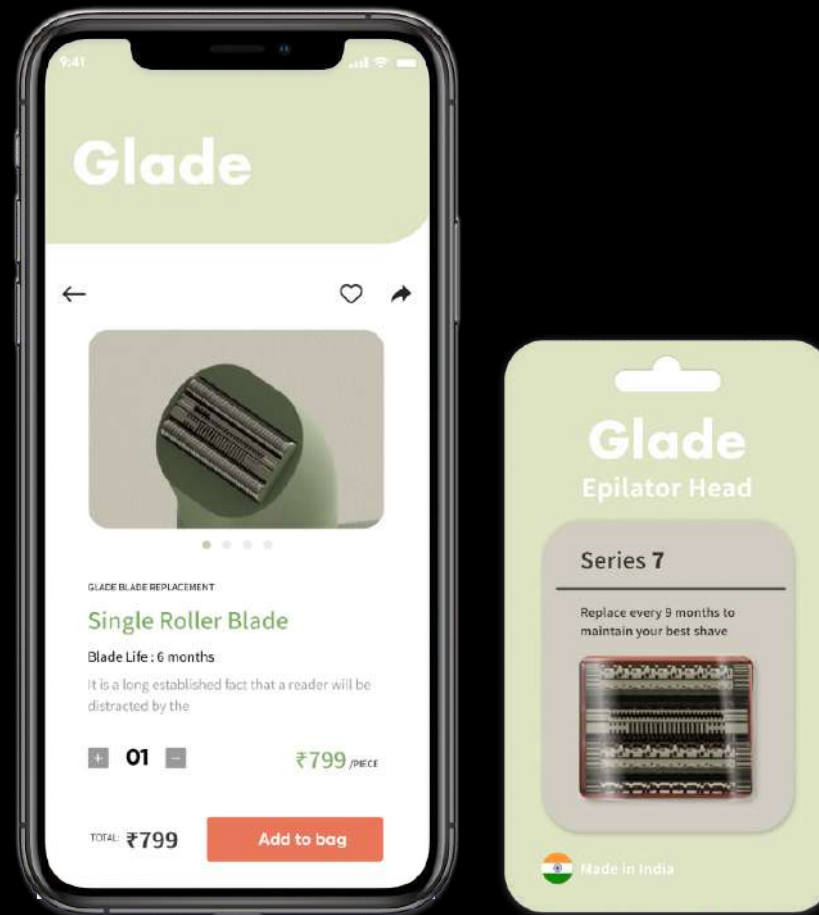
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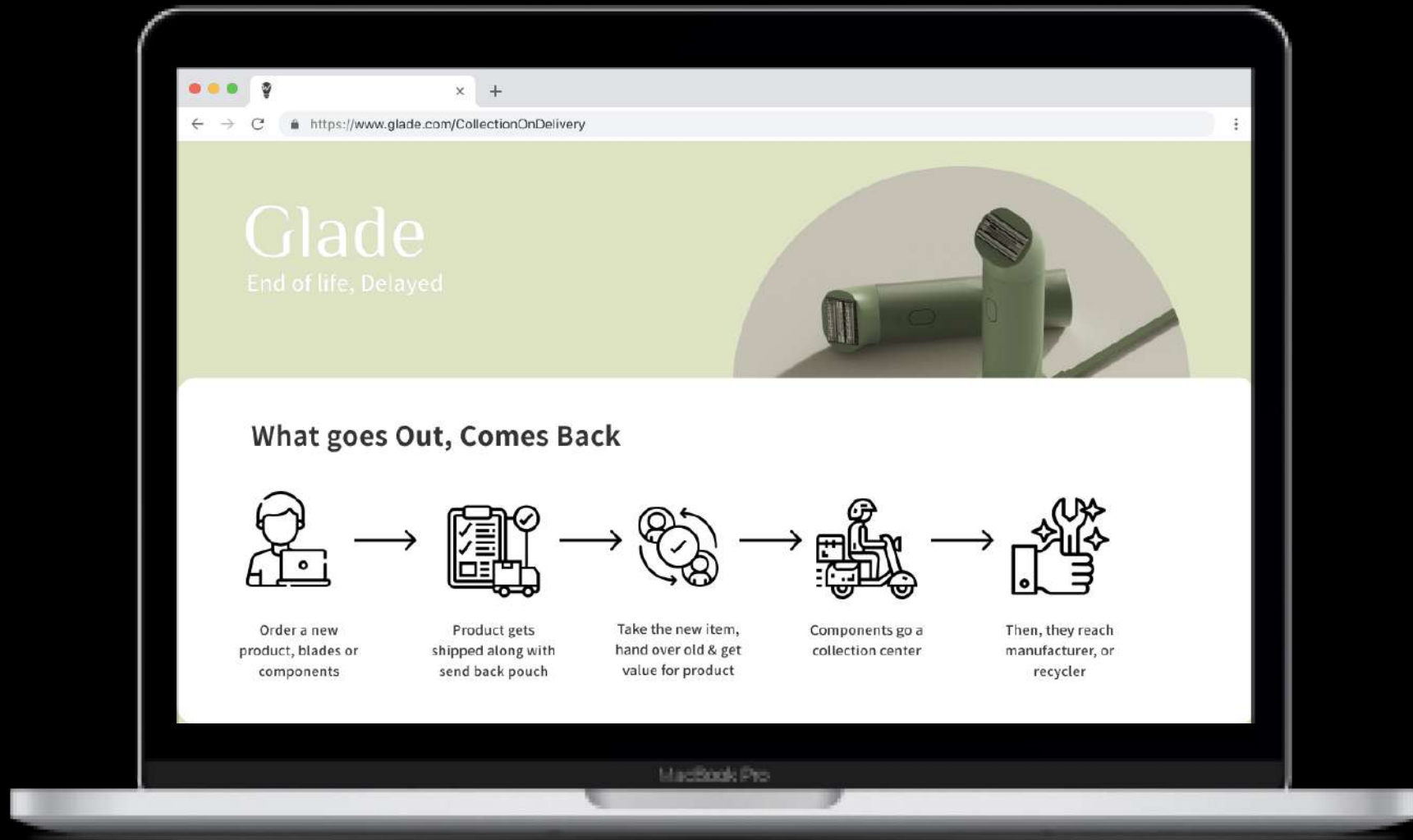


