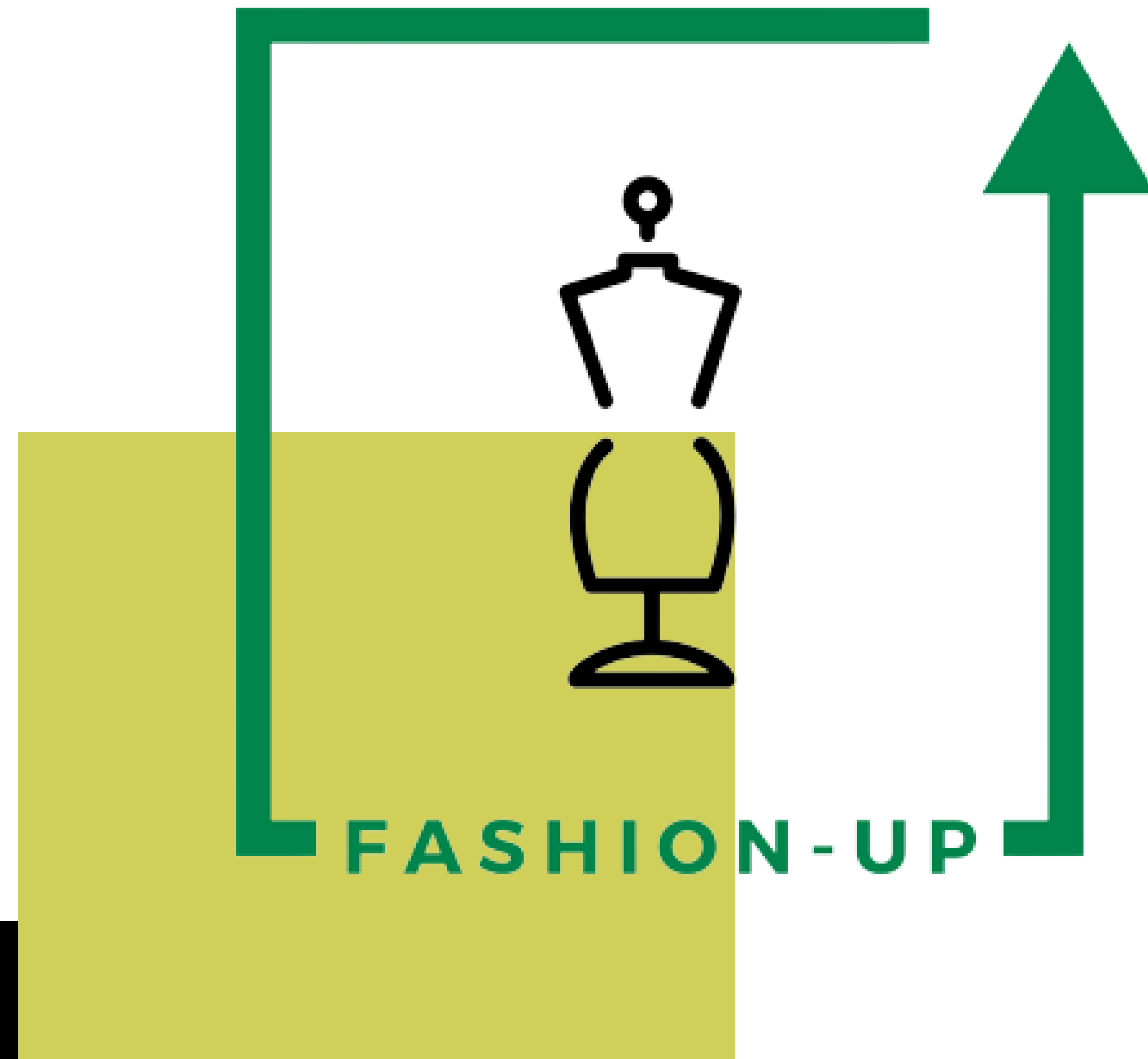


Module 1

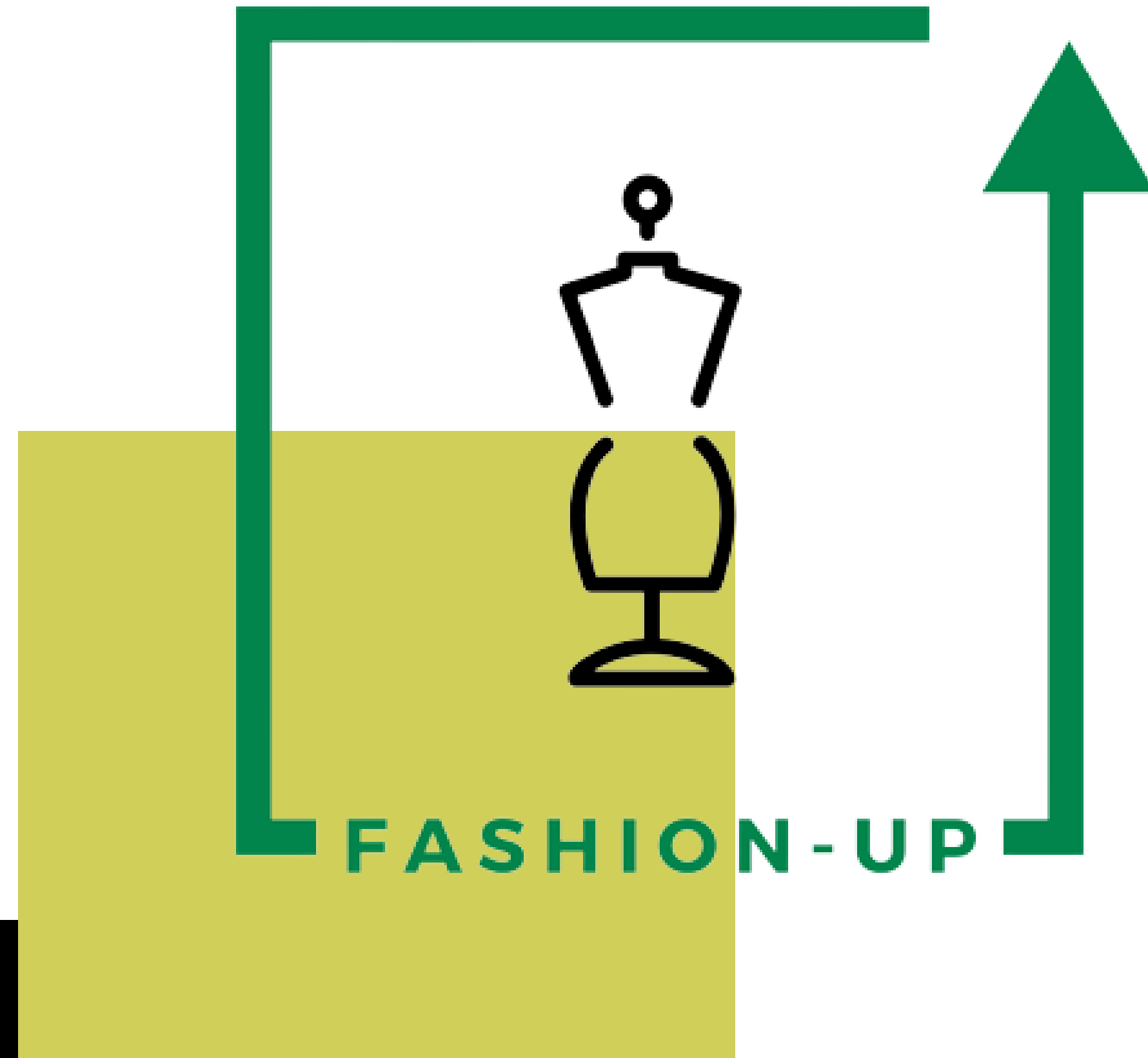
UNIT 3

CLOTHING MODULAR
ITEMS AND CREATIVE
UPCYCLING APPROACHES



Duration: 13 hours

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.





Overview of the Unit

This Unit covers the creation of garments using modular clothing items, such as towels, kitchen cloths, scarves, and handkerchiefs. The focus will be on modular design and zero-waste pattern cutting, with an emphasis on drawing inspiration from folklore and traditional costumes. Through this exploration, the unit aims to teach sustainable design practices while highlighting the potential for creative reuse of everyday textiles.





Estimated Reading Time
15 minutes

Expected Learning Outcomes

By the end of this Unit, you will be able to:

- 1. Understanding Modular Clothing Design:** you will be able to explain and apply the concept of modular design in creating garments using everyday items such as towels, kitchen cloths, scarves, and handkerchiefs.
- 2. Exploring Zero-Waste Design:** you will learn how to incorporate zero-waste principles into their garment creation process, focusing on minimizing material waste and optimizing the use of available fabrics.
- 3. Innovative Garment Construction:** you will gain the ability to construct garments in innovative ways, using unconventional materials while adhering to sustainable design principles.

Pre-requisite knowledge

This Unit assumes a basic understanding of clothing design, basic sewing

Learning Objective

The Unit aims to inspire students with creative ideas from traditional garments and contemporary interpretations. The focus is around modular clothing pieces from everyday life.



Target Audience

This Unit targets people/learners/entrepreneurs including NEETs, low skilled adults looking for a job or in reconversion but also looking for a better placement within the artisanal clothing sector, professionals already working in the sector, students graduated by secondary schools within fashion or textile design curricula. Among the target groups, special regard will be given to women with economic fragilities.

Key concepts

Modular cloths, creative upcycling, no waste

For this Unit's practical part, you will need
a rounded tablecloth
scissors
pins,
sewing machine with matching thread
chalk
tape measure

Necessary equipment



01

Teacher's Profile

Teachers should know basic of fashion design and sewing.

01

Methodology

This Unit introduces a theoretical part which is followed by a practical part of making.





Content

01

Zero Waste Design

Zero Waste Design
concept

02

History and Traditional Costume

Designers in History
and Traditional
Costume

03

Square and rectangles as modules

Archizoom
Students projects

04

Case Study EVADIFRANCO

WHITES
Towel maxi sweater
Rounded tablecloth
Column dress

Modular cloths from everyday life

It's fun to experiment with geometric textile items in our everyday life: sheets, tablecloths, towels.

Every piece has a different texture and they are usually easy to wash and to care of.

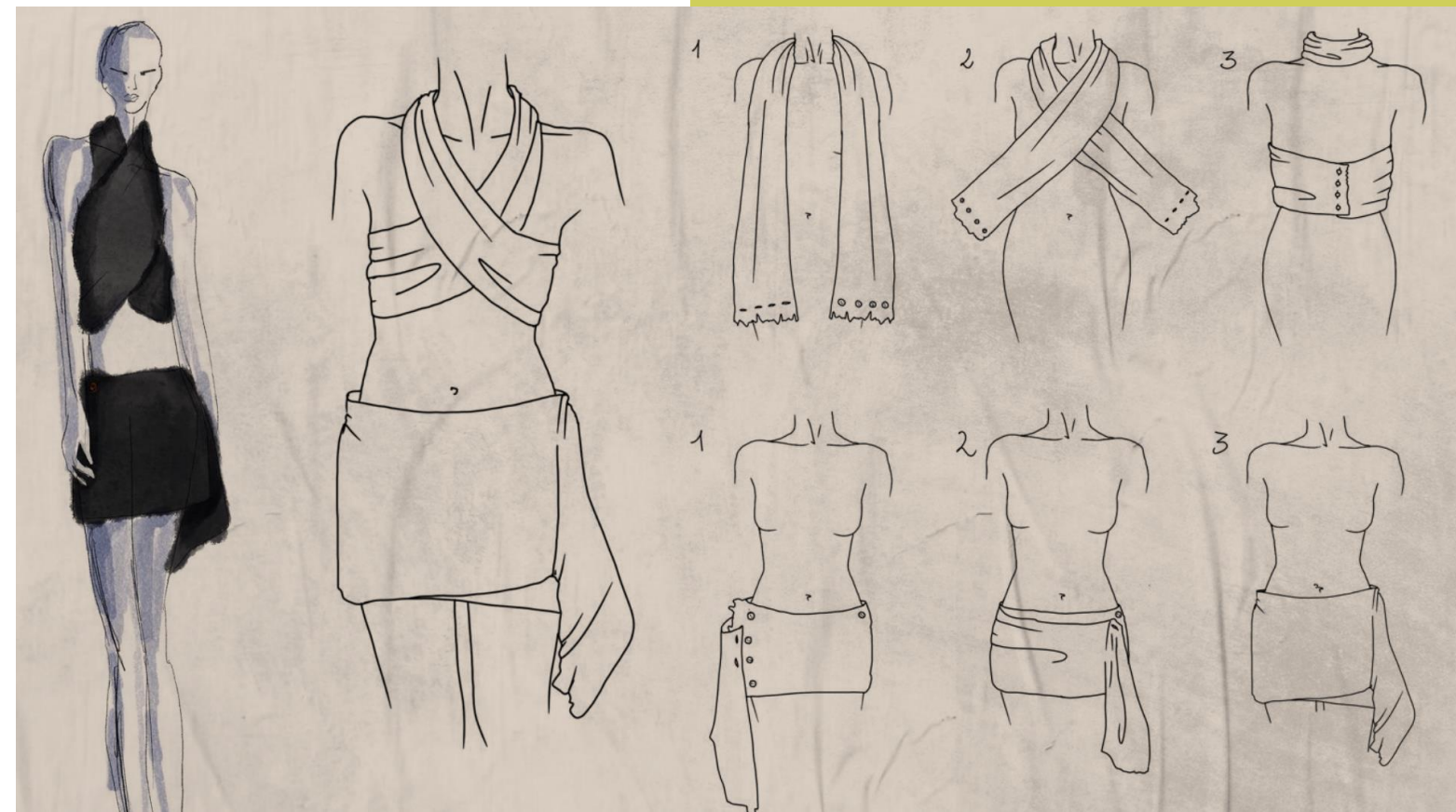
Mainly in cotton they are perfect for transeasonal garments.



