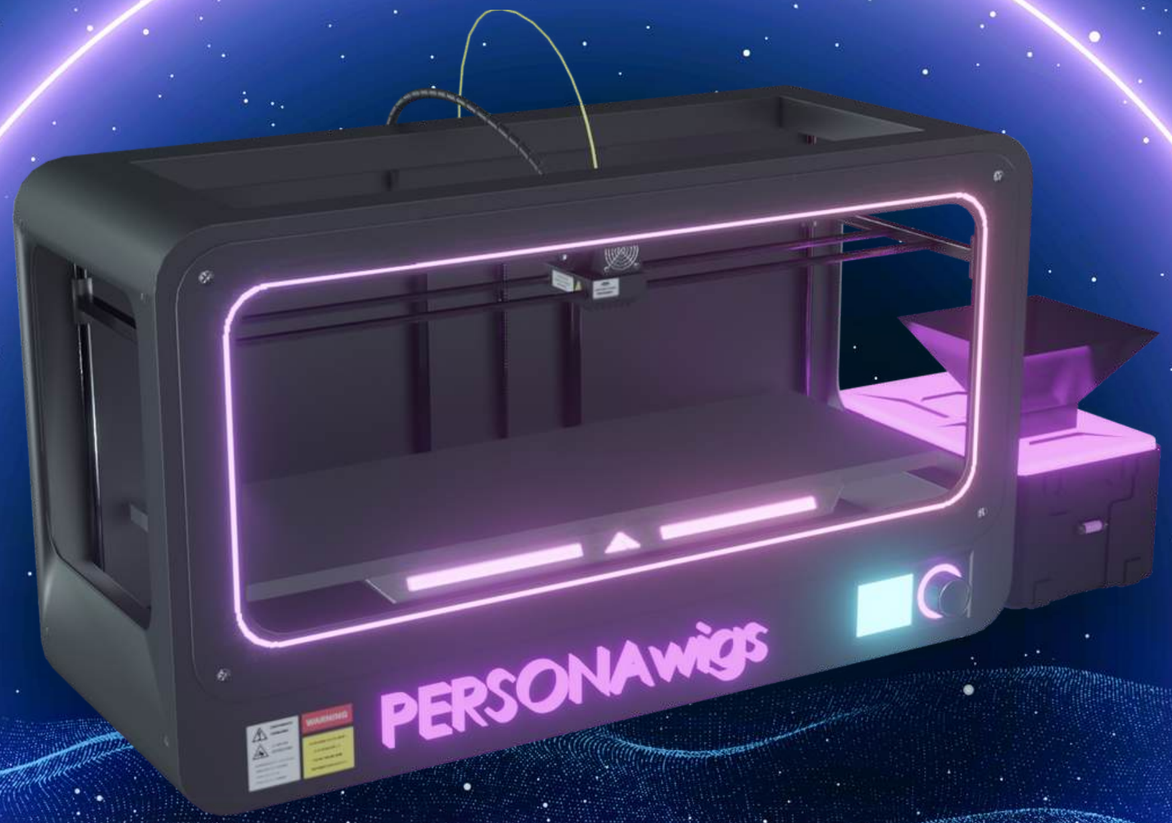


PERSONAwigs

A recyling wig 3D printer that can 3D print your desired hairstyle, by using unused wasted hair as material.

TRUTH IN THIS CATEOGRY

47%

People all over the world suffer from hair loss (47%)

Source: National Institutes of Health (NH)

75%

WHO predicts the number of global medical treatment cases resulting in hair loss will increase by more than 75% by 2050.

Source: WHO

SCARCITY

In 100kg of real hair purchased each time, there are only about 2-3 tufts of hair over 50cm long. Therefore, there is a scarcity of qualified hair for wigs.

Source: Thanh nien articles

CAGR of 4.0%

The global hair wig market is projected to grow from $2.28 billion in 2021 to $3.0 billion in 2028 at a CAGR of 4.0% in forecast period, 2021-2028.

Source: Fortune Business Insight

Hair loss is a great concern issue. The wig market value is also increasing and has potential in the future. However, quality wigs are expensive and scarce.

CONSUMER'S PAINPOINT

HAIR DONATOR

"I want contribute even the smallest things to help the community of people with hair loss diseases that their hair can not grow. I feel that it takes away a lot of their self-confidence. But my hair is unqualified to donate for them because it is effected by continuous heat and chemicals."

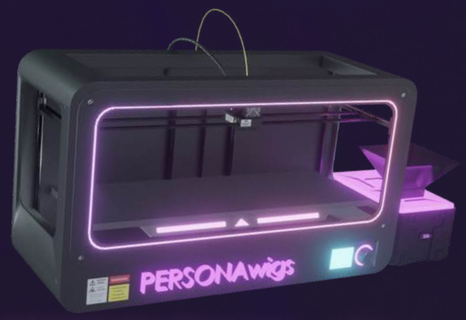
HAIR ADOPTOR

"I want to have my own custom wigs that perfectly fit me from size to style to express my identity, but mass-produced synthetc wigs are not personalized, and good quality human hair wigs are quite scarce"

L'ORÉAL ENABLES EVEN SHORT AND WASTED HAIRS TO BE DONATED FOR WIGS

PROVIDE PERSONALISED WIG AND IMPROVE WIGS QUALITY WITH REASONABLE COSTS

BY



PERSONAwigs

A recyling wig 3D printer that can 3D print your desired hairstyle, by using unused wasted hair as material.

