

## Conference Paper

# On Building a Community to Exchange and Share Sustainable Fashion Applications

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**Abstract.**

Sustainable development is a standard plan for peace and prosperity for people and the planet, now and in the future, set forth by the 2030 Agenda for Sustainable Development, which was adopted by all United Nations member states and agreed to in 2015. The Sustainable Development Goals (SDGs) are an urgent call to action for all developed and developing countries in relation to global cooperation. Many factors cause environmental pollution, but the fashion industry is considered by the United Nations Conference on Trade and Development (UNCTAD) as the second most polluting industry in the world. It accounts for 10% of global carbon emissions due to the energy used in production, manufacturing, and transportation. In particular, the factors that strongly affect the environment in the fashion industry are the textile materials, the fabric dyeing industry, and the rapid development of fast fashion. The data was collected through an online survey of 101 fashion consumers and interviews with nine target audiences who need to buy and sell used clothes or are interested in buying and selling used clothes or sustainable fashion. Sustainable design is not a new concept, but it is still quite strange to the Vietnamese. Consumer ignorance about sustainable consumption and the harmful effects of the fashion industry on planet Earth is a big reason why consumers constantly plunge into the shopping vortex. The problem of wasteful and unsustainable fashion consumption is a big global problem at a time when the fashion industry is gradually emerging into the sustainable fashion movement. This is an opportunity to build a community by connecting consumers through their essential needs, helping them raise awareness, change their behavior, and make each individual part of a sustainable fashion community. They are thus contributing to sustainable development in the future.

**Keywords:** SDGs, sustainable fashion, sustainable consumption, community

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## 1. Introduction

Sustainable development is a standard plan for peace and prosperity for people and the planet, now and in the future, set forth by the 2030 Agenda for Sustainable Development, which all countries have adopted. United Nations member states agreed in 2015. 17 The Sustainable Development Goals (SDGs), an urgent call to action for all developed and developing countries in relation to global cooperation, is at its center. etc [1] If the SDGs are achieved among people, governments and businesses, the world can become a more prosperous place for all, where no one is left behind.

Many factors cause environmental pollution, but in which UNCTAD considers the fashion industry as the 2nd most polluting industry in the world [2]. It accounts for 10% of global carbon emissions due to the energy used in production, manufacturing, and transportation. In particular, the factors that strongly affect the environment in the fashion industry are the textile materials, the fabric dyeing industry, and the rapid development of fast fashion. According to research from Fiber fashion, fast fashion changes fashion consumption, wasteful consumption, and fashion consumption in the 21st century is characterized by excessive consumerism. Moreover, it is because of that problem that researchers have conducted literature review studies on SDG goals, fashion, community, behavioral approaches, and user research on fashion consumption behavior.

The research questions are as follows:

1. Which SDGs Goals does the application apply to?
2. What is the current state of global fashion consumption?
3. Why is sustainable fashion a solution to the consequences of global fashion consumption?
4. How does building a community about sustainable fashion make global fashion consumption more sustainable?

## 2. Research

### 2.1. About SDGs

Among the 17 sustainable development goals [1] the CESF Application is developed and evaluated based on 3/17 goals of the SDGs. For each goal, conduct research and evaluate the impact of that goal on the remaining 16 goals on the list, from which to choose the appropriate goal is to create a community to exchange and buy used clothes.

, sharing the message of sustainable fashion to help consumers raise awareness, and reduce the negative impact of the fashion industry on the environment, thereby contributing to sustainable development in the future, specifically as follows:

**1. Goal 10: "Reduce inequality within and among countries"**

(a) 10.2: "By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status"

**2. Goal 12: "Ensure sustainable consumption and production patterns"**

(a) 12.5: "By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse"

(b) 12.8: "By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature"

**3. Goal 13: "Take imperative action to combat temperature change and its impacts"**

(a) 13.3: "Improve education, awareness-raising, and human and institutional capability on temperature change mitigation, adaptation, impact reduction, and early warning"