Zero Waste Design

Zero waste is a design technique that eliminates textile waste at the design stage involves using a single, complete piece of fabric for a specific purpose, such as cutting one or more garments. The key to eliminating fabric waste in garment production lies in the pattern-making and fashion design phases. Specifically, achieving zero-waste garments requires pattern making to be fully integrated into the overall design process.

The fabric is a value, something to play with to create unique volumes.



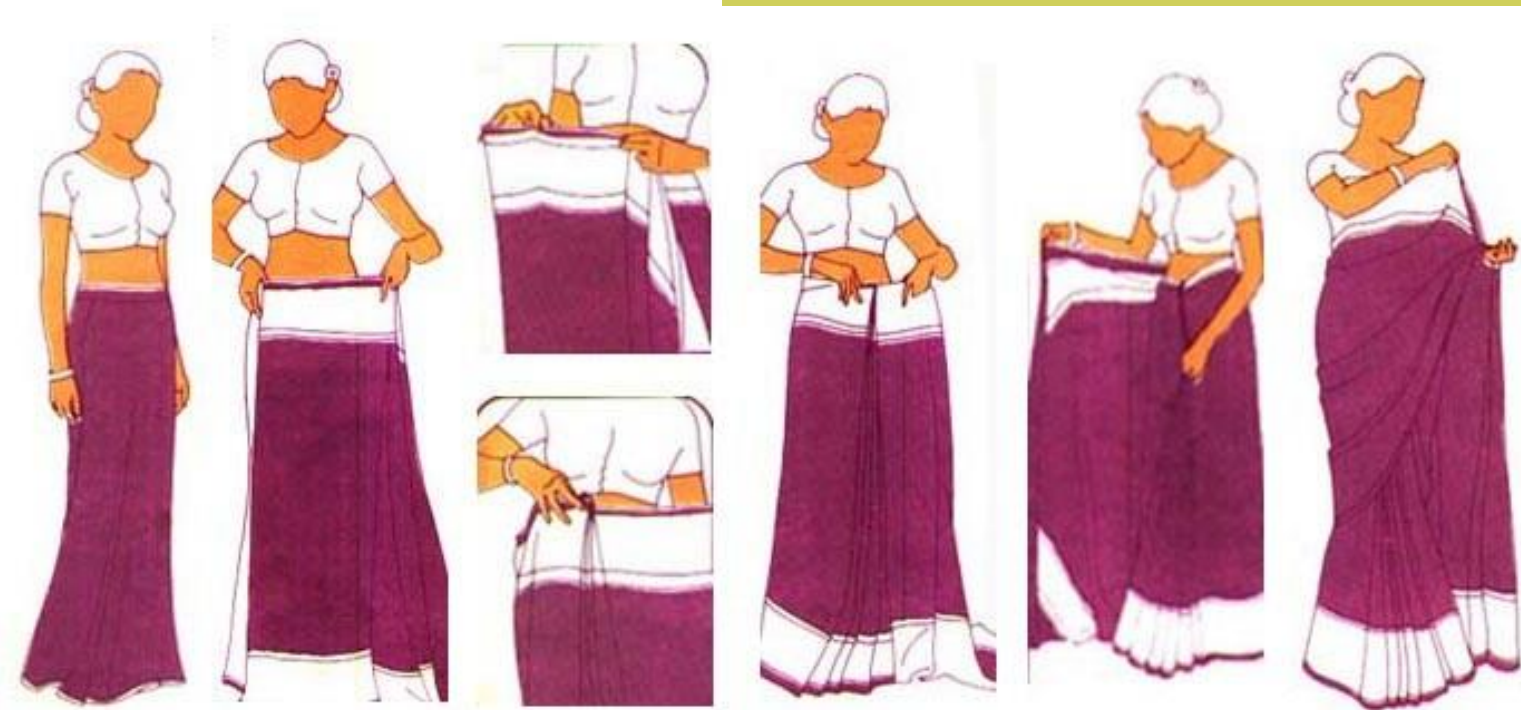
Zero waste in History

Zero waste approach has been spontaneously practiced since the birth of woven cloth.

The greek ancient chiton and peplos, the Indian sari, are basically lengths of fabric draped on the body without any cut.

The kimono has the same no waste principle yet it's a flat garment made from a very narrow cloth (35-40 cm wide x 11-12mt long). The piece is split in a total of 8 pieces with no fabric waste.

A pair of traditional Chinese trousers is made of offset squares so they hang in a very interesting way and still they have no waste.



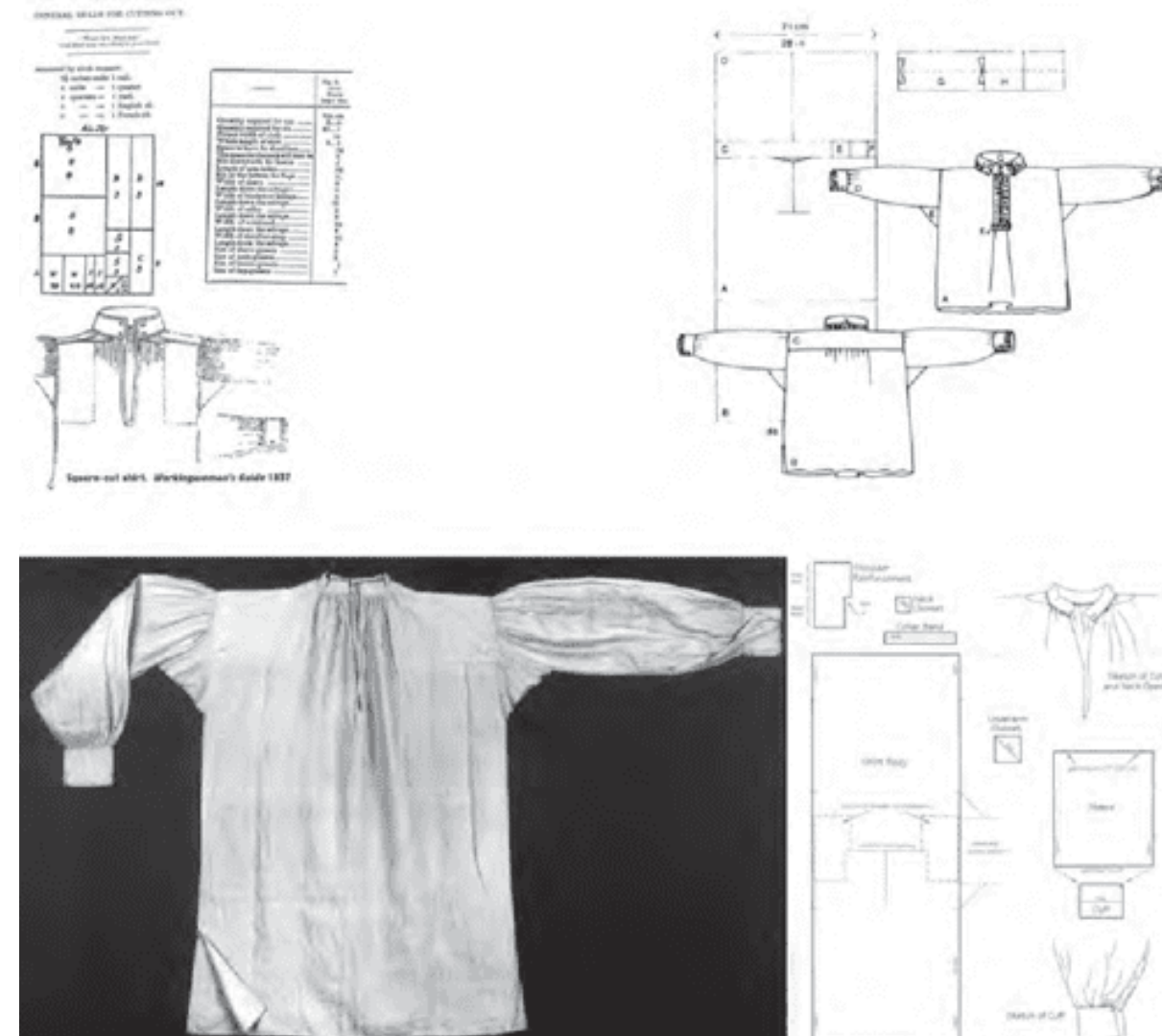
Zero waste in History

Greek “chiton” for men and women were draped rectangular piece of fabric



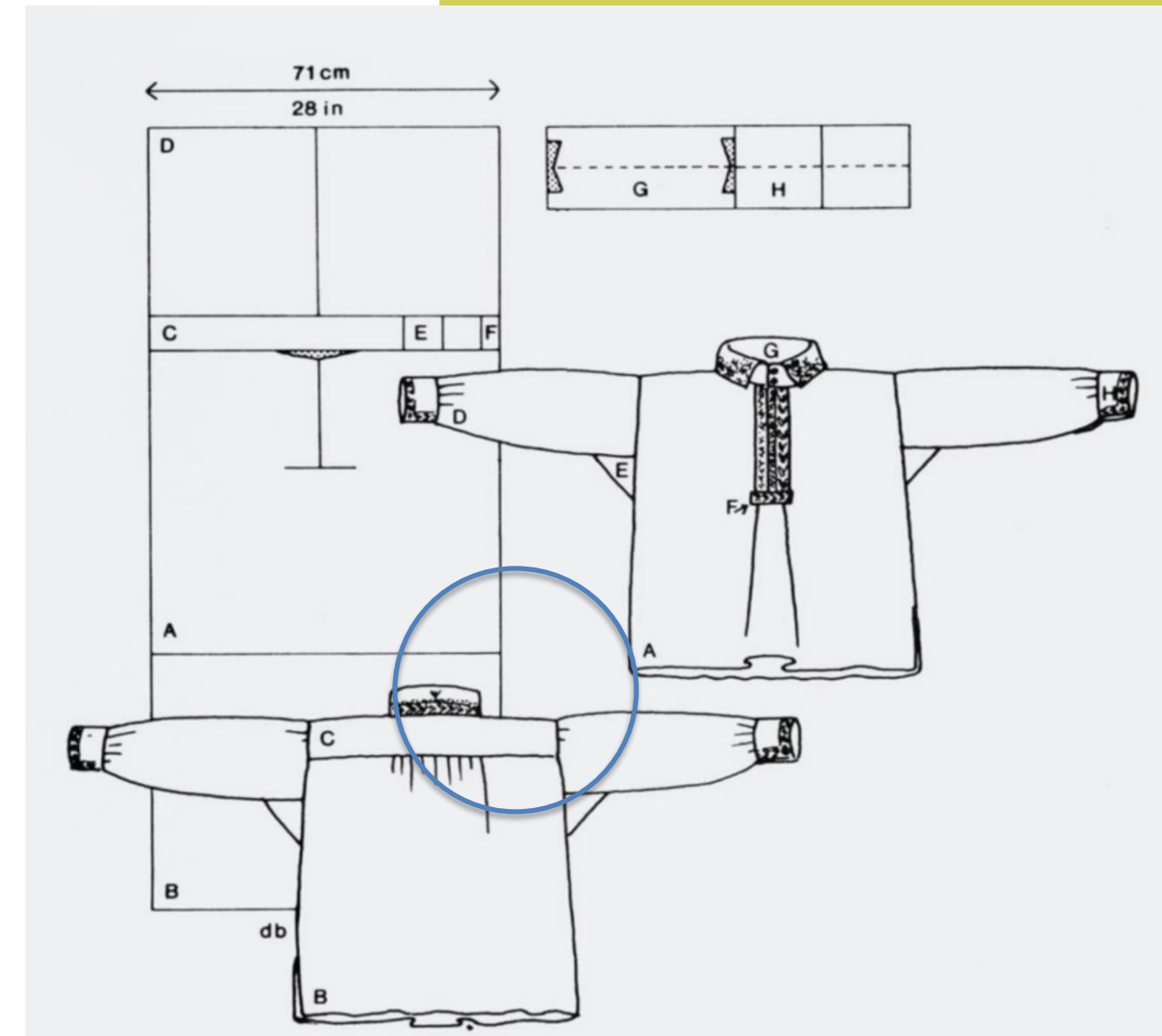
Zero waste in Traditional Costume

The square cut shirt, traditional garment from Europe and North America, has many variations.



