

Sustainable Innovation 2021

Accelerating Sustainability in Fashion, Clothing, Sportswear & Accessories

23rd International Conference

Online Conference: 15th-21st March 2021

Business School for the Creative Industries

University for the Creative Arts

Epsom, Surrey, UK

Sustainable Textile Production through Adapted Pattern Design

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The waste of resources due to overproduction and poor fit are problems that could be improved by dividing the production steps.

A relocation of textile production to the consumer countries would be an ideal way to avoid long transport routes, early orders (without knowing the sales figures). Better working and environmental conditions would also improve this situation.

However, high wages in the buyer countries and smaller quantities would drive up the prices of the textiles many times over. In addition, many countries have neither the know-how nor the infrastructure in place due to years of production outsourcing. To rebuild this is a good approach, but it needs time and money.

In order to take the first step in this direction, this approach follows the partial production similar to the car industry.

The approach is described using the example of a T-shirt:

In this example, the range includes men's sizes 46-64 (10 sizes)

The sizes to be produced can be combined to XS-XXL (5 sizes), since the selection of sizes is made according to the shoulder-neck-hole area, the grade jumps are small in this area, in contrast to the abdominal area.

In the first step, the procurement, cutting and the first part of the production is carried out in the existing production facilities in the low wage countries. The T-shirt is produced in the neck/shoulder and armhole area, hems and side seams are not sewn.

This blank is delivered to the customer.

In the buyer's country the final production according to individualized measurements takes place.

These can be delivered online by the end customer or can be determined in stores.

In the second production step, waist width, hem width, sleeve length and length are trimmed according to these measurements and finished.

These work steps are uncomplicated and a maximum of 2 different sewing machines are required.

Advantages:

- Decoupling from the usual delivery rhythm
- Strengthening the domestic textile industry
- Preservation of the partner companies in the low-wage countries
- Avoidance of overproduction
- Improved fit through individualization and thus longer wearing time

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- Extended clientele, also problem figures can be served
- The process can be applied to further product groups, e.g. shirts, pants, jackets

As a disadvantage, it should be mentioned that this procedure is only advantageous for classic models,

Fashionable articles with short running time cannot be produced effectively in this way.