- 3D - PRINT PERSONALISED WIGS
- UTILISE WASTED HAIR AT SALONS
- NO NEED TO USE LONG AND QUALIDIED HAIR TO MAKE WIGS
- FEEL A JOYFUL NEW BEAUTY EXPERIENCE AND EMBRACE DIVERSE HAIRSTYLING WITH TRUE HAIR HEALTH
- GIVE CONFIDENCE FOR PEOPLE WITH HAIR LOSS AND SEVERELY DAMAGED HAIR

HOW TO USE

STEP 1

3D scan your face

Scan your face on the Try - on app

STEP 2

Choose and customize your own hairstyle on the app

Choose your favorite hair shape and color with diverse hairstyle choices to express your own identity

STEP 3

3D Printer prints your chosen wigs with exact head shape that you scan before that

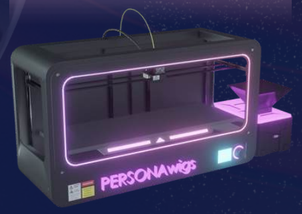
3D Printers at chosen salons receive orders and print the wigs to prepare your customer ‘s upcomming appointments

STEP 4

Hair stylists made some adjustment

Based on some added demand, their wigs can be styled by stylists as if it was real hair

Each Step Needed Components



COMPONENTS AND FEATURES

Print Bed

- Horizontally - long print bed for printing long wigs (Max length of wigs is the length of print bed)

Extruders

- Multiple extruders for faster printing time (each extruder print 1 hair string at a time)

Wasted hairs

- Wasted hair from salons or donated from customers

Compatible with Virtual Try-on App

- The PERSONAwigs printer can be compatible with the virtual L'Oréal Try-on App.
- Customers can book their desired wigs at home and it will be printed and styled at partner salons.

Synthesize bioplastic from waste keratin (what make 95% of hairs)

- The first step: Processed though high-temperature-hot-water for removal of impurities.
- Second step: dried keratins at 80～100 °C
- The 3rd step: pulverize (grind to powder).
- The 4th step: mix with plasticizer (make it more softer and flexible).
- The 5th step: secondary drying at 60～85 °C
- The 6th step: hot-forming under pressure 30～70MPa
- The 7th step: cooling

****Source: Preparation method of bioplastics based on waste keratin, Google Patents*

WHAT MAKES PERSONA WIGS SPECIAL ?

A MORE SUSTAINABLE L'ORÉAL BRAND IMAGE

PERSONAwigs allows the recycling of wasted hairs at salon everyday

A MORE INCLUSIVE L'ORÉAL BRAND IMAGE

Allows anybody to donate hairs for their love ones, and prints qualitied wigs

INCREASE SALE VOLUME OF PPD

Our wigs can be hair styled by L'Oréalproducts as if it was real hair.

PERSONA WIGS'S FEATURES

Sustainability

- Wasted hair is utilised to make qualified and personalized wigs
- Wigs is used by bioplastic which is environmentally - friendly

Inclusion

- Well-designed for people suffer from hair loss and cancer

Feasible and estimated price

- We used a desktop FDM printer assembled from the Printrbot's Simple Maker's Kit, which costs roughly $350.
- Proven efficiency of used technology mechanism

Scalable

- Likely to appeal to a diverse and global clients of L'Oréal Professional Products Division
- Adapt to the personalized patterns of wigs

KPI

Selling price	2023 Haircare market value	Target 0.5% market value	Marketing cost =5% revenue	Estimated Production cost = 30% selling price	ROI
350$	8833.09 million $	44.16545 million $	2.208 million $	105 $	150%

(Projected revenue in 5 years)

USED TECHNOLOGY

L'ORÉAL BRANDSTORM

3D PRINTING HAIRS

Using techniques for furbricating 3D printed hair by exploiting the stringing phenomena that happens when operating a hot glue gun.

Wigs can be printed in the style that is chosen by customers on the Try-on App, and can be styled further like normal haid by hair stylists.

BIOPLASTIC GENERATION

Utilize waste keratins to make bioplastics, that are not only mitigate the environment problem caused by non-biodegradable plastics, but also keep the flexibility of synthetic plastic by adding in plasticizers in its producing process.

VIRTUAL TRY-ON AR ECOMMERCE APP

Using AR in L'Oréal Virtual Tryon App, so that users can choose their favorite wigs by trying them on, and order it on the app so it can be printed and styled at salons.

**** Source: 3D Printed Hair: Fused Deposition Modeling of Soft Strands, Fibers and Bristles*

Empowering UNIQUENESS and Crafting CONFIDENCE : Tailored Wigs for Extraordinary Journeys - PERSONA WIGS