

# **Circular Opportunity in Fashion**

## **IDE424 Final Project**

**Atakan Göksel**

# INDEX

- 1. Introduction**
- 2. Research Findings**
- 3. Material Sourcing and Production**
- 4. Design and Manufacturing**
- 5. Distribution and Retail**
- 6. Usage and Maintenance**
- 7. End-of-Life and Recycling**
- 8. Interview Insights**
- 9. Circular Fashion Hub Concept**
- 10. Innovation and Improvement**
- 11. Circular Opportunity and Stakeholders**
- 12. Conclusion**



# Circular Economy in Fashion

“Take, Make, Dispose”

*linear approach*



Utilize waste or recycled materials

Turn product into a service

Minimize waste stream

Reuse scenario

Local sourcing

Repairability

Biological/technical cycle  
contribution

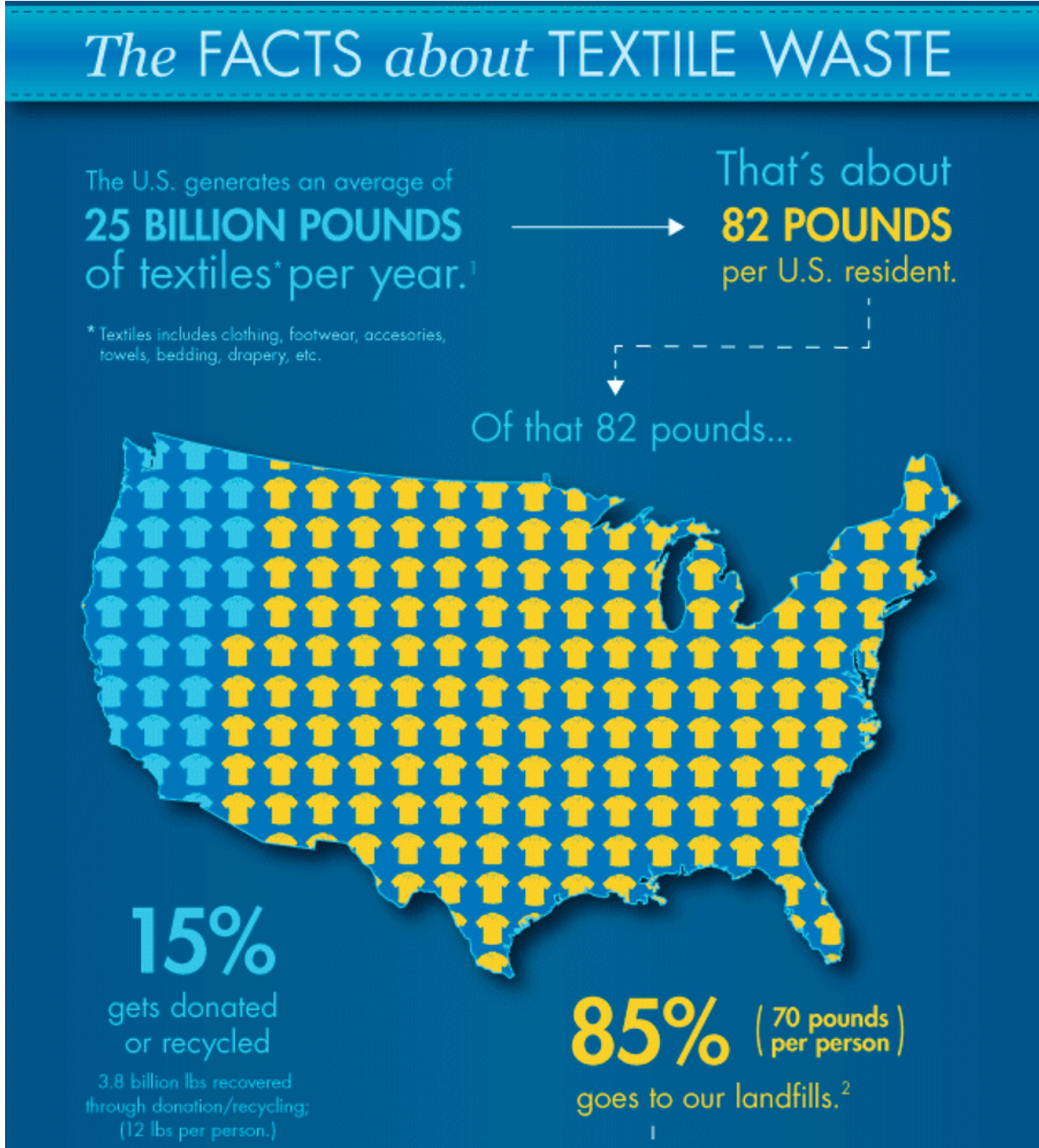
End-of-life scenario

Customer experience improvement

Redesign with biodegradable  
materials

New system requirements

# Utilizing Waste, Minimizing Waste Streams & Local Sourcing



Fabric Scraps

Post-Consumer Clothing

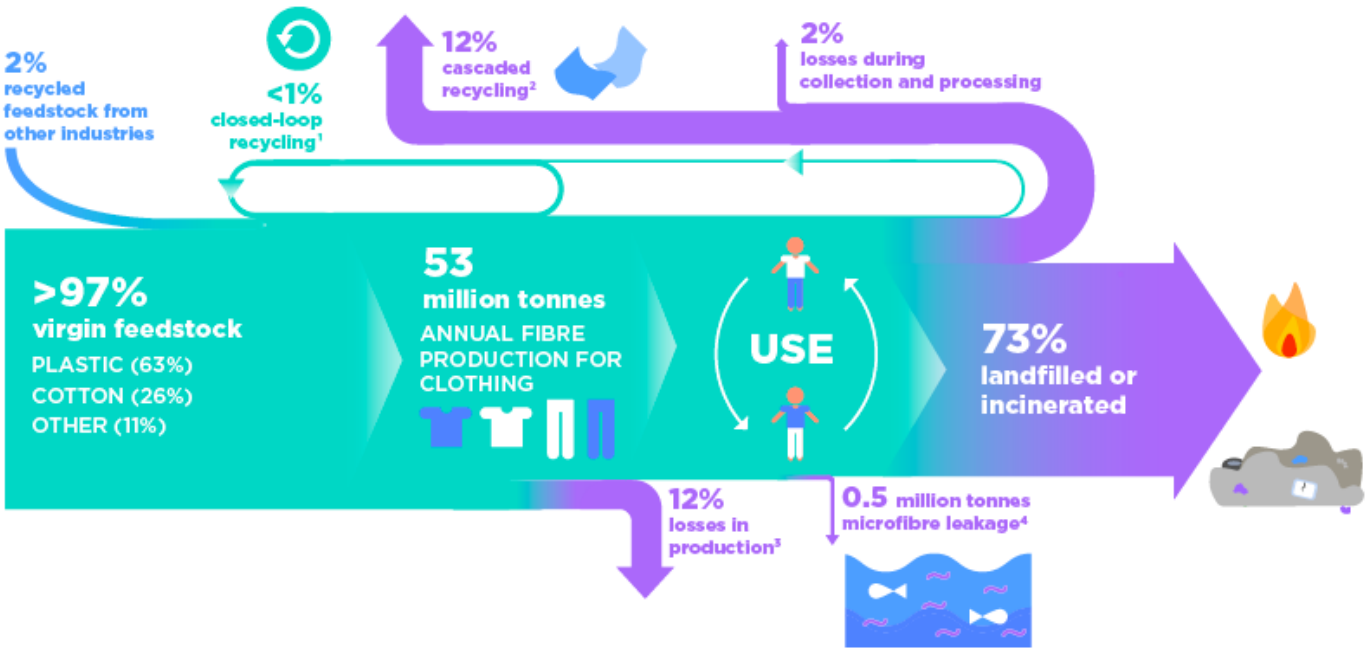
Recycled Polyester