## 2.2. The reality of global fashion consumption

The wasteful reality of the fashion industry, the development of fast fashion and unsustainable consumption is reflected in the tendency to buy more and more, and how to handle waste after use. A research from Goodonyou.eco says the fashion industry generates an estimated 92 million tons of textile waste annually, projecting that this number will increase by about 60% between 2015 and 2030 [3]. In a 2022 study, Woollygreen found that the average amount of clothes worn is 36% less than 15 years ago [4]. Consumers buy more clothes even though they wear less. That is why consumers' problem with what they do not wear is a sore point. A study from the BBC has shown that in the US alone, 85% of discarded textiles are dumped or burned, with the average American throwing away about 37kg of clothing each year [5]. The YouGov Omnibus study reveals the extent of clothing waste in Vietnam: Survey results show that about 74% of Vietnamese adults have ever given or thrown away their clothes and of which about 19% have ever thrown or given away clothes. [6]

Fashion industry leaders are working together to address environmental concerns. The wave of sustainable fashion is fighting to cover fast fashion. Fashion industry leaders are working together to address environmental concerns, [7] and the wave of sustainable fashion is gradually covering fast fashion. According to the National Assembly Television of Vietnam, sustainable fashion was quite strange to many people in the past, but today, this concept is widely covered worldwide and is loved by many fashionistas. [8]

### 2.3. Sustainable fashion is a solution to the consequences of global fashion consumption

According to Good On You, *fast fashion* can be defined as cheap, trendy clothing that takes ideas from the catwalk or celebrity culture and transforms them into garments in fashion shops on the street at breakneck speed to meet consumer demand. [9]

According to ECO Canada has raised the dark side of fast fashion. The fashion industry can have 52 seasons per year. [10] The fashion industry consumes much water and pollutes it, and the United Nations estimates that a pair of jeans using 1kg of cotton requires 7,500-10,000 liters of water to grow. The fashion industry is believed responsible for 20% of global wastewater and high pollution levels due to using fertilizers, pesticides, chemicals, and dyes. Fashion manufacturing emits harmful emissions, including greenhouse gases (GHGs) like CO<sub>2</sub>, throughout its life cycle. [2]

The life cycle of the average garment follows a linear life cycle. In a linear life cycle, final products are made for single use; after they have completed their use, they are considered waste.

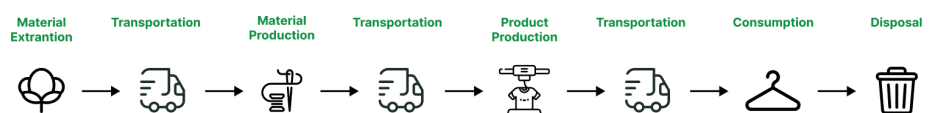


Figure 1: Product Life cycle of typical fashion products (Source: GBB [11]).

According to GOSHOPIA, *sustainable fashion* is simply promoting a fashion industry that takes a long-term approach to the design, production, and consumption of clothing and accessories, avoiding harm to people, planets, or animals. [12]

According to the VOUE, there are reasons why sustainable fashion is more important. Sustainable fashion creates less waste as sustainable brands focus on quality clothing products made from durable materials, products that are used over and over again, helping to reduce CO<sub>2</sub> emissions and other greenhouse gases, use biodegradable materials from natural or recycled fabrics, saving water, ensuring fair wages, and decent

working conditions. Once garments are created, sustainable fashion ensures that their life cycle is cyclical and used more than once. [13]

