

## DEVELOPMENT OF CLOTHING MODELS IN THE CONTEXT OF CIRCULAR FASHION

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**Abstract.** *The issue of recycling waste from the fashion industry is becoming more and more important. The article describes the methods of upcycling and recycling goods in the fashion industry. It considers various types of creative sources for the artistic design of clothing, from materials and products of secondary use or recycling. Analyzing existing methods of upcycling fashion industry products allowed us to identify the ecological, artistic and aesthetic advantages of clothing made from recycled materials. The research was based on the experimental modelling of the garment in the three-dimensional program CLO 3D, considering the individual parameters of consumers and the principles of customization. According to the research results, various three-dimensional models of sewing products of the author's collection were created in the context of circular fashion, which reflected each consumer's individual style and preferences.*

**Keywords:** *fashion design, upcycling, 3D clothing model*

### **Introduction**

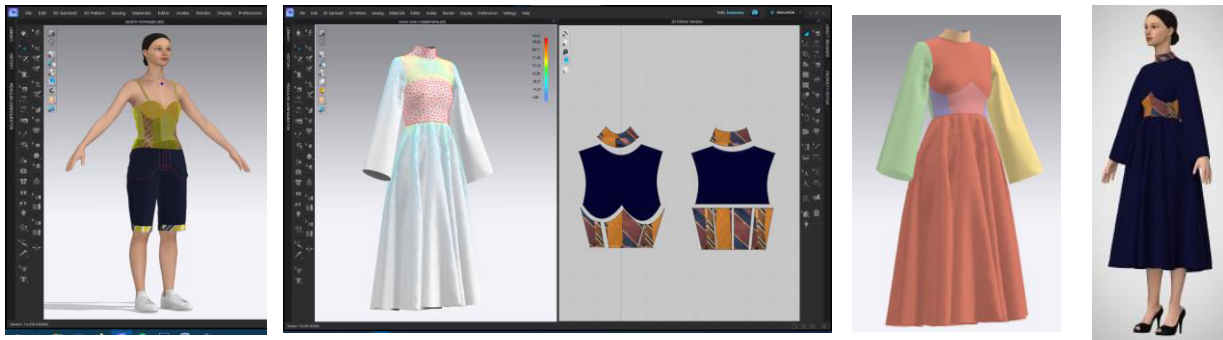
The fashion industry is one of the main polluters of our planet. Many brands are now following the principles of fast fashion, which means they aim to sell many low-quality clothes in a short time [1]. The culture of transience, newness and perceived obsolescence is so common in the fashion industry that it has led to an increase in overconsumption and, as a result, large amounts of waste. Thus, the clothing purchase and disposal rate has increased dramatically, and the path that clothes take from stores to landfills has become shorter. However, in recent years, sustainable fashion and upcycling have become increasingly popular, as clothing does not always have to be in landfills [2]. Upcycling is growing in popularity.

The concept of sustainable development of the global community has become a way to develop environmentally friendly fashion and encourage consumers to buy more environmentally friendly products. For representatives of the young Generation Y, the concept of sustainable development significantly impacts consumer preferences. It is an effective tool for promoting more ecological products in the garment industry [3].

### **Results**

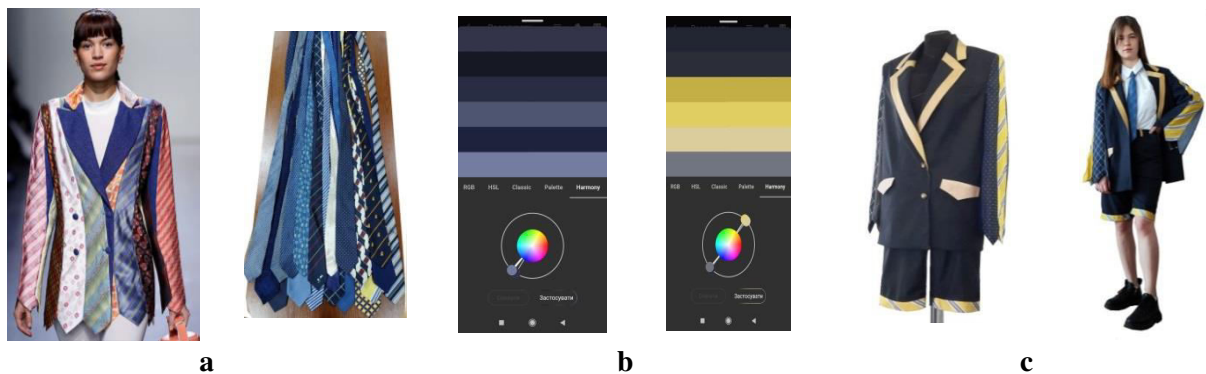
This research study produced a 3D prototype of a corset, shorts and a dress with elements of used neckties using the «CLO3D» app. With the help of 3D visualization, we were able to analyze the correct fit using «Stress map», «Mesh», and «Random color surface» on the example of a dress with upcycled elements, Figure 1.

In the next stage, we look at recycling men's used neckties into women's jackets and shorts. When we combined the colors and prints of the neckties, we primarily paid attention to the harmony of prints, colors and textures.



**Figure 1. 3D prototypes of realization of project images of corsets, shorts, and dress with used neckties**

Using the «Color Gear» app, we explored color harmonies and used them to develop a costume, Figure 2, b. At the prototype stage, we made a women's shorts with cuffs, a pocket with a cut-off barrel and neckties straps made of neckties. The last stage of the research was to try on an actual product for the consumer, Figure 2, c.



**Figure 2. (a) The source of inspiration for the study is used neckties; (b) Color harmony of used neckties (c) Testing the jacket and shorts design on a mannequin and the consumer**

### Conclusions

The subject of this study is upcycling as a way of implementing a design concept in the artistic design of a costume. The proposed author's collection reflects a number of alternative creative ideas for upcycling clothes.

Upcycling allows consumers to modernize clothes that were used as an effective alternative to their disposal. It can form the basis of "environmental marketing", the role of which in modern society is growing every year, especially for the younger generation. However, the artistic design of products from secondary raw materials requires more attention, the search for a broader range of creative sources, and knowledge about innovative materials and their processing technologies.

### References

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