Upcycling

Recycled Natural Materials

Integrated Recycling

Global material flows for clothing in 2015





**waste possible.**

5683



# Better Than New



## Patagonia' Worn Wear' Swap Black Friday 11·28·14 All Day

No longer wearing that jacket? Take a break from the consumer madness this Black Friday and drop by the Patagonia Worn Wear Swap. If you don't find something you like, our friends from the sharing app yerdle will be on hand to exchange your used Patagonia clothing for yerdle credits.

Free food, refreshments and music

**Patagonia Denver**  
1431 15th St (303) 446-9500  
insta: @patagoniadenver fb: PatagoniaDenver

**patagonia**  
© 2014 Patagonia, Inc.

# Material Sourcing and Production

Take-Back Programs

Repair Services

Lean Manufacturing

## Roadmap To Change

We guide value chains towards the use of safer chemistry - for a cleaner planet - and a brighter future

Powered by ZDHC



Chemical Management

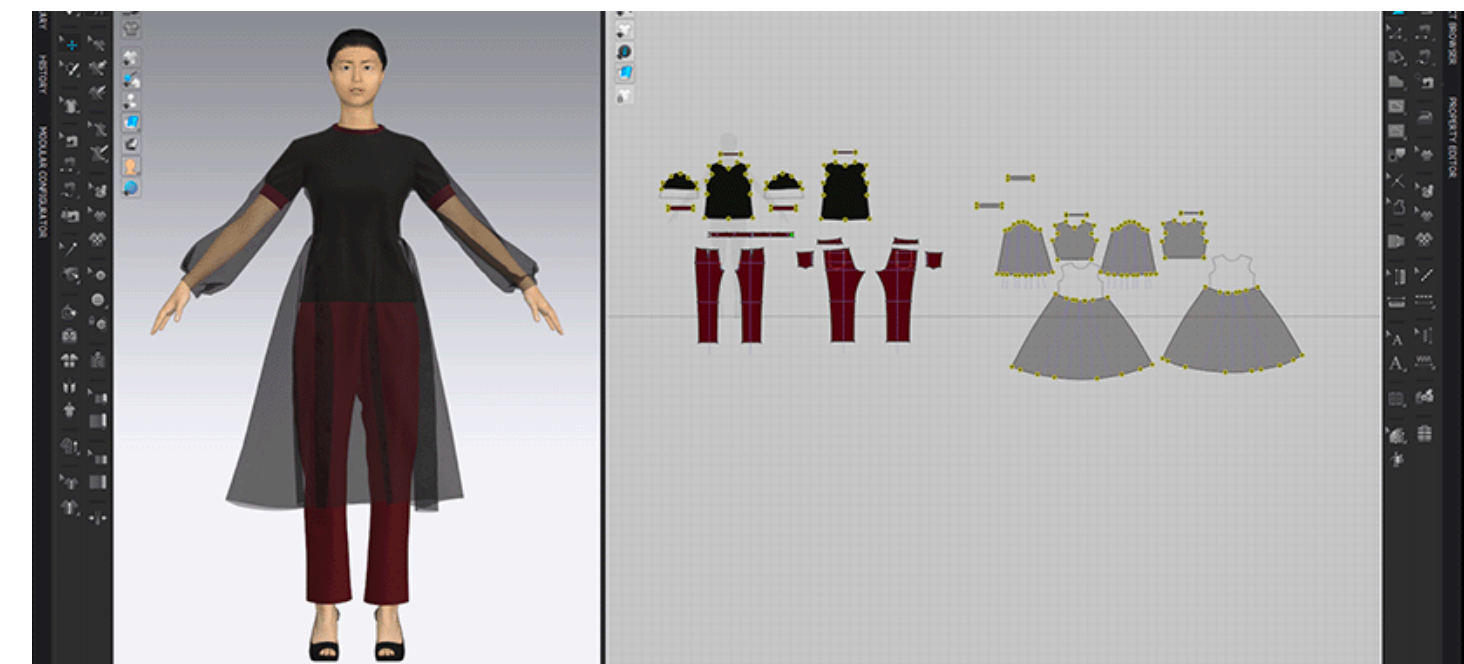
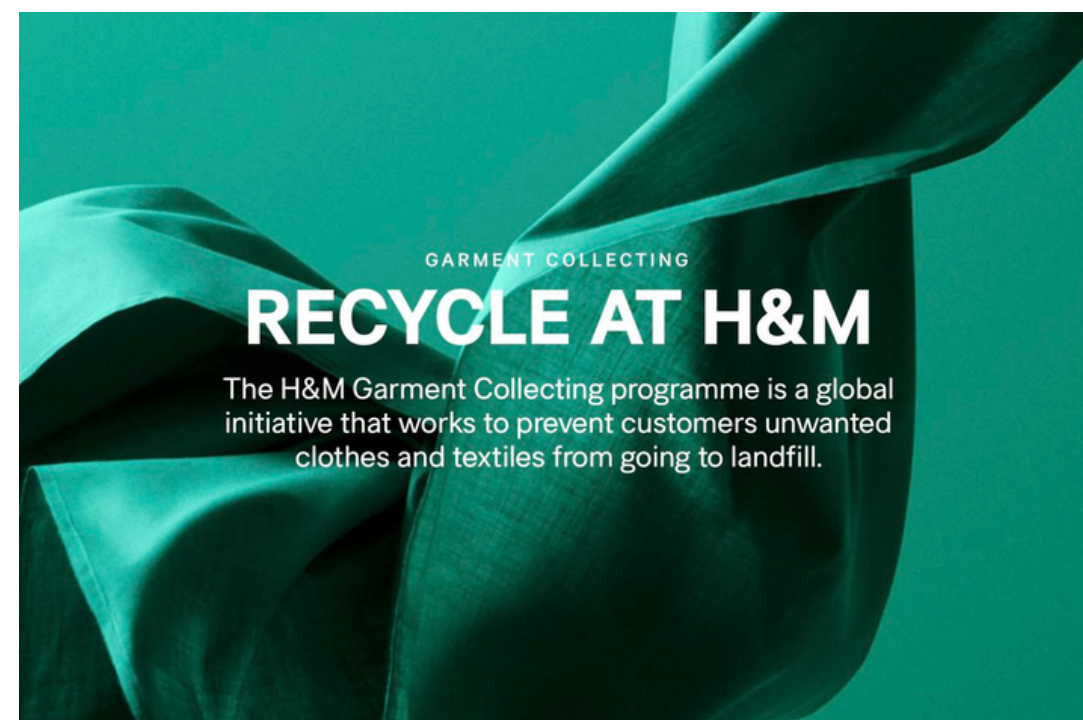
Material Choice