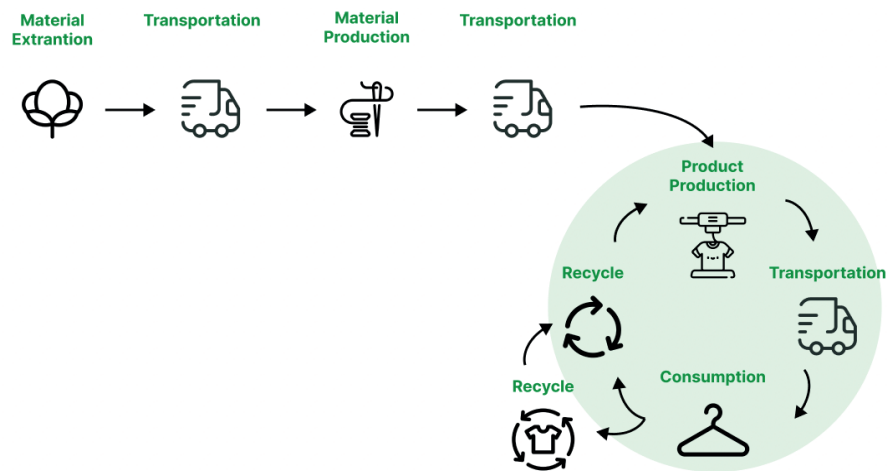


Figure 2: Product Life cycle of sustainable fashion (Source: GBB [11]).

Fast fashion does not just stop at the production stage but also in the use process. Many modern clothes are not made to last. Much of it will end up in landfill after only a few wears. The researchers have created the table below, comparing unsustainable and sustainable consumption through the studies.

TABLE 1: Comparing unsustainable and sustainable consumption.

Unsustainable consumption	Sustainable consumption
Buy a lot of unnecessary items and choose cheap, low-quality items	Buy less and choose high-quality items
Do not recycle old clothes and textile products	Recycle old clothes and textile products
Do not use old clothes for other purposes	Reusing old clothes for other purposes
Material selection from synthetic fiber, nylon	Selection of organic, natural materials products
Only use new clothes	Buy or rent used clothes
Shop from fast fashion and low-ethical brands	Shop from sustainable and ethical fashion brands.
Throw away clothes after use, do not donate or sell	Donate, sell or trade used clothes
Use textile products less than 10 times	Use 1 textile product many times

## 2.4. Building a community about sustainable fashion make global fashion consumption more sustainable

**The current landscape is an opportunity to build an online community:** The United Nations Sustainable Development Goals[1] focus on human finance and intelligence. Community building is one of the ways to focus on gray matter. Additionally, the popularity and availability of the Internet are prerequisites for a new connection model, building collective interaction or online community. A community is any group of people in which members share similar characteristics, interests, opinions, or goals. According to a study on Creating Community-Connection Experiences by Academia Accelerating the world's research, the community brings many benefits to participants, such as anticipated reciprocity, increased reputation, a sense of efficacy, attachment, or commitment. A community typically exhibits higher intelligence than any other member of that community. [19]

**A sustainable fashion community contributes to the spread of sustainable fashion.** A sustainable fashion community brings together people interested in sustainable fashion, thus impacting fashion. The first impact is to connect consumers, allowing them to express their awareness of sustainable fashion through actions: From buying and selling used clothes to prioritizing the use of quality clothes that are environmentally friendly. The second impact is the spread of sustainable fashion. Moreover, it is impossible to immediately provide a comprehensive solution that changes the entire fashion industry, nor can it only provide solutions from supply or demand in the opportunity that the fashion industry is gradually emerging. Sustainable fashion, the supply gradually becomes "more sustainable"; the right solution when impacting this "sustainable fashion" revolution is the impact on demand.

## 3. Method & Model

### 3.1. Method

#### 3.1.1. Literature Review

Identify, synthesize and evaluate studies around the current state of the fashion industry, sustainable fashion, using used clothes as a manifestation of sustainable fashion, an opportunity to build a sustainable fashion community firmly online. In addition, find out the assumptions that need clarification on used clothing sales and take action to clarify the assumptions through other methods: Observation, Survey, Interview.

### 3.1.2. Observation

Observation of used clothing channels is created, including used clothing markets, used clothing stores, used clothing stores online, personal accounts on social networks, and created a table relationship between the supply and demand of old clothing channels and consumers.