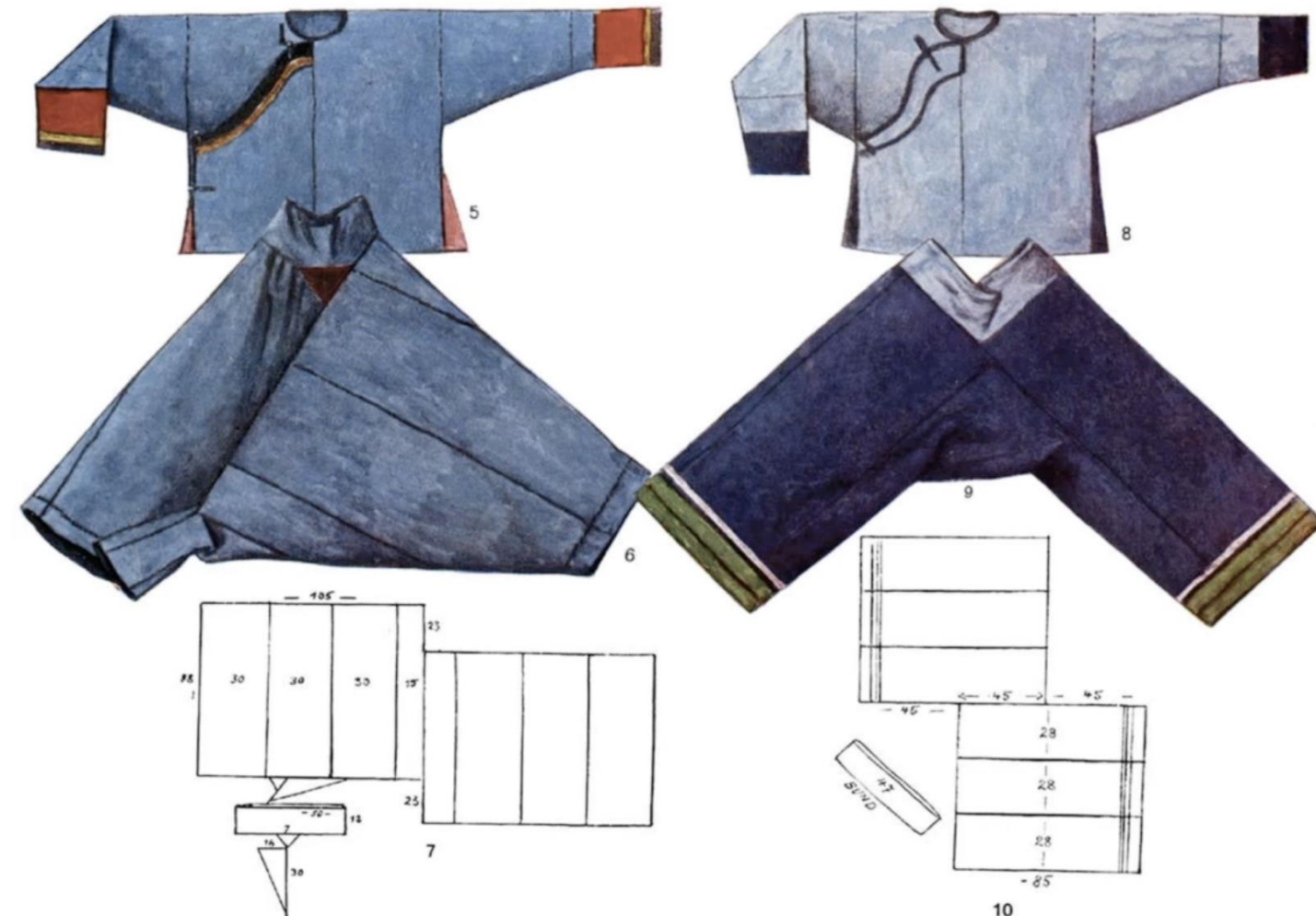
Zero waste in Traditional Costume

Gathers as useful technique to include extra fabric into the design. Functional and decorative at the same time



Zero waste in Traditional Costume

Chinese traditional pants from Max Tilke studies



Zero waste in Traditional Costume

Navajo mens poncho

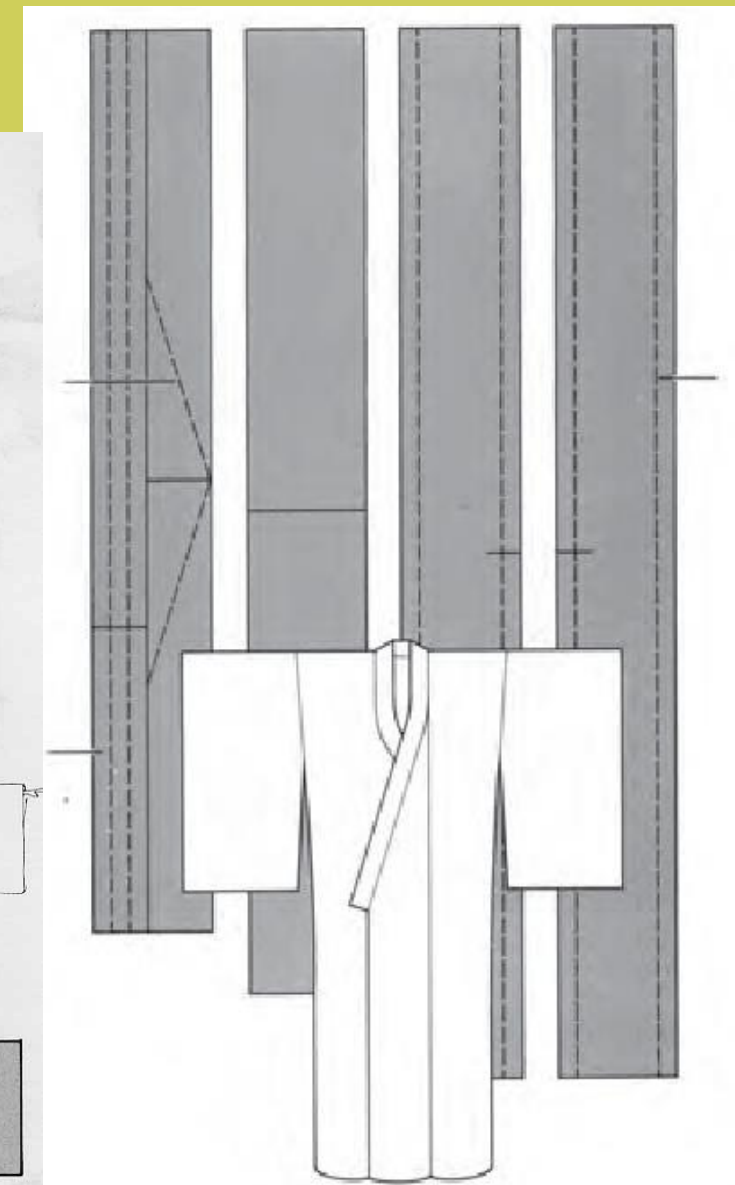
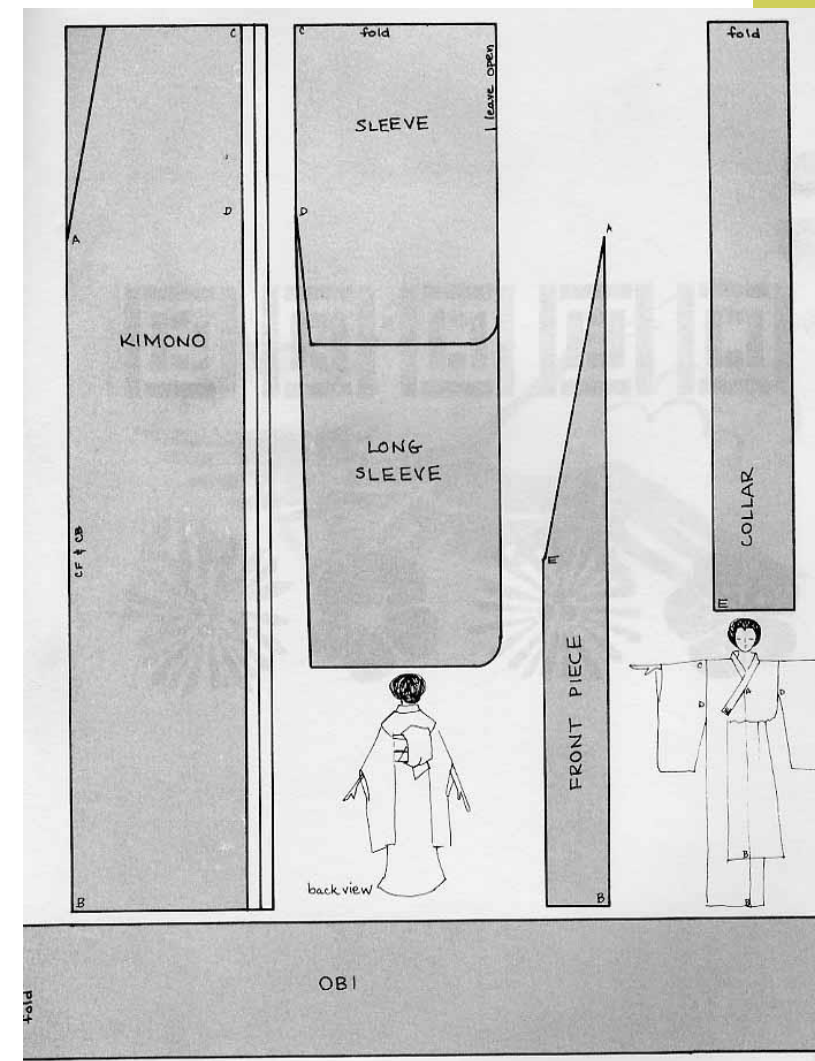
A rectangular piece of cloth with a head opening.
This piece was hand woven.



668 Poncho maschile navajo del primo stile classico, 1840-1860. Lunghezza 214,5 cm, larghezza 142,2 cm.

Zero waste in Traditional Costume

Japanese Kimono



Zero waste in Traditional Costume

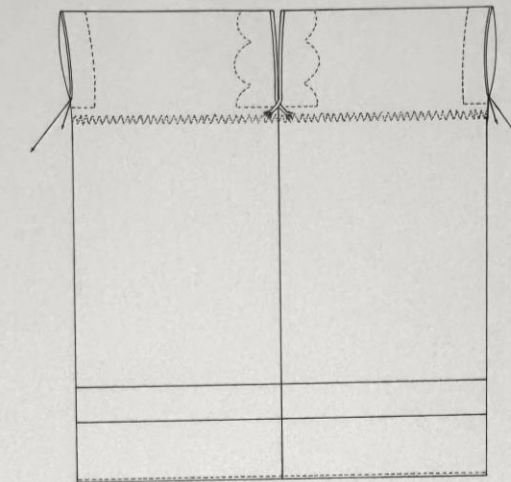
Mexican Huipil

Three rectangular pieces sewn together on the longest side.