Digital Prototyping

Durable Quality

Zero-Waste Design

Modular Design

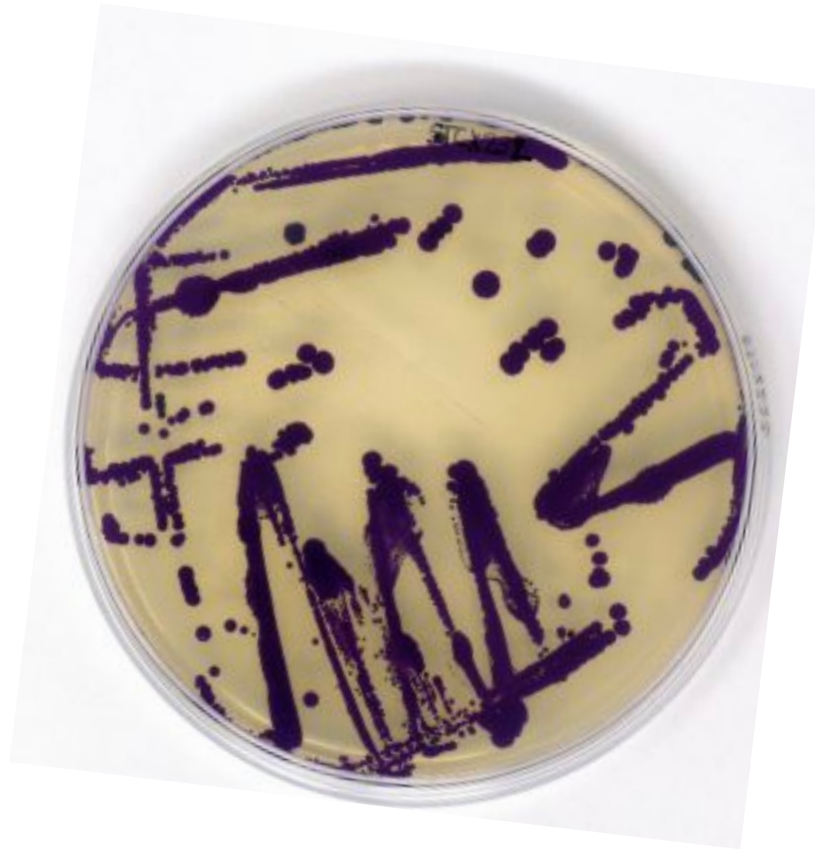




good together

# EILEEN FISHER + west elm

We care about responsible design and conscious manufacturing—that's why we're good together. This limited-edition collection brings recycled EILEEN FISHER denim full circle for less waste and a longer product life cycle. It's sustainable fashion for your home.