### 3.1.3. Survey

Aim to clarify the issues observed, including consumption habits, knowledge, and awareness about sustainable fashion, behavior, and attitude towards buying and selling used clothes. The survey was conducted via google form and sent to 500 fashion consumers. Google form consists of 4 parts: Part 1: Fashion consumption habits, part 2: Awareness level about "Sustainable fashion", part 3: Buying and selling used clothes

### 3.1.4. Interview

Based on the analysis of the survey results, there are two main groups of consumers: The group that wants to buy used clothes and the group that wants to sell used clothes. The In-depth Interview aims to clarify the goals, pain points, circumstances, and behaviors of the above consumer groups. These two groups are distinguished by their fashion consumption habits, sustainable fashion awareness and behavior, and the purchase and sale of used clothing. Therefore, an In-depth Interview took place with nine consumers from the two groups above. Interview time with each person is 45 minutes to 1 hour. Flexible interview questions vary for each interviewee but still cover the topics of fashion consumption, sustainable fashion, and used clothes clothing sales.

## 3.2. Model

The model shows how customers are going through Behavior Intervention from "Consume fast fashion, waste fashion, low awareness of "Environmental issues related to fashion products consumption", not caring about product life"" to "Reuse used fashion products, maximize product life cycle, (Both participating in buying and selling), sustainable fashion fashion, spreading sustainable fashion to others"

Hook and Growth loop support impact in attracting new consumers, helping them form positive sustainable fashion habits.

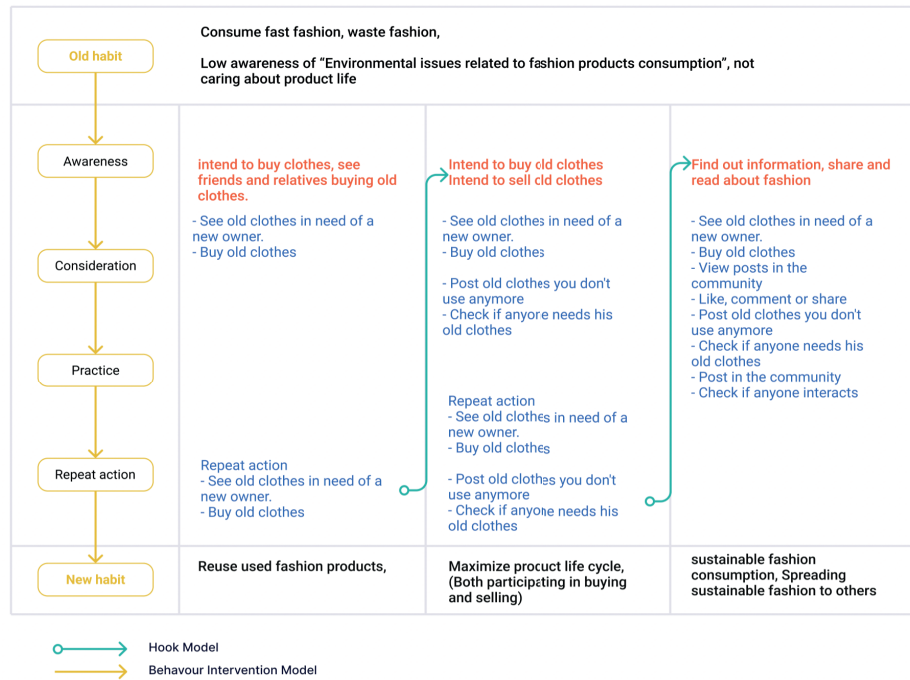


Figure 3: Behavior intervention and hook model. [20].