Zero waste in Traditional Costume

Woman's Shirt from Myanmar



The simple cut of this shirt, in which two rectangles of cloth are sewn together vertically, leaving spaces for the head and the arms, is common to several tribal groups in Burma and elsewhere in South-East Asia, and is used for both male and female dress. This Karen woman's shirt is profusely decorated with silk thread embroidery and with seeds of a type of grass called in English 'Job's Tears' (*coix lacryma*). It would be worn with a simple tubular skirt. This shirt was collected in the nineteenth century in Burma; the Karen live mainly in the south-east of the country, and also in adjacent parts of Thailand.

Woman's shirt of cotton embroidered with silk thread and seeds.
Myanmar (Burma), (Karen tribe), mid 19th century
6550 (IS)

Zero waste in Traditional Costume

Woman's pleated skirt in China, Yi minority



图3-112 美姑红缨须斗笠



图2-4 美姑毕摩上衣右衽



图2-5 布拖百褶裙展开图



图2-6 昭觉老年人穿的百褶裙

Zero waste in Traditional Costume

Hand pleating process for the skirt



Zero waste in Traditional Costume

Sleeveless woman's tunic from Haka population,
Chin, Birmania



Japanese Wave



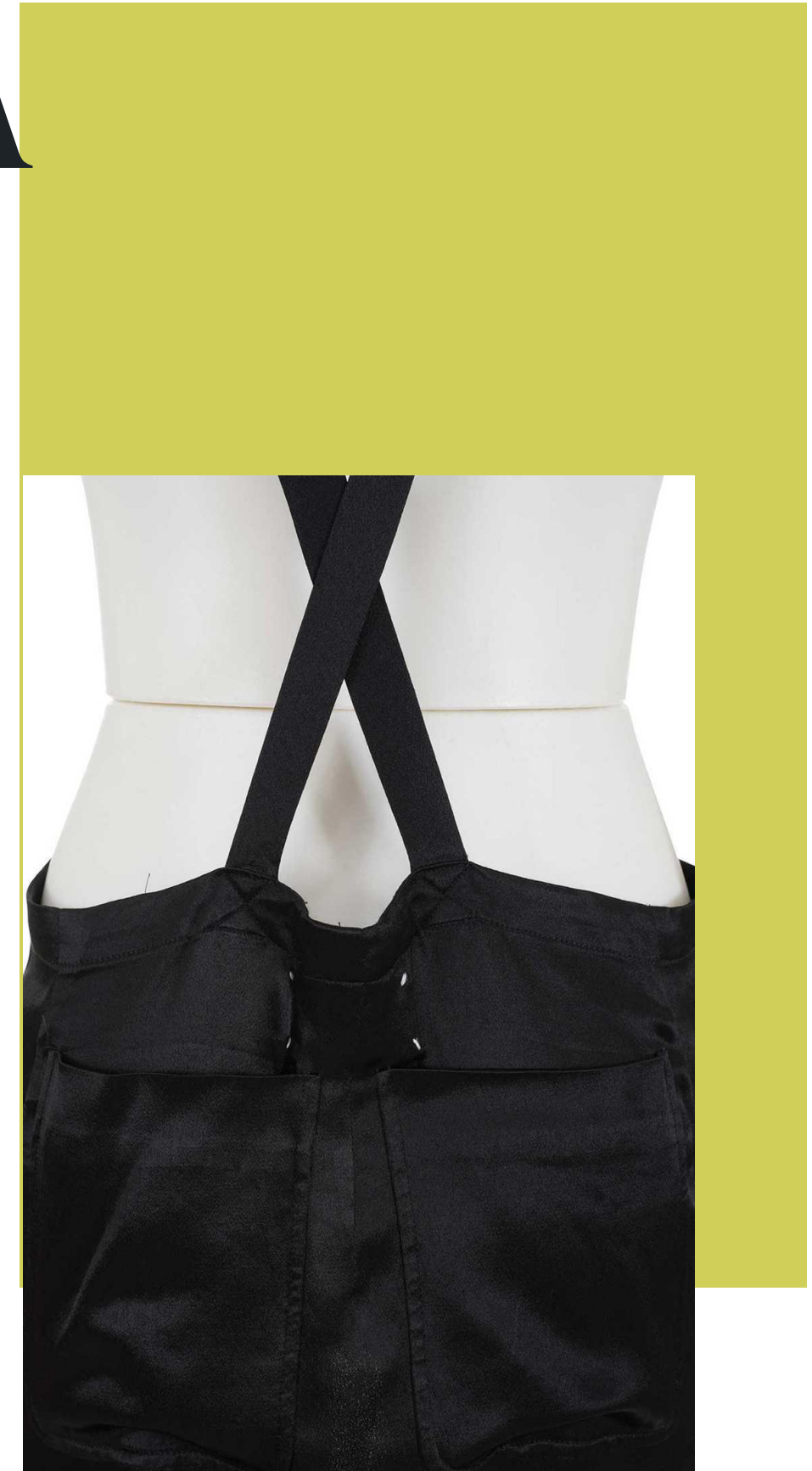
Rei Kawakubo

© The Kyoto Costume Institute, photo by Takashi Hatakeyama

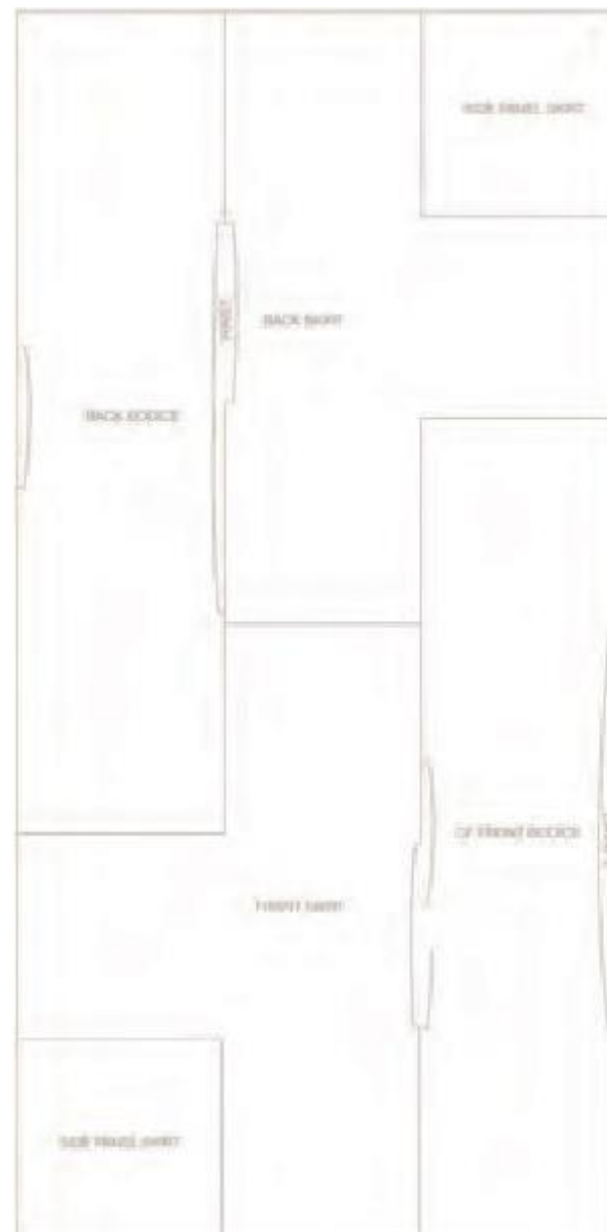


Issey Miyake

MARTIN MARGIELA



ZANDRA RHODES



ZANDRA RHODES



Zero waste in History

Mariano Fortuny designed the Delphos in 1907. The fine pleating is functional to the fit: it allows stretch and at the same time it's part of the construction.



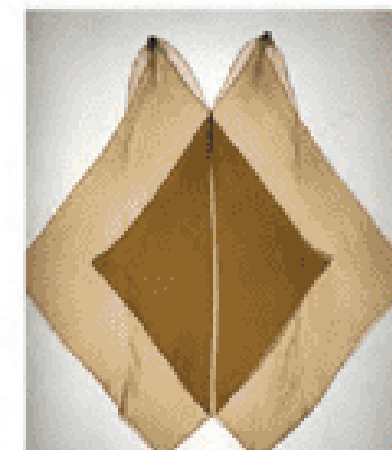
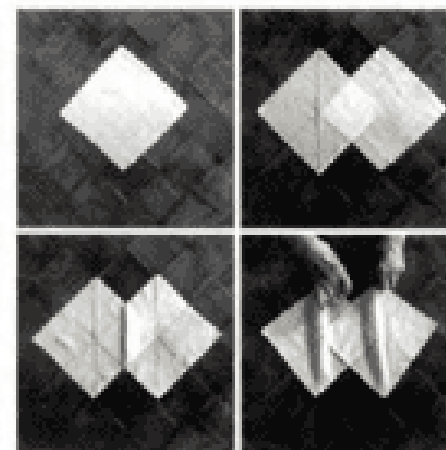
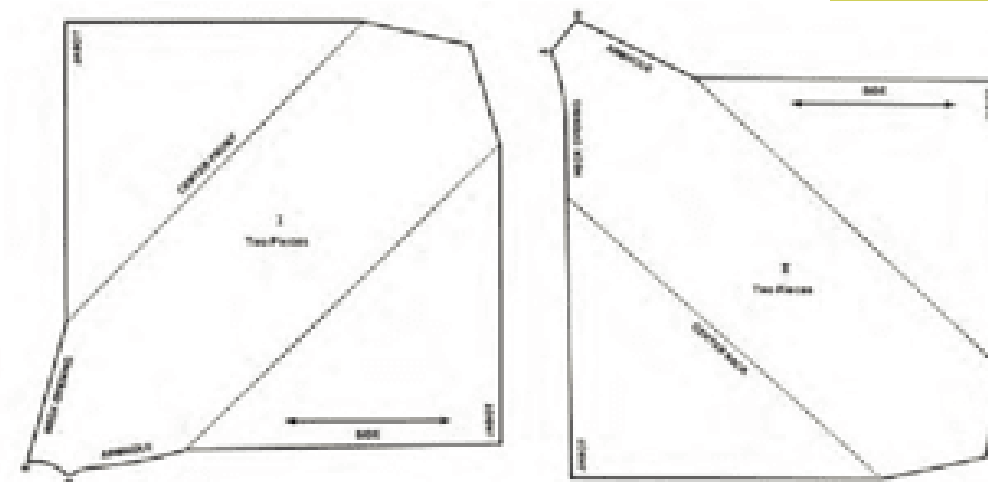
Ernesto Thayaht

Ernesto Thayaht (1893–1959) was an Italian artist, architect, and designer who is best known for creating the Tuta in 1919, a one-piece garment that became a symbol of functional, modern, and avant-garde design. The Tuta is particularly notable for its simplicity, versatility, and innovation in the early 20th century, especially in the context of Italian fashion and design movements. It was also an early example of minimalism in fashion, as it was cut from one continuous piece of fabric, a precursor to later zero-waste design concepts.



Madeleine Vionnet

Ernesto Thayaht worked for Madeleine Vionnet during the '20s, sharing the same interest for geometry and symmetry. An interesting example of no waste technique is shown in the dress made of four squared shapes cut on the straight-line yet worn on the bias.