## Design and Manufacturing



Local Fiber Production

Community-Based Manufacturing

Local Artisans Collaboration

Near-Sourcing of Accessories

Utilizing Local Waste Streams

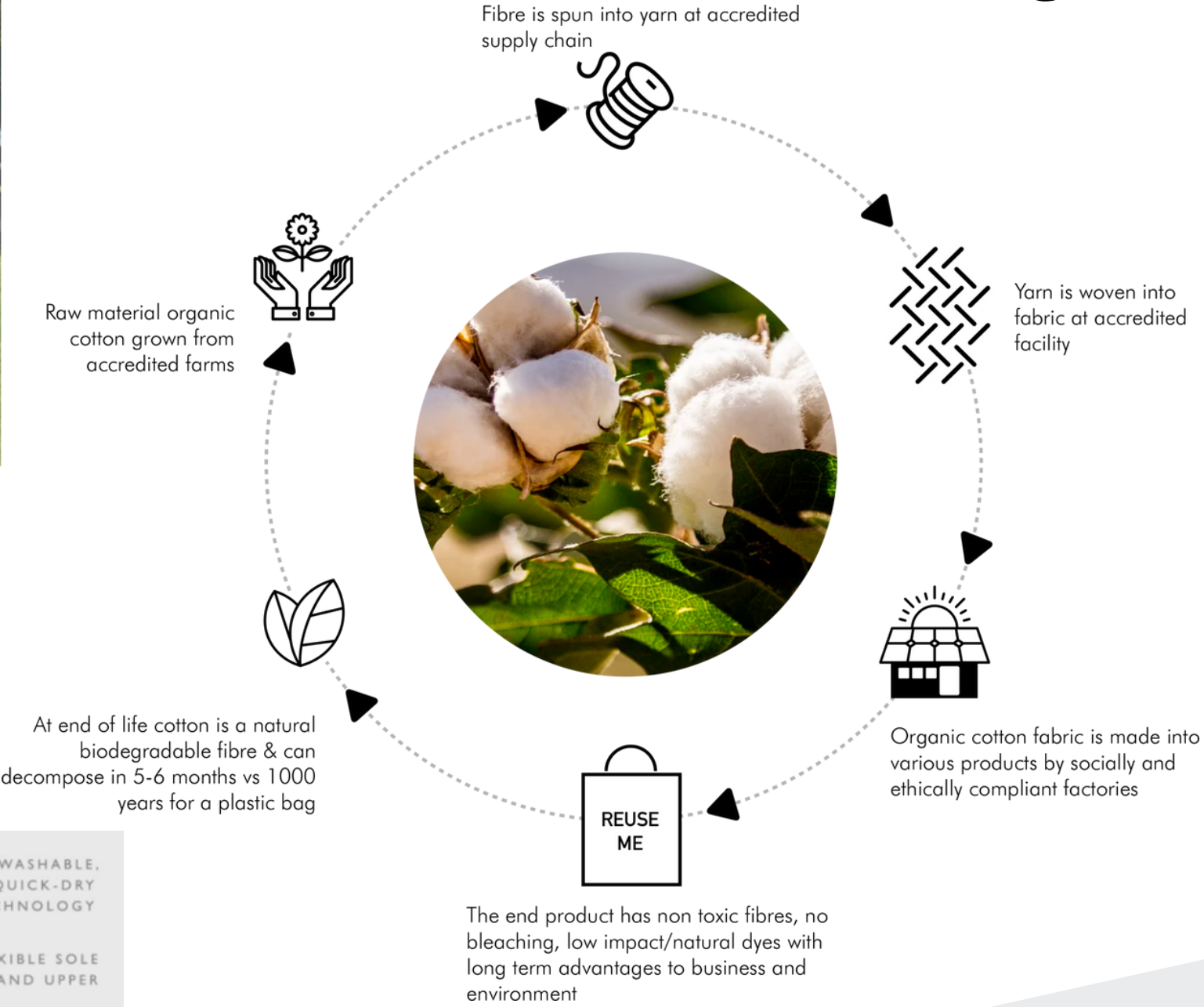
Dyeing and Finishing







# Design and Manufacturing





# Distribution and Retail

Repair and Maintenance  
Services

Take-Back Programs



Wardrobe Management

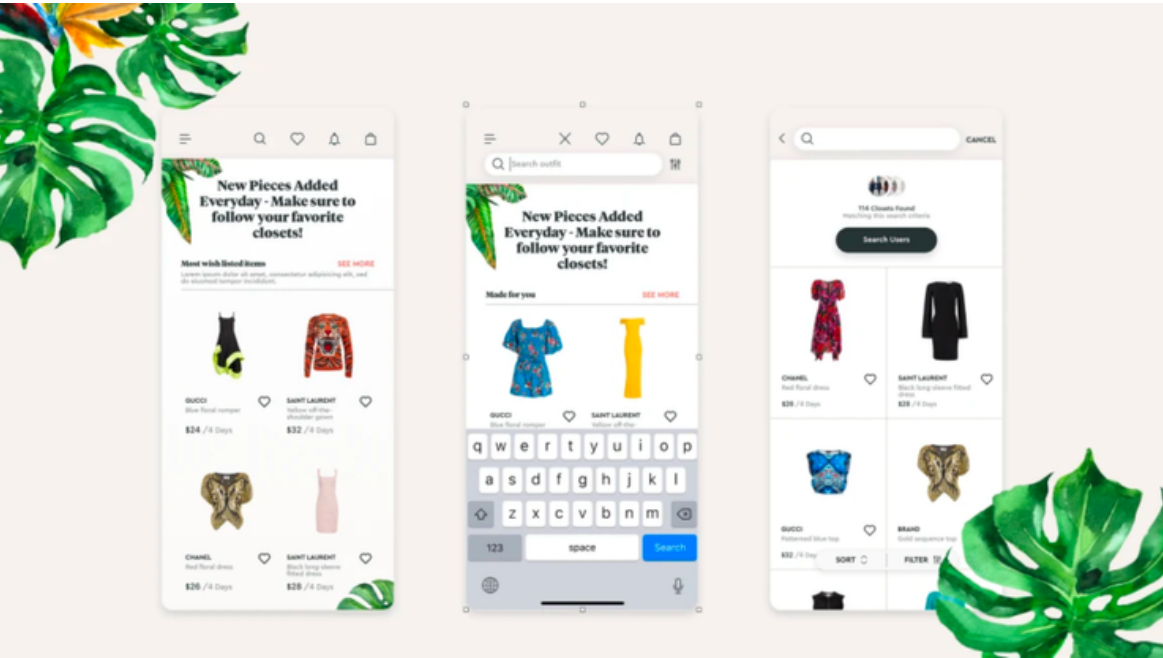
Leasing High-Value Items

Clothing as a Platform



Clothing Rental Services

Subscription Models







# Usage and Maintenance

Online Tutorials and Guides  
QR Codes for Repair Instructions

Workshops and Classes  
Community Repair Events

Include Repair Kits  
Design for Repairability



Collaborate with Repair Cafés  
Customer Service Support

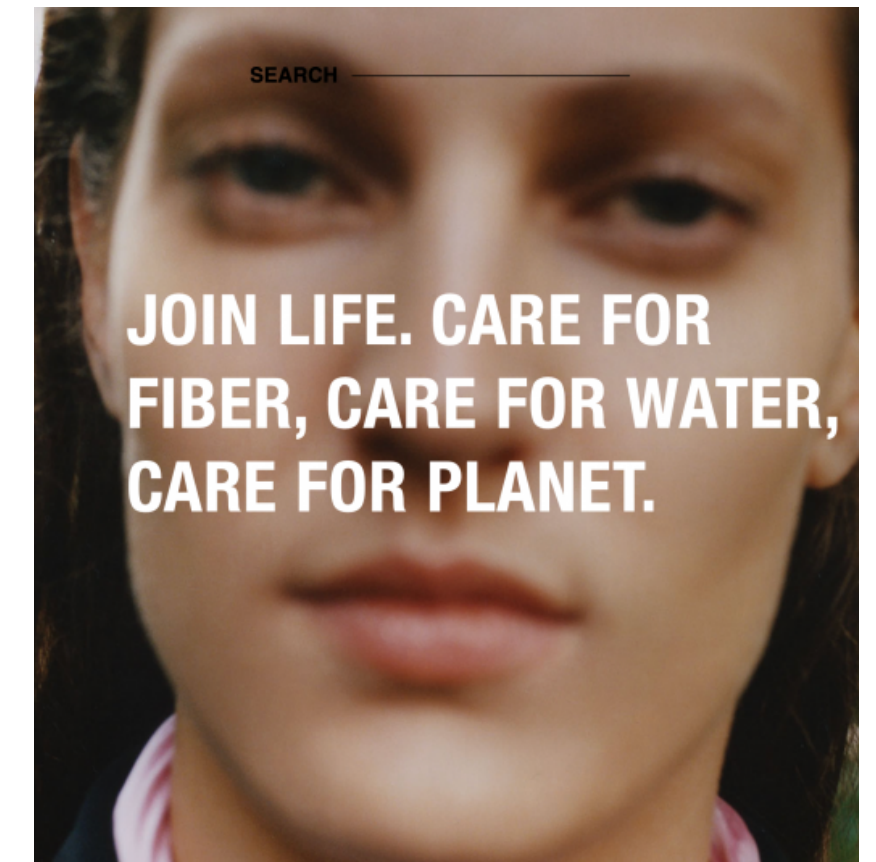
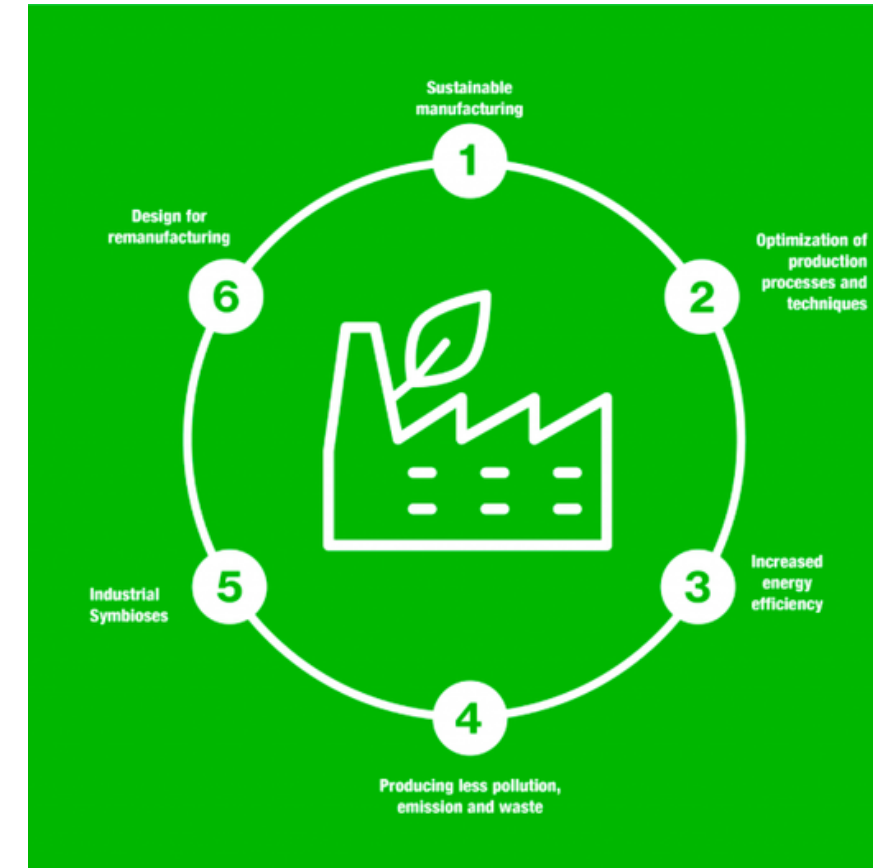