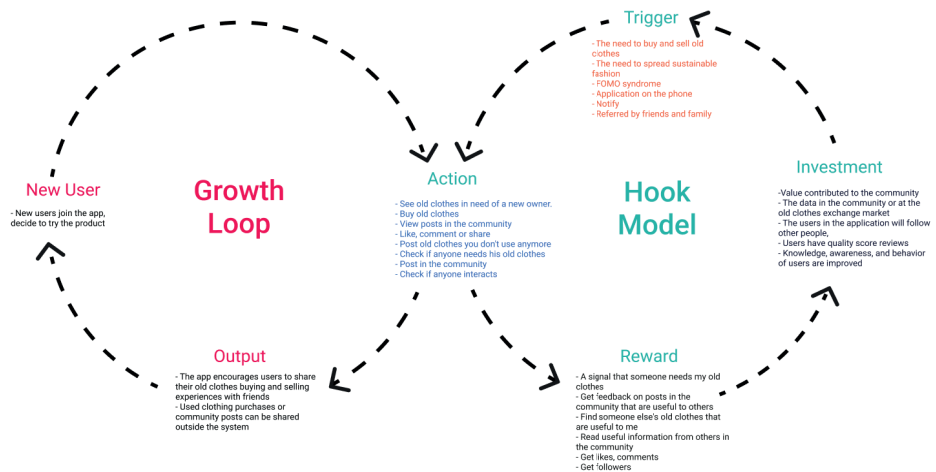


Figure 4: Hook and Growth loop model. [21].

## 4. Finding

### 4.1. Data analysis

#### 4.1.1. Observation

Buying and selling used clothes is a form of consumption that consumers can easily implement to promote sustainable development in fashion consumption. However, the



existing channels of exchange and sale of used clothes clothes in the market still do not meet the criteria of sustainable consumption according to the SDGs set forth.

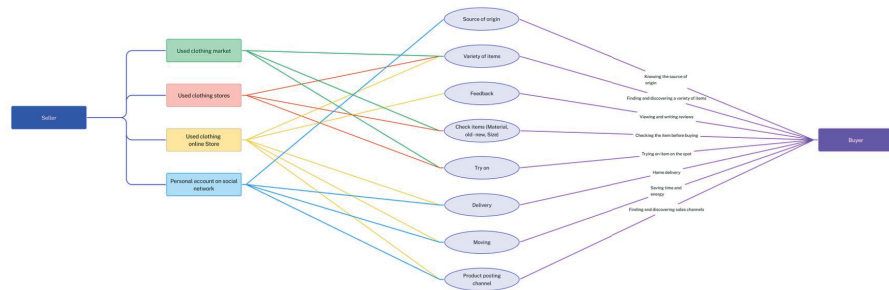


Figure 5: Chart of the relationship between demand of used clothing channels and consumers.

The reality of the "sustainable fashion community" in Vietnam is still not widespread. All these communities have a low number of participating members (150 - 700 members) and low posting frequency (less than ten posts per year). All communities have only the purpose of spreading the sustainability message but have not attached any practical benefits to the participants, so they have not yet attracted participants.

### 4.1.2. Survey

Consumers' demand for clothes shopping is large (60.4% buy clothes 1-2 times a month), and diverse forms of clothing shopping with online shopping dominate (81.2%). Material is not the top criterion that most consumers choose; instead, consumers are most interested in shape (44.6%), style (23.8%), and price (15.8%). The percentage of new clothes purchased in the wardrobe is high, and the rate of unused clothes is high. Users have many ways to dispose of clothes they do not wear anymore, but the majority are ways to leave them out of the closet (73.3%) and give them to others (58.4%); the rate of reselling clothes is not high (20.8%).

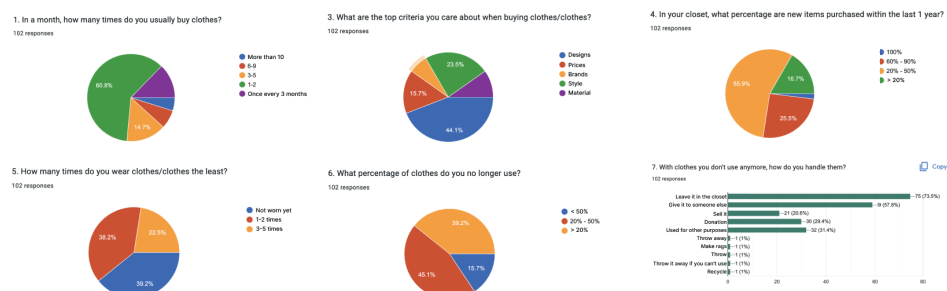


Figure 6: Survey questions on fashion consumer behavior.