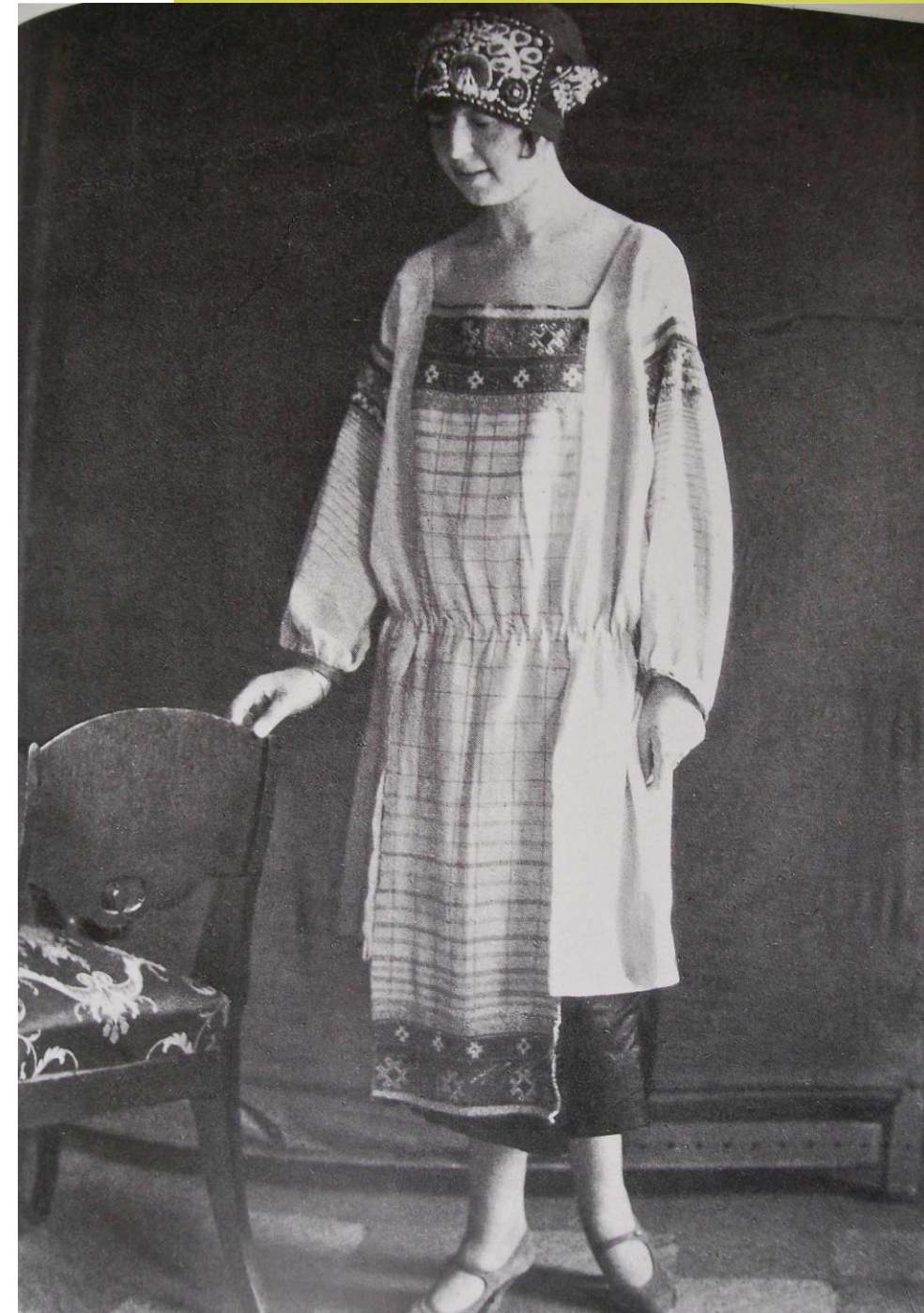


Russian Constructivism

Lamanova suggested how to create a dress from wollen squared cloths. They could be homeware like kitchen towels.

Lamanova incorporated the core ideas of Constructivism, emphasizing functionality, simplicity, and geometric forms. Her designs sought to align with the ethos of a new, egalitarian society following the Russian Revolution.

Her innovative approach continues to influence sustainable and functional fashion concepts in contemporary design.



Russian Constructivism

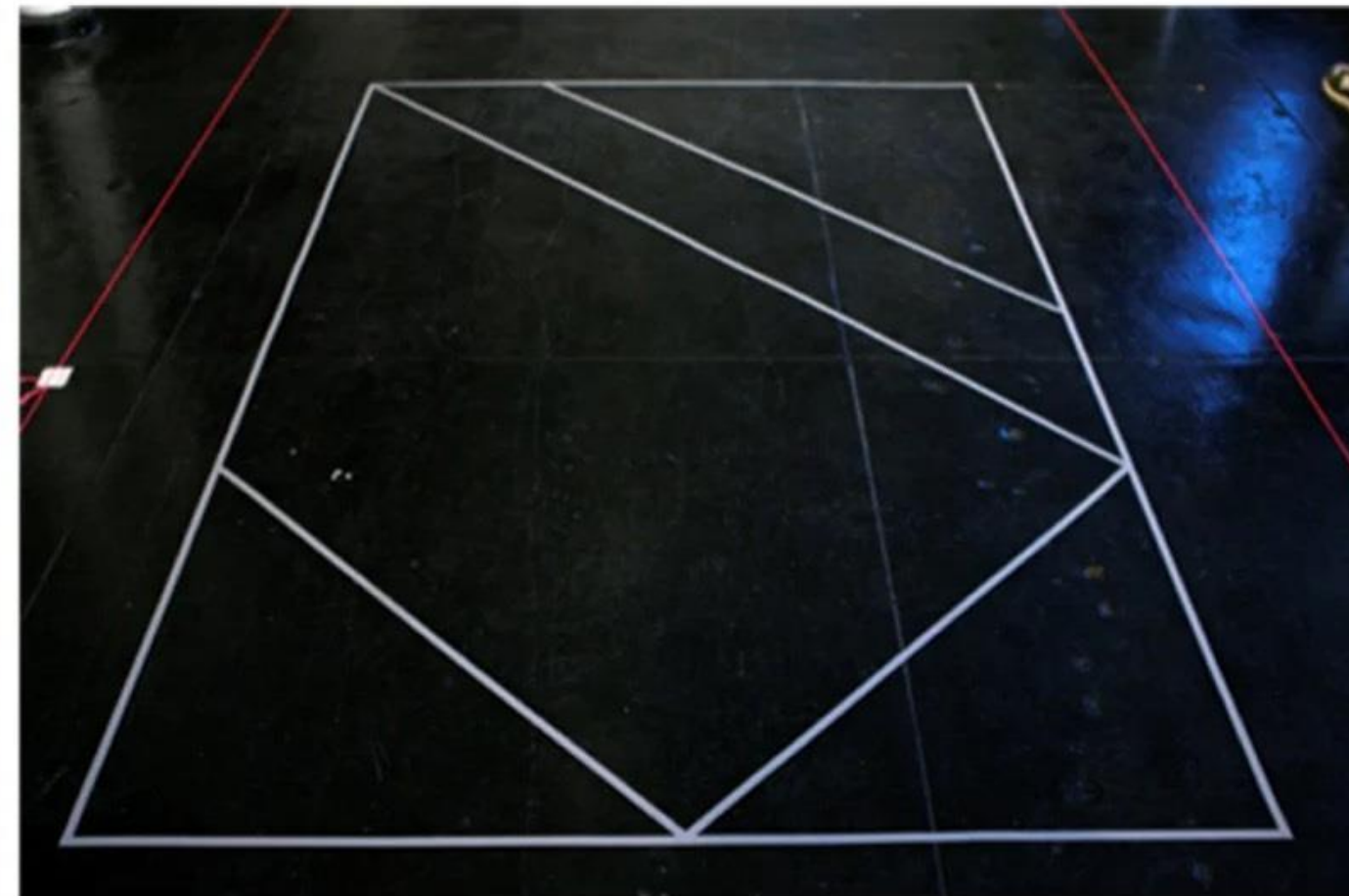
Lamanova wearing one of her
zero waste creations



Yelohee Teng

Designs are carefully planned to use the fabric with no waste, often using innovative pattern-making techniques.

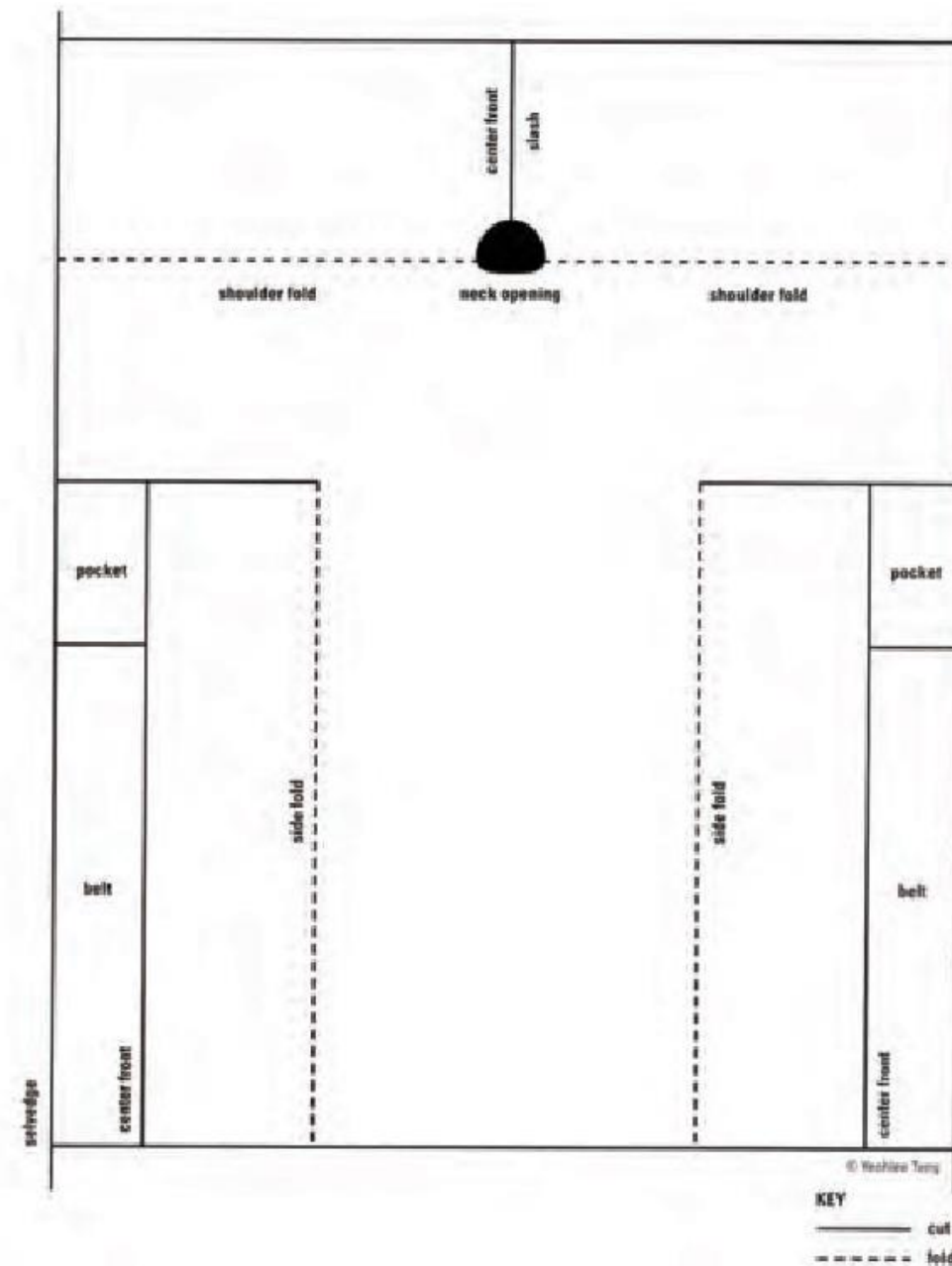
Zero Waste collection 2009



Yelohee Teng



Coat, 1997



Nanni Strada

Based in Milan, renowned for her innovative approach to fashion, particularly in the use of geometric patterns and modular design. Her work blurs the boundaries between clothing and architecture, emphasizing structure, form, and functionality.

She collaborated with many Italian brands to design functional and avant-garde garments over the '70 and '80.

She received the Compasso d'Oro back in 2018.