# End-of-Life and Recycling





# End-of-Life and Recycling



# Interview

**Interviewer: I am exploring how people interact with sustainable clothing. To start, can you tell me about how you typically use and care for your clothing?**

**Berk: Sure, I tend to buy clothes that are versatile and durable because I like items that can withstand frequent wear. I wash my clothes at low temperatures and air-dry them to save energy and reduce wear and tear.**

**Interviewer: When you no longer need a piece of clothing, what do you usually do with it? Have you ever repurposed or repaired clothing yourself?**

**Berk: I try to donate clothes that are still in good condition. My mom sewn buttons back on and fixed minor tears, but I've never done anything major in terms of repairs or repurposing.**

**Interviewer: Sustainability is a significant aspect of our age. How important is sustainability in your clothing purchases and lifestyle choices?**

**Berk: It's becoming more important to me. I've started looking for brands that use sustainable materials and ethical labor practices. It's not just about the clothing anymore; it's about the whole production process.**

# Interview

**Interviewer: That's a valuable perspective. Have you faced any challenges when trying to dispose of or recycle clothing?**

**Berk: Absolutely. It's not always clear where I can take clothes to ensure they're actually recycled and not just dumped in a landfill. More convenient recycling options would be helpful.**

**Interviewer: Lastly, how would you feel about a service that allows you to rent, repair, or exchange clothes rather than owning them outright?**

**Berk: I love the idea of renting for special occasions. I'm not sure about everyday clothes, though. I like having things that are mine. But if the service could offer personalization and ensure high hygiene standards, I'd definitely consider it.**

**Interviewer: Thank you for your insights, Berk. Your feedback is incredibly helpful as we refine our sustainable clothing line to better fit consumers' needs.**

## CIRCULAR OPPORTUNITY

Developing a fully circular clothing line, utilizing sustainable materials, and incorporating a business model that extends the lifecycle of garments through services like renting, repairing, and recycling.

This innovation would offer customers a more engaged and conscious shopping experience. They would benefit from a broader range of services beyond just purchasing clothing, including the option to rent garments for special occasions, repair services to extend the lifespan of their favorite pieces, and the ability to recycle items easily. This could foster a deeper connection with the brand and contribute to a sense of community and shared responsibility for the environment.

# CIRCULAR OPPORTUNITY

**This system would require the establishment of a robust infrastructure for the return, repair, and recycling of clothing. It would also need a platform for renting and exchanging garments, as well as a logistics network optimized for these services.**

**Additionally, there might be a need for new technologies in textile recycling to handle a wider variety of materials more efficiently.**



# CIRCULAR OPPORTUNITY



**Organic Cotton**



**Hemp**



**Linen**



**Bamboo**



**Econyl**



**Tencel and Lyocell**



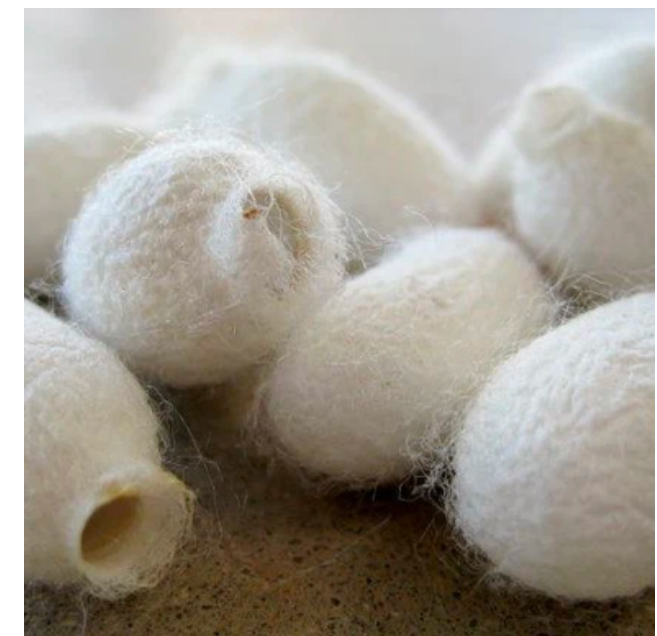
**Recycled Polyester**



**Piñatex®**



**Wool**



**Peace Silk**



**"Eco-HUB Wardrobe" is a comprehensive service product designed for clothing brands committed to sustainability.**

**It offers a unique blend of services that extend the lifecycle of garments while fostering an eco-conscious consumer base.**

**The service aims to integrate circular economy principles directly into the customer experience, transforming how consumers interact with their clothing.**



# ECO HUB Key Services

## **Garment Rental Service**

**Offers customers the option to rent garments for a specific period, ideal for special occasions, seasonal wear, or trying out new styles without the commitment of purchase.**

## **Repair and Upcycle Hub**

**Provides professional repair, tailoring, and upcycling services. Customers can send in damaged or worn garments for restoration, enhancing their longevity.**

## **Take-Back and Recycling Program**

**Encourages customers to return their old garments, which are then either recycled into new fabrics or upcycled into new fashion items.**

# ECO HUB Key Services

## Virtual Wardrobe Consultant

A digital platform offering personalized wardrobe management advice. It suggests outfit combinations, identifies gaps in the wardrobe for future purchases, and advises on garment care.

## DIY Repair Kits and Online Workshops

Provides DIY repair kits with essential tools and materials. Complementary online workshops teach customers basic repair and maintenance skills.

## Eco-Cycle Points System

A loyalty program where customers earn points for participating in eco-friendly practices like renting, repairing, or recycling garments. Points can be redeemed for discounts on future purchases or rental services.

# ECO HUB Implementation Strategy

## Partnerships

Collaborate with local artisans, repair specialists, and recycling centers.

## Technology Integration

Develop an app or website for managing the rental service, sustainable products and virtual wardrobe consultations.

## Marketing and Awareness

Launch campaigns to educate consumers about sustainable fashion practices and the benefits of participating in the ECO HUB program.

## Feedback Mechanism

Implement a feedback loop to continuously improve services based on customer experiences and environmental impact assessments.