Sustainable fashion is still entirely unfamiliar to consumers, only a small part of consumers consider themselves knowledgeable about sustainable fashion (21.8%). However, their understanding and awareness of sustainable fashion are not high: For those who have heard but do not understand deeply about sustainable fashion: The majority (53.3%) think that this is fashion related to the environment, and 22.6% said that sustainable fashion is fashion that can be worn many times. For those who have never heard of sustainable fashion, sustainable fashion is essential, highly applicable, durable, expensive, or used clothing. For those who have heard and think they know: Most of them think this is environmentally friendly fashion, and a small part (36.4%) understand sustainable fashion towards long-term development goals. 22.7% of them also said sustainable fashion is not close, the price is high, the designs are not diverse, and it is difficult to access.

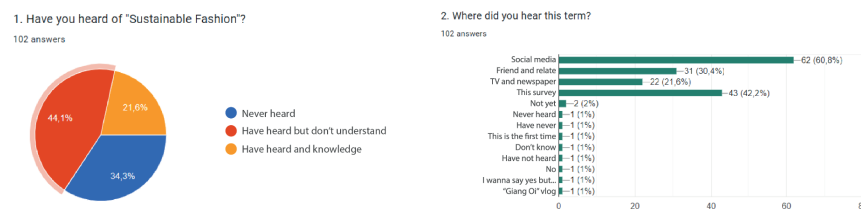


Figure 7: Survey questions on knowledge and attitudes about sustainable fashion.

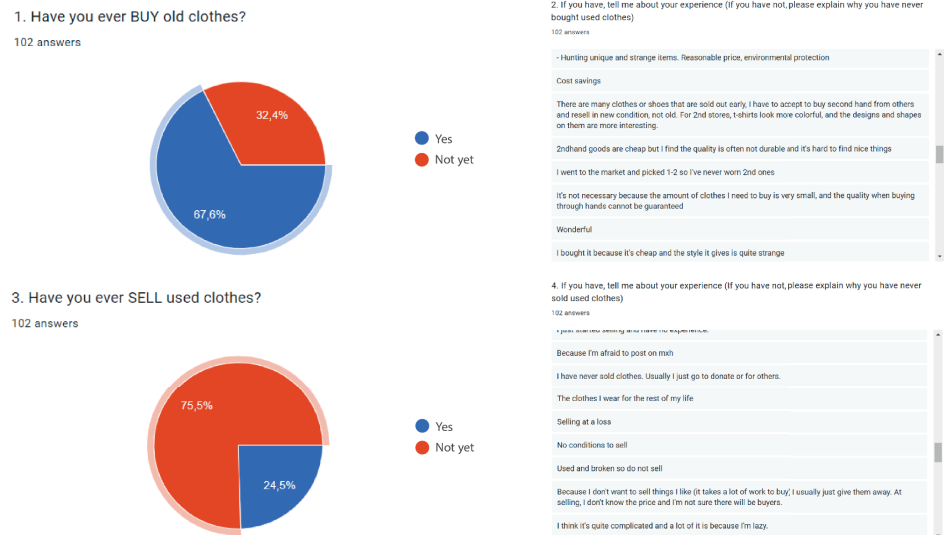
Buying used clothes is quite popular among consumers (67.3% ever bought) because of the benefits of buying used clothes, such as affordable prices, unique designs, and environmental protection, even though they are still available. A barrier is a fear of buying goods of unknown origin and poor quality. Meanwhile, selling used clothes is still not accessible to most consumers (76.2% have never sold) because they do not like the sale, do not know how to sell, cannot reach buyers, and think that Selling used clothes takes a long time. Meanwhile, some consumers still sell used clothes because they see the positive side, which is to tidy up the wardrobe and give it to those who need it more.