## Making green choices accessible

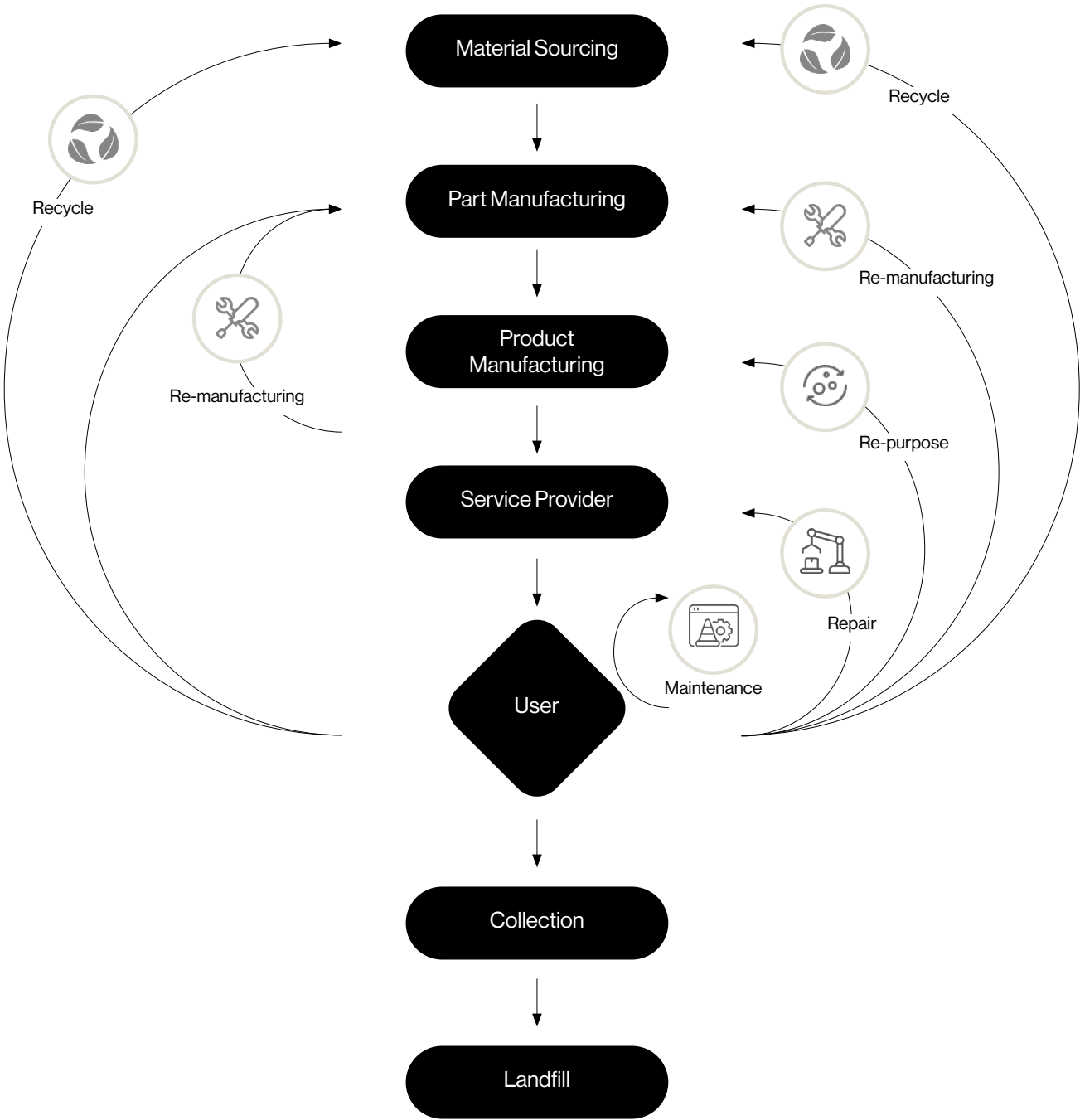
Services that make it easy to swap out minimum components at home.

Buy-Back or Subscription channels along with incentivisation can help products reach the right touch points where they can be reused, recycled or re-harvested reducing things that end up at the landfill.





Proposed Circular System



Recycle	We can recycle more parts now as they are bigger and standardized.
Re-manufacturing	The manufacturer can re-harvest the standard/non damaged parts of the product.
Re-purpose	Internal & electronic parts like motor and gear assembly cannot be repaired at home.
Repair	Maintenance is made easy by including a clean-while-use feature.
Maintenance	The epilator roller can be easily replaced like blades of a razor.



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