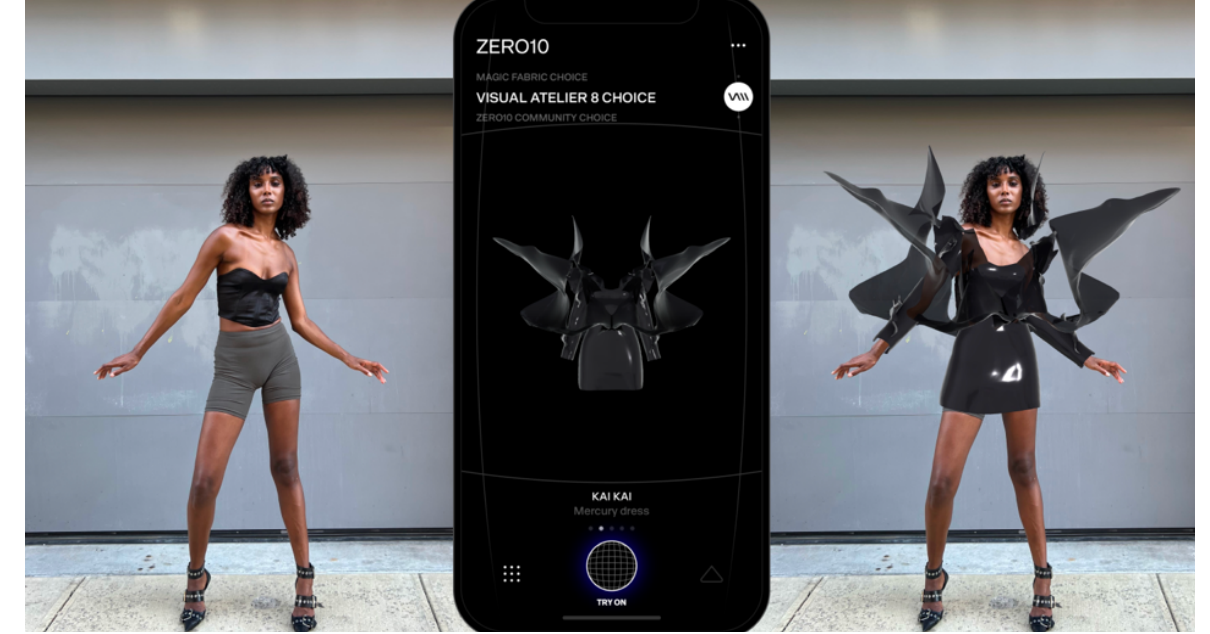
# WHAT WOULD THIS SYSTEM REQUIRE THAT DOESN'T CURRENTLY EXIST?