### 4.1.3. Interview

#### "Want to buy used clothes" Group

Goal: Save, experience many fashion styles and choose their fashion style.

Pain point: Not having a lot of money, can't buy a lot of clothes at an affordable price, when buying clothes online, they buy more than they need, but buying at the store is expensive, and they can't sell used clothes because it's difficult to reach out



**Figure 8:** Survey questions about the behavior and experience of buying and selling used clothes.

to buyers and despite being conscious of protecting the environment through fashion consumption, they are still small, so they have not yet acted.

**"Want to sell used clothes" Group**

Goal: wanting to have a lot of clothes to change, they also want their wardrobe to be simple and neat so that they don't waste time choosing clothes for work or play.

Pain point: aware that the amount of clothes in their closet is too much but they don't have time to filter and sell. They have a need to give and sell old clothes but can't find a place to sell used clothes, they can post on their page on social networks, but it often takes a long time to sell an item because they are very difficult to find. contact people who want to buy their stuff. In addition, there are a lot of hassles and complications involved in selling things yourself such as having to sell or ship them yourself.

Finding two groups of consumers helps guide building solutions, testing them, and improving them to meet goals, alleviating the pain of these two groups. Thereby promoting the exchange of used clothes, building a sustainable fashion community, and spreading sustainable fashion towards the sustainable development of the entire community.

**4.2. Statement**

**Problem statement:** The reality of fast fashion, alarming waste of fashion, the 2nd most polluting fashion industry in the world. Sustainable fashion is the solution in this

situation. Buying and selling used clothes is not only a trend but also a form of reuse, contributing to environmental protection.

The current form of buying and selling used clothes is not convenient for consumers. With buying used clothes, it is difficult to find sales channels, sellers, items, and quality. With the sale of used clothing: difficult to reach buyers, and sellers have to transport themselves.

**Solution statement:** The CESF application - community to exchange and share sustainable fashion which provides a community, an environment specializing in used clothes sales, making it easy for users to reach both buyers and sellers, educating users starting from meeting the essential needs, helping them change their behavior towards exchange, purchase and sustainable development.

## 5. Conclusion

The SDGs are an urgent call to action for peace and prosperity for people and the planet, from basic services to more serious issues like climate change. The fashion industry is the second largest polluter. The fashion industry is growing along with the burning problem of fast fashion consumption and wasteful fashion. Sustainable fashion emerges as a solution to promote the fashion industry to take a long-term approach that avoids harming the planet and solves the adverse problems caused by fast fashion. While the fashion industry's production cannot be interfered with by consumers, finding sustainable alternatives is essential to minimizing harmful environmental impacts. While "reuse" is not a perfect method to eliminate the fashion industry's negative impact on the environment. It is still an effective way to extend the life of used clothing, allow consumers time to realize the seriousness of fast fashion consumption, and reduce the need for unnecessary purchases. Reuse also needs to be done correctly to ensure sustainability criteria in consumption. Community building is one of the ways to focus on brain resources, connect consumers to participate for the benefit of the community, make them part of a sustainable fashion community, and contribute to sustainable development.

Therefore, the solution is given as follows: The CESF application - a community to exchange and share sustainable fashion, which provides a community an environment specializing in used clothes sales, making it easy for users to reach buyers and sellers, educating users starting from meeting essential needs. Help them change their behavior towards exchange, purchase, and sustainable development.

Although this study has been carefully developed, two limitations exist. First, the survey response rate is not high, 101/500 (20.1%). The low response rate is the short survey opening time (3 days). Second, the use of open-ended questions makes insight mining suboptimal. To overcome this limitation, researchers should quantify the qualitative characteristics at the in-depth interview stage.

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