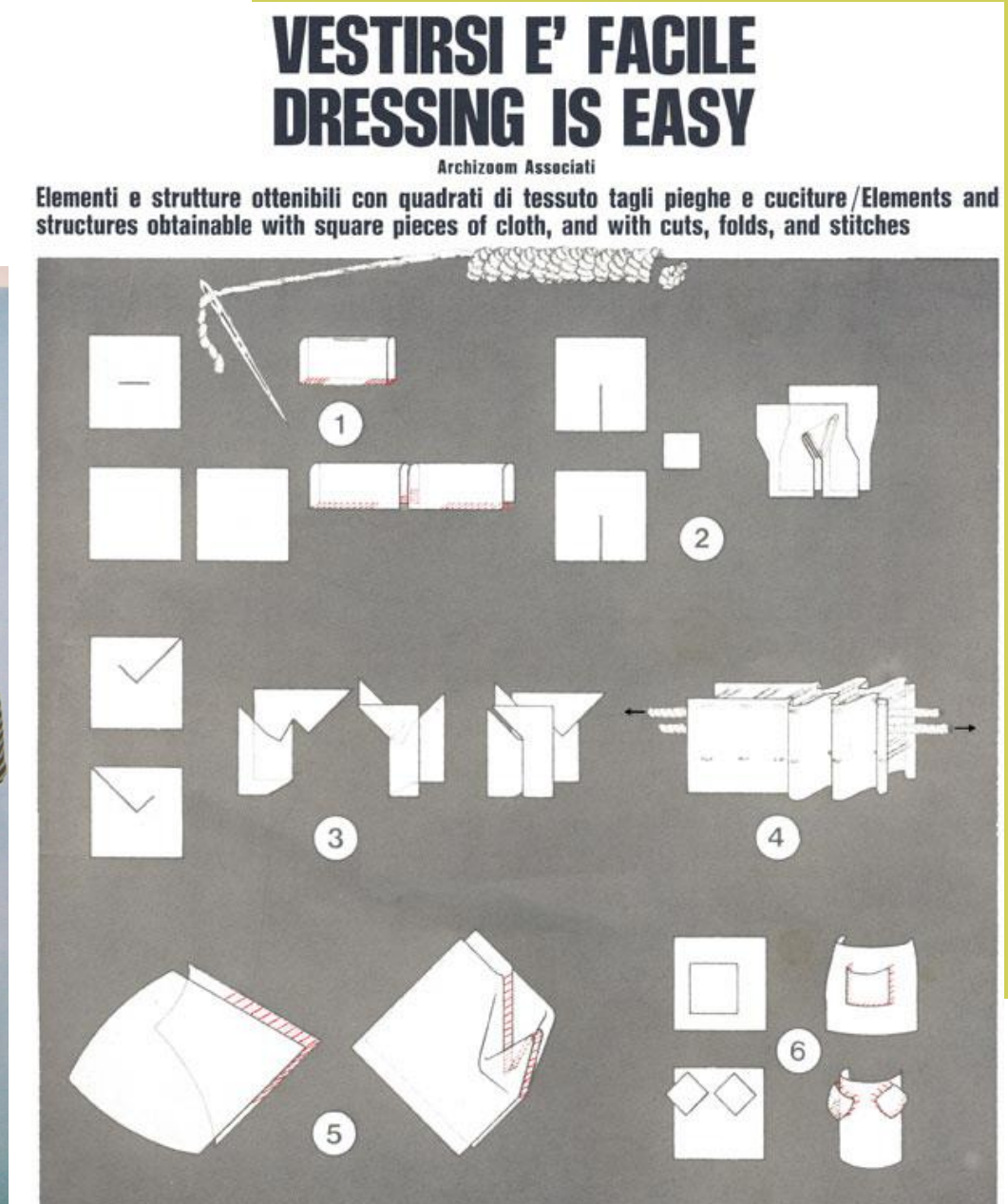


Square as a module

Lucia Bartolini was one of the founding members of **Archizoom Associati** and contributed to the collective's vision of experimental, **avant-garde design**. While she was involved in architecture, her work in product and furniture design was also significant.

a series of geometrically inspired, angular garments that were created as a part of Archizoom's design exploration.

This project can be inspiring for further design interpretations of the square modu



Square as a module

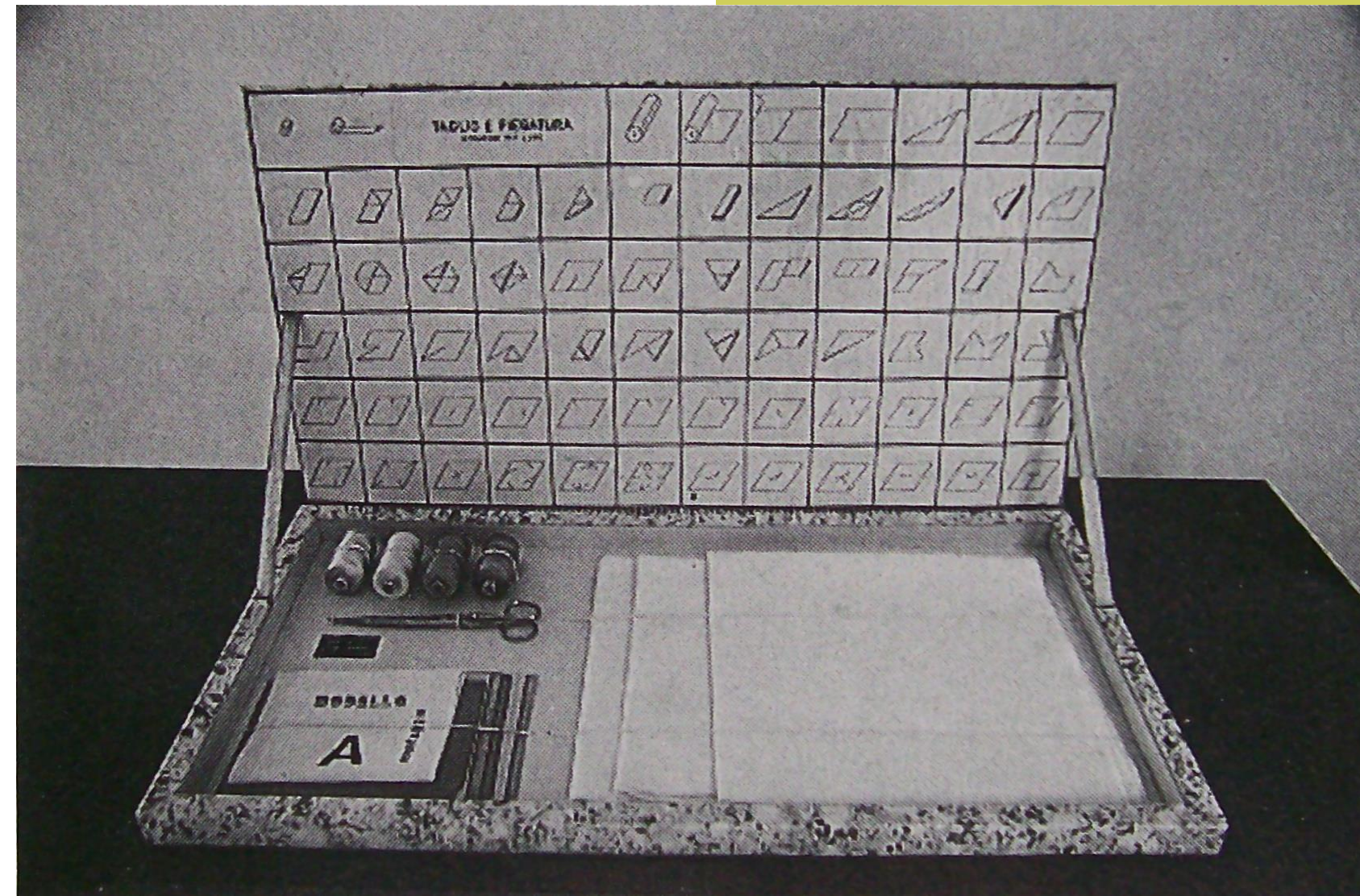


TAGLIO E PIEGATURA												



Square as a module

Dressing is easy kit for sewing different styles starting from squared pieces of fabric



Be imaginative!

This is a table decoration from a Portuguese vintage craft magazine, yet the shape suggests the design of a summer top. It's a modular designed inspired by the concept of the ARMOUR, small single pieces assembled with negative space in between, allowing more comfort and mobility.



Rectangle as a module

Scarves as a everyday modular objects to redesign



Sara Iannaccone
Asia Luongo
Anna Palermo
Virginia Ilnheria

Rectangle as a module

The scarf in purple has been used as decoration, sewn onto the kimono jacket.



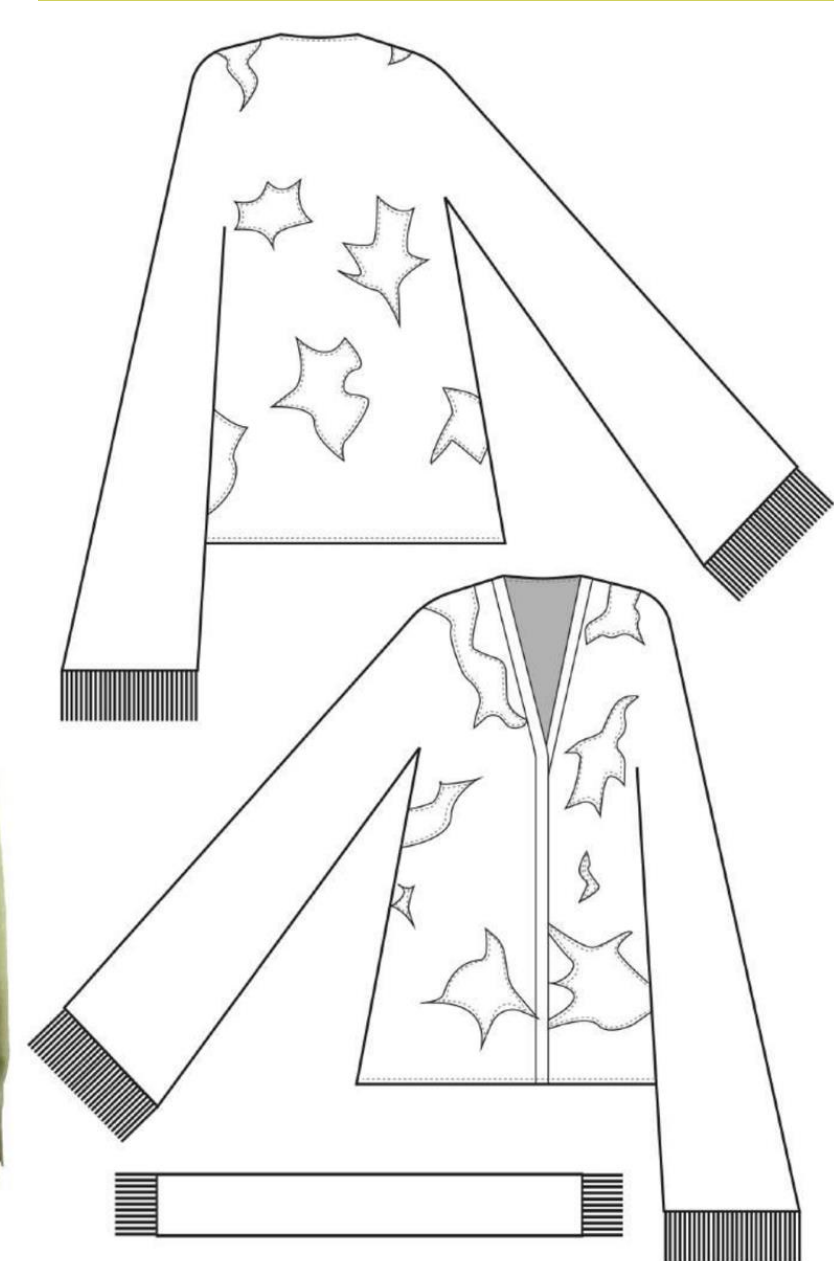
Rectangle as a module

Decoration

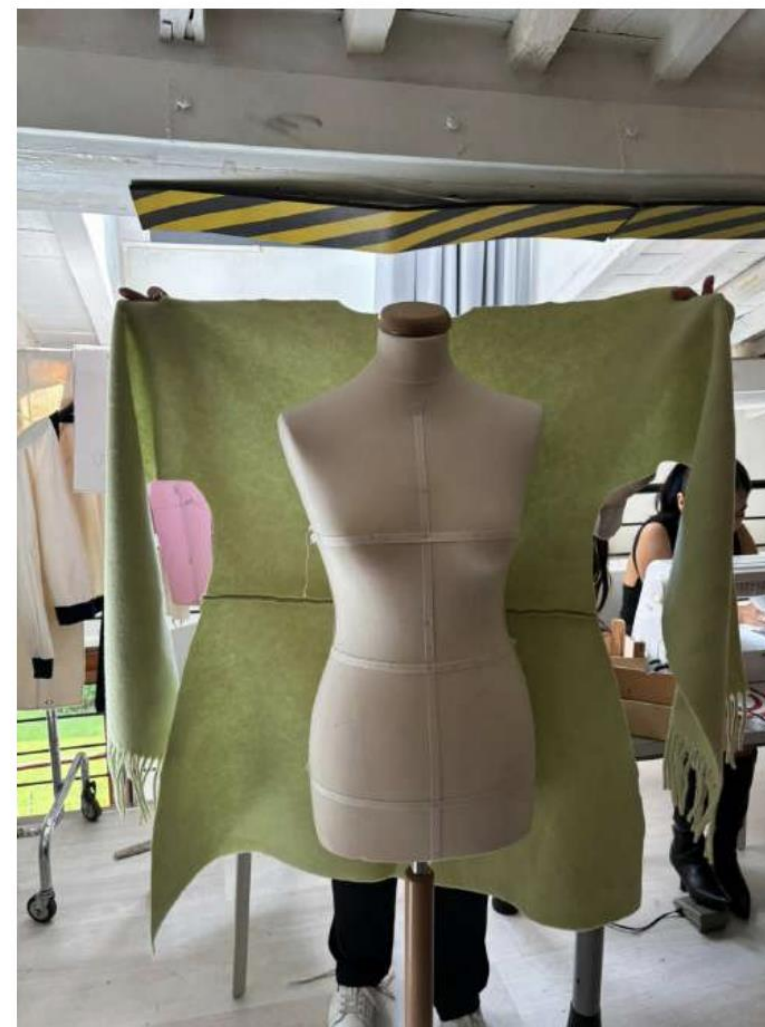


Kimono in lana e baby alpaca con maniche lunghe con frange e orlo con filo di ferro. Cinturino viola in lana