**Specialized Recycling Facilities**



**Repair and Upcycling Centers**



**Marketplace for Upcycled Fashion**



**Local Artisan and Craftsperson  
Network**



**Logistics Network for Circular  
Fashion**



**Educational and Training  
Resources**



# WOULD THIS INNOVATION IMPROVE THE CUSTOMER EXPERIENCE IN SOME WAY?



**Increased Variety and Accessibility**



**Environmental Consciousness**



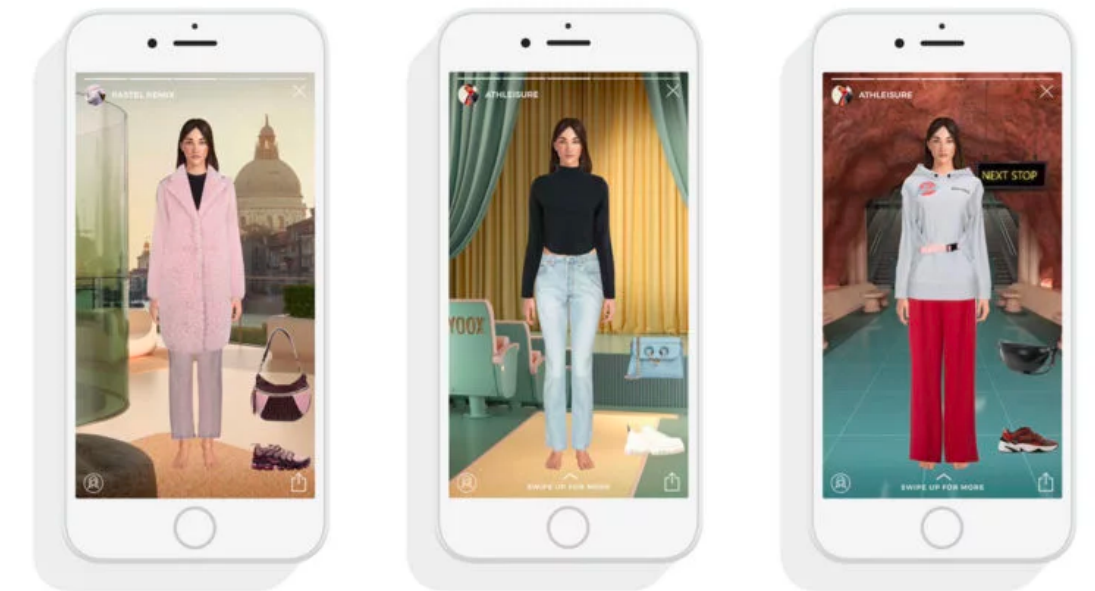
**Economic Benefits**



**Longevity and Value**



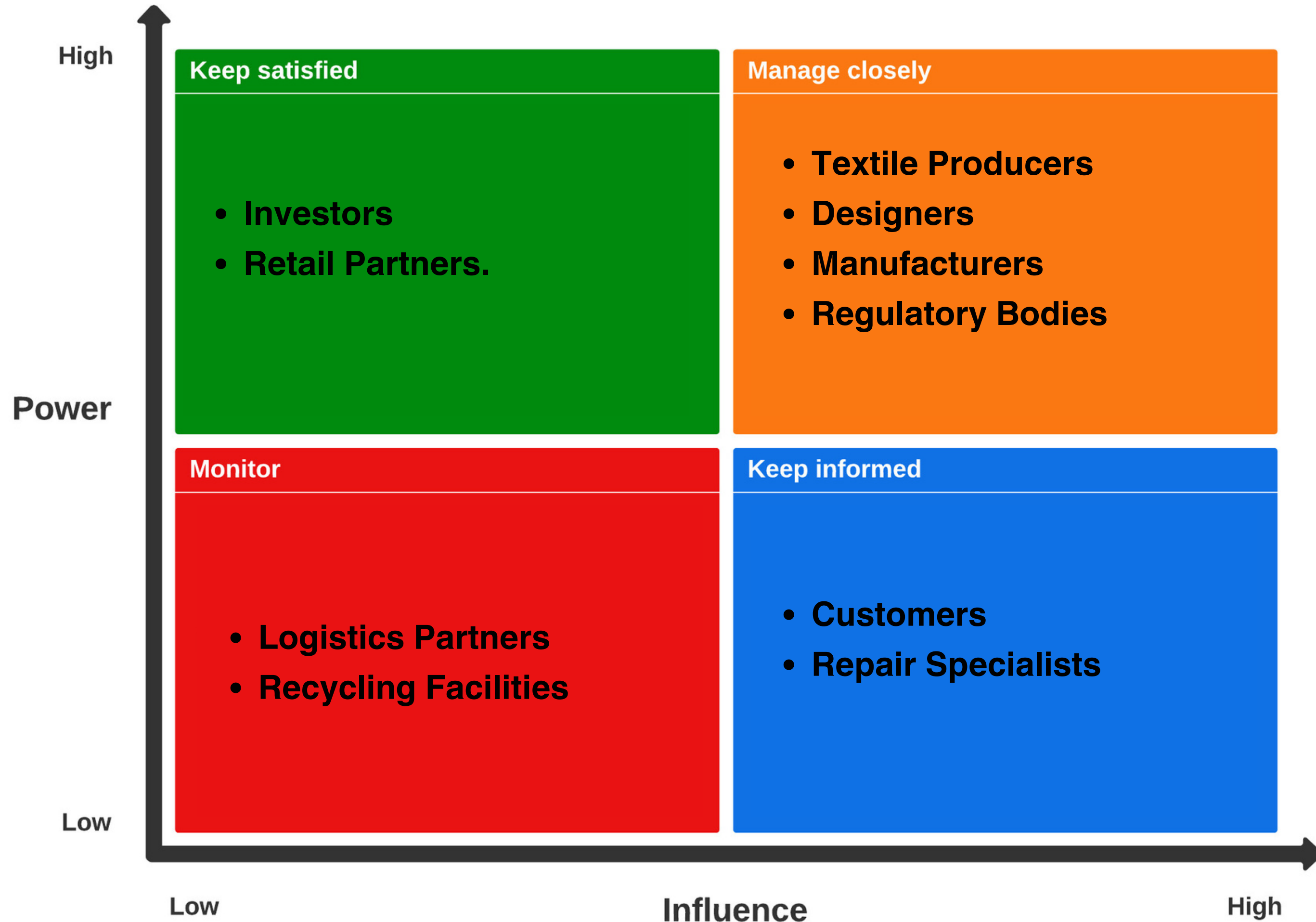
**Convenience and Flexibility:**



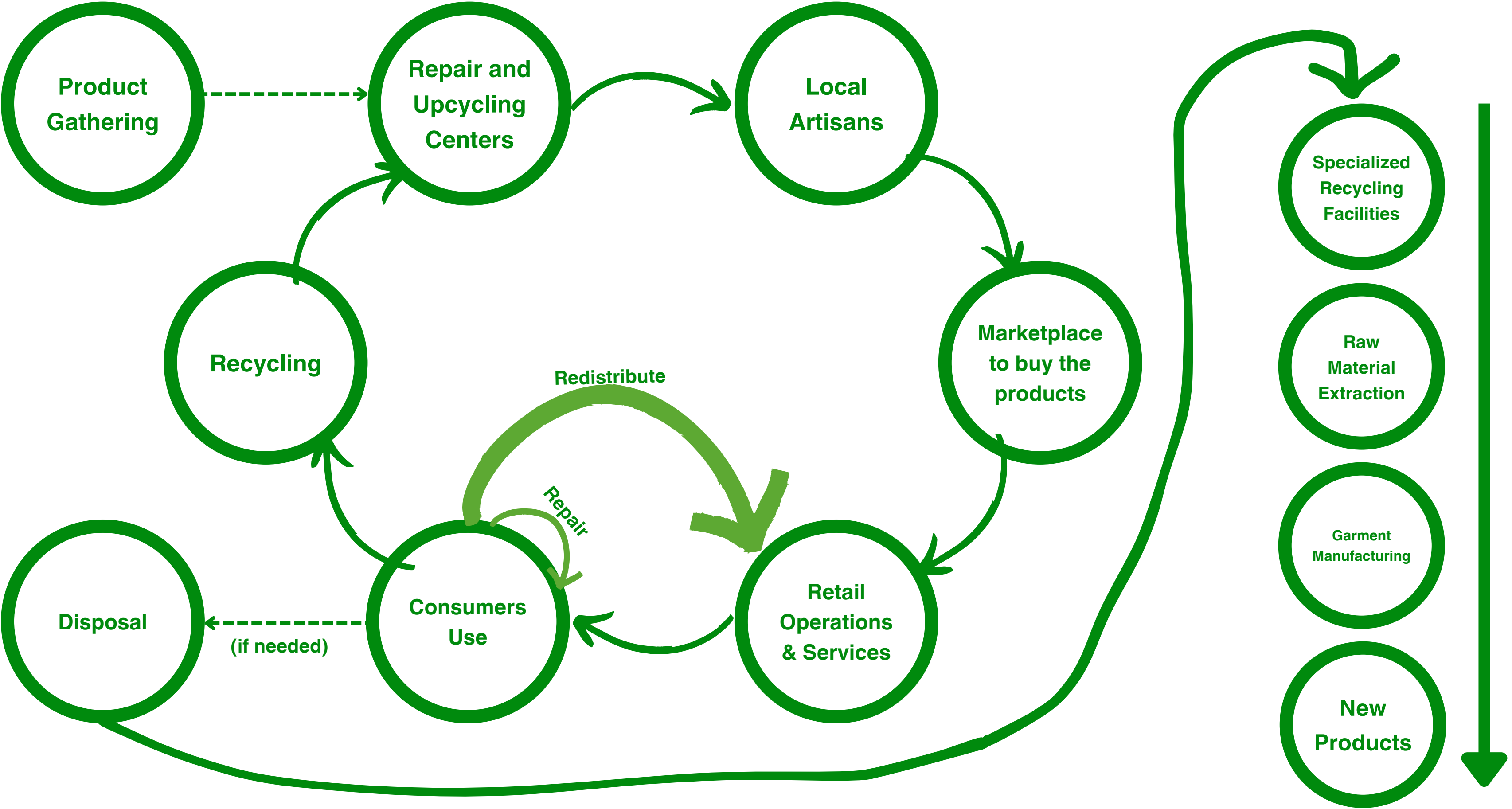
**Personalized Fashion Experience**



# WHICH STAKEHOLDERS DO I NEED TO MAKE THIS HAPPEN?



DESIGN



# CIRCULAR STRATEGY CARDS

Narrow




Localize supply where appropriate



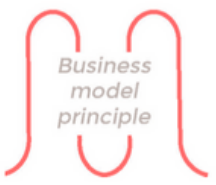
Business model principle

- work with local artisan and craftsmans
- localize production and recycling facilities

Slow




Repurpose existing products and components



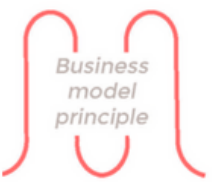
Business model principle

repurpose clothes and parts of clothes and maintain and repair them for reuse purposes

Slow




Provide the product as a service



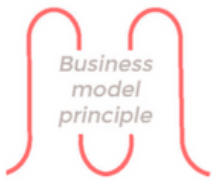
Business model principle

a large operational service based product

Slow




Organize maintenance and repair services



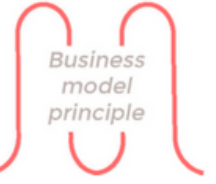
Business model principle

- products which are gathered will be repaired at in-house factories
- new made products from recycled fabrics will also be made in-house

Slow




Remanufacture existing products and components



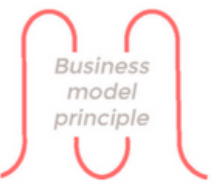
Business model principle

remanufacture the existing clothes, use their not worn out parts and fabrics to create new unique silhouttes