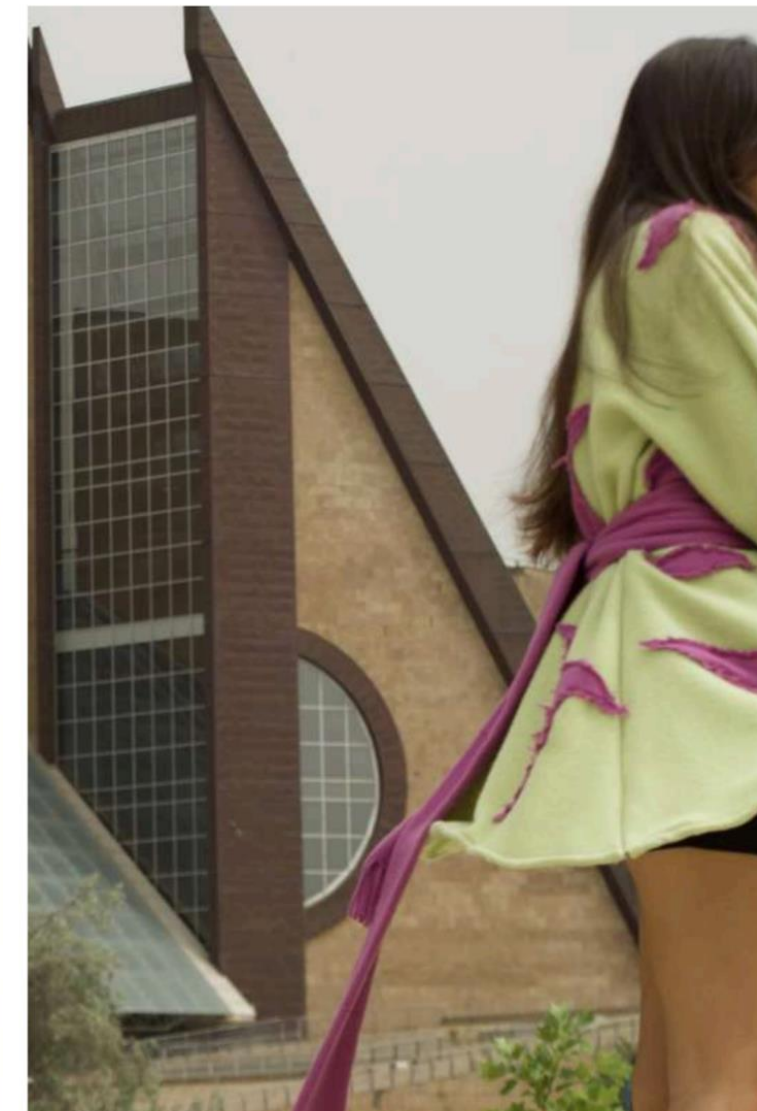
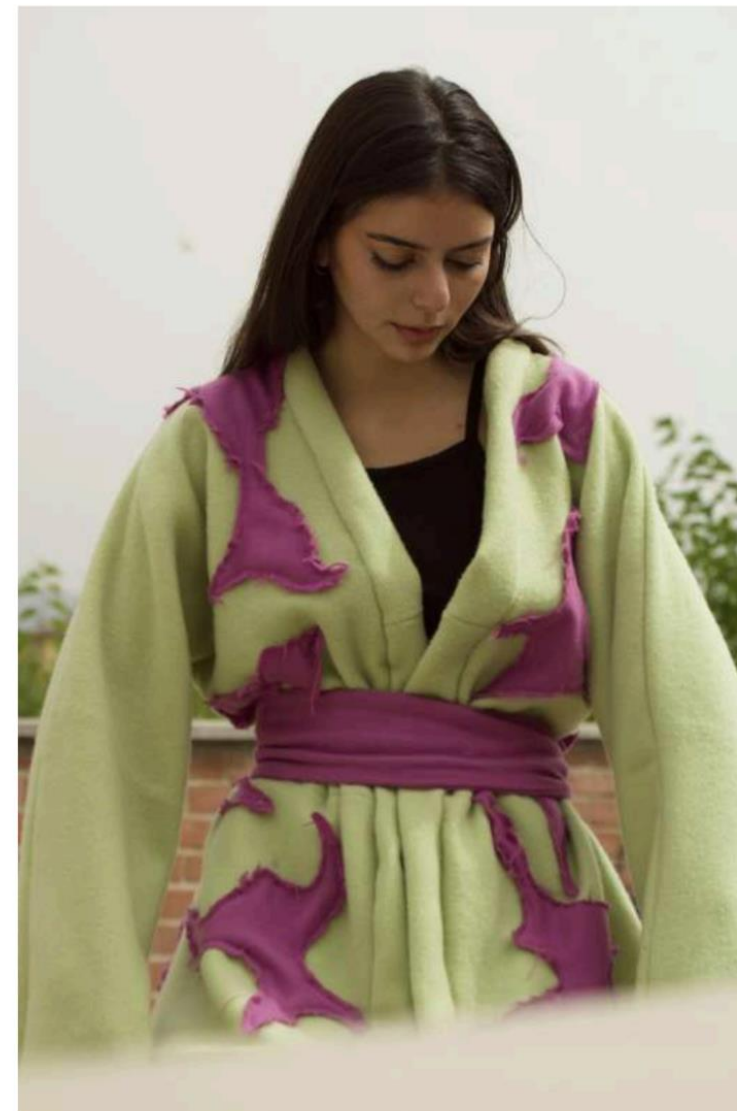
Sara Iannaccone
Asia Luongo
Anna Palermo
Virginia Ungheria



Rectangle as a module



Rectangle as a module



Rectangle as a module

Haute Couture vibe: In this case the scarf was cut in strips to make a new woven fabric. The focus is on the texture, which creates the structure and the silhouette at the same time.



Project by fashion students
Mia Agopian, Mikela Carrepani, Sara Commentale, Sornava Varvara, Edoardo Brilli

Timo Rissanen

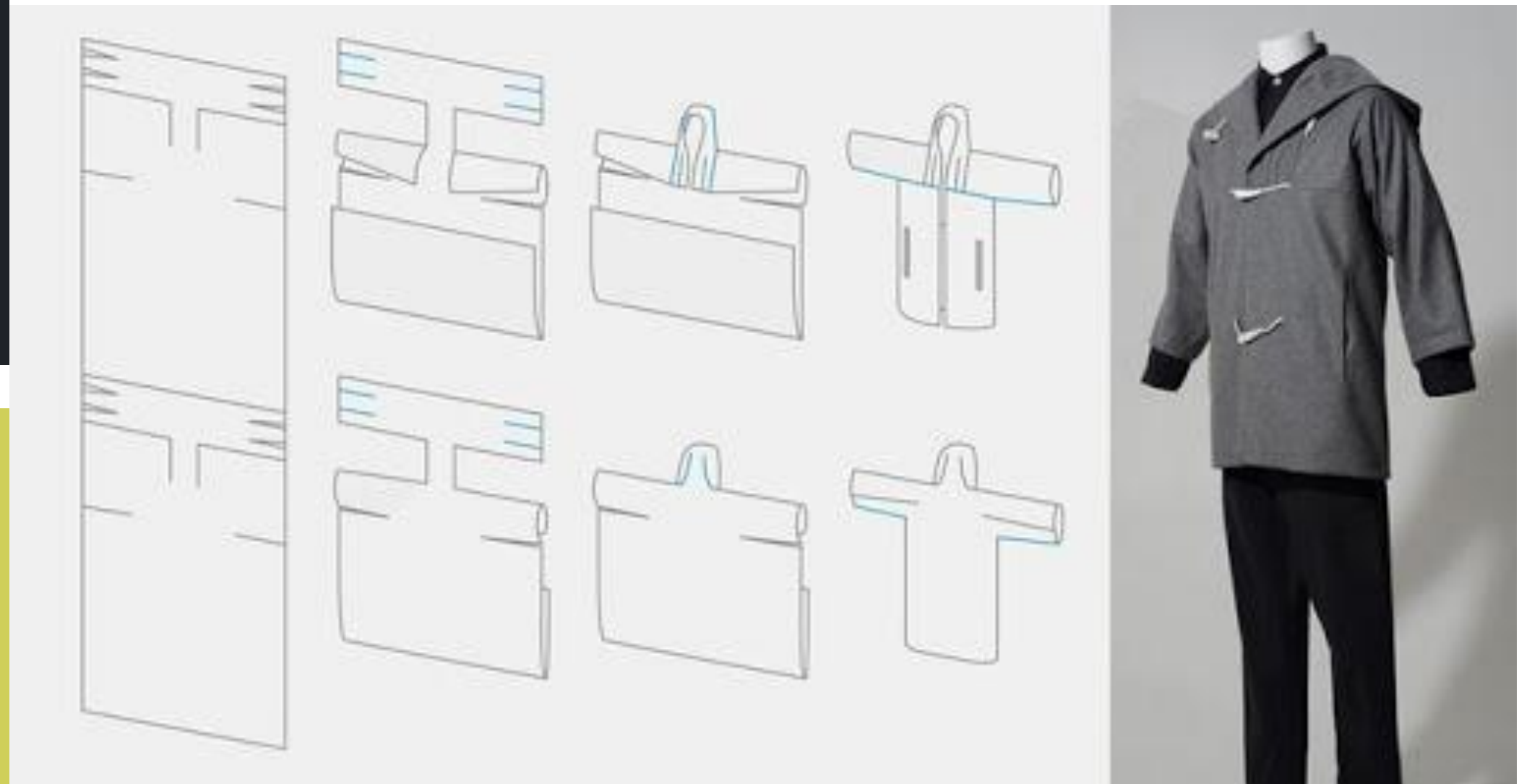
*Assistant Professor of
Fashion Design and
Sustainability at
Parsons The New
School for Design*

When I first started with zero-waste design I worked in a way that I had always worked, which was to sketch things and then move onto the pattern-cutting phase. But I changed my approach to zero-waste design when I realised that by keeping an open mind regarding the final outcome, with the same goal of making beautiful garments, allowed me to explore and invent new outcomes.