Slow




Enable users to maintain and repair their products



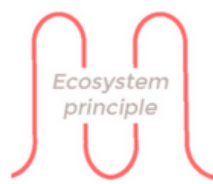
Business model principle

include repair-kits for the consumers to repair their clothes to a some extend and online guides to raise awareness for longetivity of usage

Slow




Turn disposables into a reusable service ecosystem



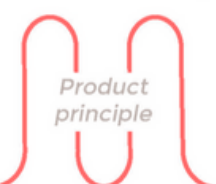
Ecosystem principle

- Disposed clothes will come back to life-cycle in factory with;
- raw material extraction
- garment re-manufacturing
- new products

Slow



Design for ease of maintenance and repair



Product principle

design new silhouttes and re-made clothes with ease of maintenance in mind

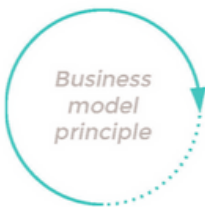


# CIRCULAR STRATEGY CARDS

Close



Recycle products  
in proper facilities

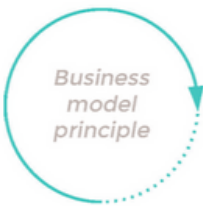


- Have in house facilities which are certified for Specialized Recycling Facilities

Close



Enable and  
incentivize product  
returns



customers can give their  
worn out products back  
to for use

Close



Design with  
recycled  
inputs



- Reuse recycled clothes and keep recycling and also reusing old clothes

Inform



Virtualize

Product  
principle

Virtualize the shopping,  
trying- out clothes,  
buying and all of the  
other processes other  
than production facilities

Close



Reuse and sell  
components and  
materials from  
discarded products



- reuse the materials from disposed products and add them to production for new products

# CONCLUSION

**Repair and Maintenance** for longer upcycling purposes and use the product till worn-out. With the help of **local artisans and craftsmen** develop new products, **upcycle** old clothes, **repair and maintain** the current clothing pieces.

Create and use a **virtual marketplace** for new buyers/consumers and also traders to buy/give products.

Consumers can buy **upcycled** products and **recycled** products.

Users can also trade their old clothes which will be inspected by our artisans; some products will be **upcycled with repairs** or such, some products will be **disposed for recycling** and used for their **garments, buttons, zippers** etc. and some will directly go in to our marketplace with a **maintenance care**.

We will help the buyers to take care of their clothes by **teaching** them about the **longevity** of clothes and how to maintain them properly and **creating awareness**.

**ECO-HUB** will also include **easy-repair-kits** with their products in order for the buyers to fix small things in their own and use the products longer.

# CONCLUSION

**In short, ECO-HUB will revolutionize the fashion/textile sector by incorporating circular design and opportunities in a sector still new to terms like circular economy.**

**It will have all of the operations inside its own facilities with operations such as upcycling centers, design development, retail operations & services, specialized recycling facilities, garment manufacturing and more...**

**With the great and large operations of ECO-HUB, fashion sector can develop its firm buy, use and dispose principals into a more environmentally friendly and future-focused approach with this circular opportunity.**

# REFERENCES

<https://www.ellenmacarthurfoundation.org/fashion-and-the-circular-economy-deep-dive#:~:text=In%20a%20circular%20economy%20for%20fashion%2C%20clothes%20are%20used%20more,be%20captured%20at%20different%20levels.>

<https://liveworkstudio.com/insight/opportunities-challenges-in-circular-fashion/>

<https://www.wbcsd.org/Programs/Circular-Economy/Metrics-Measurement/Circular-transition-indicators/CTI-Fashion-Initiative/News/New-circular-economy-opportunity-for-fashion-and-textile-companies>

<https://psqr.eu/publications-resources/circular-fashion/>

<https://www.bsr.org/en/blog/the-rise-of-circular-fashion-brings-opportunity-to-design-a-fashion-system>

[https://textileexchange.org/circularity/?gclid=CjwKCAiAp5qsBhAPEiwAP0qeJsH8yEp31M0wUMfJyU6LX\\_nN1hffTVWVjpTCu04soKqYY23Y405\\_DxoCfKsQAvD\\_BwE](https://textileexchange.org/circularity/?gclid=CjwKCAiAp5qsBhAPEiwAP0qeJsH8yEp31M0wUMfJyU6LX_nN1hffTVWVjpTCu04soKqYY23Y405_DxoCfKsQAvD_BwE)

[https://impact.economist.com/projects/beyondthespotlight/fashion-ei-article/?utm\\_medium=cpc.adword.pd&utm\\_source=google&ppccampaignID=18151738051&ppcadID=&utm\\_campaign=a.22brand\\_pmax&utm\\_content=conversion.direct-response.anonymous&gad\\_source=1&gclid=CjwKCAiAp5qsBhAPEiwAP0qeJn3d3LCkLjFIPGcl3ZmFZHwwpBL2QlJAcl6e4W96mt1gtq90-4fQzhoC6pYQAvD\\_BwE&gclsrc=aw.ds](https://impact.economist.com/projects/beyondthespotlight/fashion-ei-article/?utm_medium=cpc.adword.pd&utm_source=google&ppccampaignID=18151738051&ppcadID=&utm_campaign=a.22brand_pmax&utm_content=conversion.direct-response.anonymous&gad_source=1&gclid=CjwKCAiAp5qsBhAPEiwAP0qeJn3d3LCkLjFIPGcl3ZmFZHwwpBL2QlJAcl6e4W96mt1gtq90-4fQzhoC6pYQAvD_BwE&gclsrc=aw.ds)

<https://medium.com/mark-and-focus/the-circular-economy-in-fashion-reducing-water-consumption-and-improving-sustainability-74c45d13d52f>

<https://www.voguebusiness.com/sustainability/circular-fashion-exciting-to-talk-about-tough-to-implement>

<https://www.linkedin.com/pulse/fashion-circular-wont-wedontneedroads/>

<https://www.voguebusiness.com/sustainability/circular-fashions-timely-opportunity-recycled-materials>

[https://impact.economist.com/projects/beyondthespotlight/fashion-ei-article/?utm\\_medium=cpc.adword.pd&utm\\_source=google&ppccampaignID=18151738051&ppcadID=&utm\\_campaign=a.22brand\\_pmax&utm\\_content=conversion.direct-response.anonymous&gad\\_source=1&gclid=CjwKCAiAp5qsBhAPEiwAP0qeJn3d3LCkLjFIPGcl3ZmFZHwwpBL2QlJAcl6e4W96mt1gtq90-4fQzhoC6pYQAvD\\_BwE&gclsrc=aw.ds](https://impact.economist.com/projects/beyondthespotlight/fashion-ei-article/?utm_medium=cpc.adword.pd&utm_source=google&ppccampaignID=18151738051&ppcadID=&utm_campaign=a.22brand_pmax&utm_content=conversion.direct-response.anonymous&gad_source=1&gclid=CjwKCAiAp5qsBhAPEiwAP0qeJn3d3LCkLjFIPGcl3ZmFZHwwpBL2QlJAcl6e4W96mt1gtq90-4fQzhoC6pYQAvD_BwE&gclsrc=aw.ds)