**Timo
Rissanen**

**Zero Waste
Duffle Coat**



House Linens

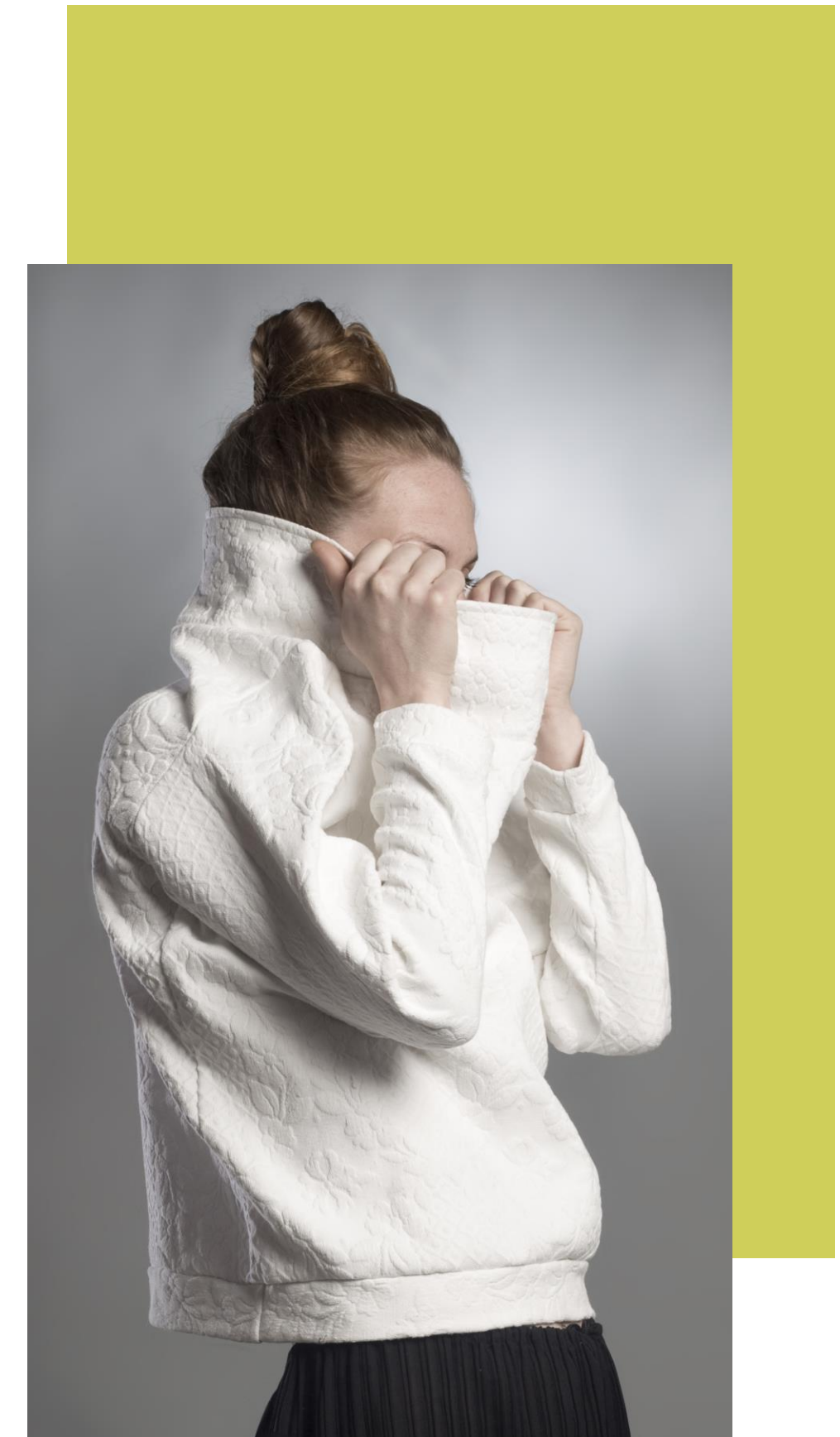
Dresses from DEPOP, Roba, free popular design contest, 2008.



Content

Case study > EVADIFRANCO designs

WHITES series is a carryover collection started 10 years ago. Garments are made from house linens and towels. Embroidered vintage bedsheets, antique bedcovers, tablecloth are redesigned into contemporary garments using a minimal (nearly zero) waste design approach. Each piece of cloth is unique and thanks to the manual pattern making (patterns are created afterwards, pieces are usually made on the stand, supported by manual sketching) there is a range of design improvisation that enhances every detail and special feature.



Case study / EVADIFRANCO

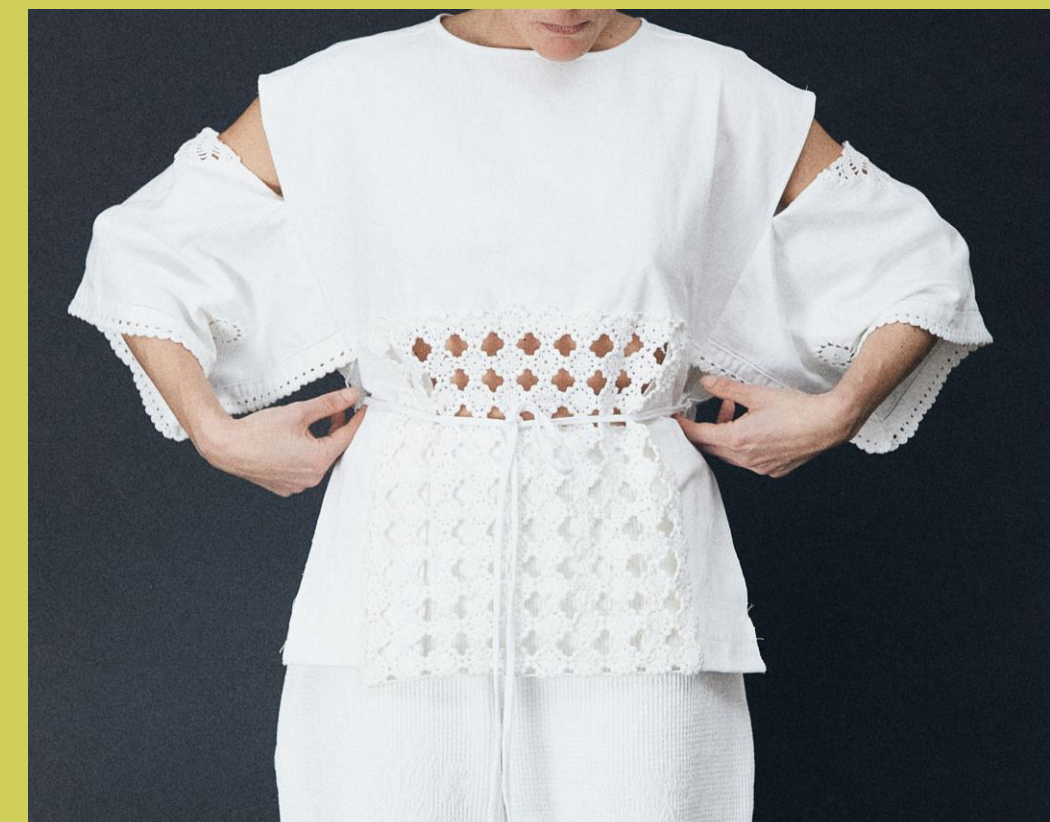
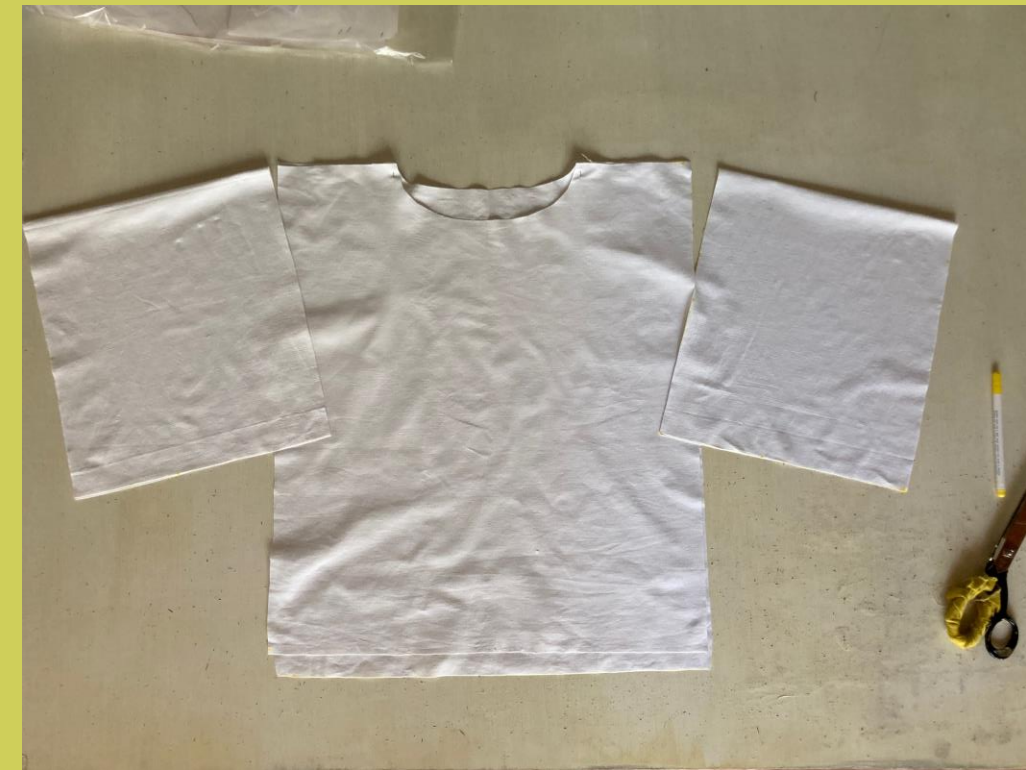
WHITES collection

Old thick cotton pad, old school textures from the gentleness of the italian 50's, rewinding to the rich beauty of the fabrics from the Renaissance, ancient and intense tones of white.

Every material inspires a different design, customised unique pieces.

One rule:white fabric.

Contemporary design mixed up with vintage materials and old fashioned textures.



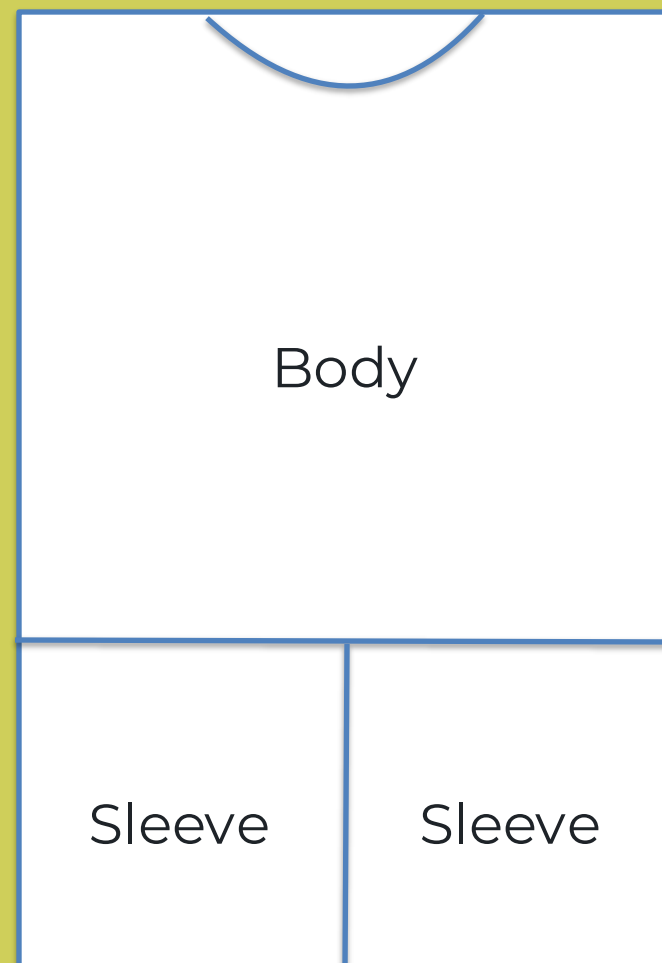
Elena Rocco photography

Case study / EVADIFRANCO

Kimono Top from pillow case

Zero Waste

The garment was made with an intuitive flat pattern making technique. The priority was the actual piece of fabric and the construction was inspired by the Japanese kimono.



Elena Rocco photography Variant with doilies



Viola Buti photography

Case study / EVADIFRANCO

Garments of WHITES series are mostly Zero Waste , the abundance of fabric is considered an inspiration and something to play with, rather than an excess to cut away.

In this modern wedding dress , front and back are made using a rectangular tablecloth, which has been gathered at the back with a wide elastic on the top. The excess fabric has been kept to make the fit more comfortable.



Viola Buti photography



Case study / EVADIFRANCO

Ritual Dress is the result of a double bedsheet with doilies application. The pattern is geometric and is made with a mix of draping and flat pattern technique



Johanna Delfos photography



Case study / EVADIFRANCO

The apron structure allows to wear the dress in different ways.

Closed at the front / closed at the back / hanging free



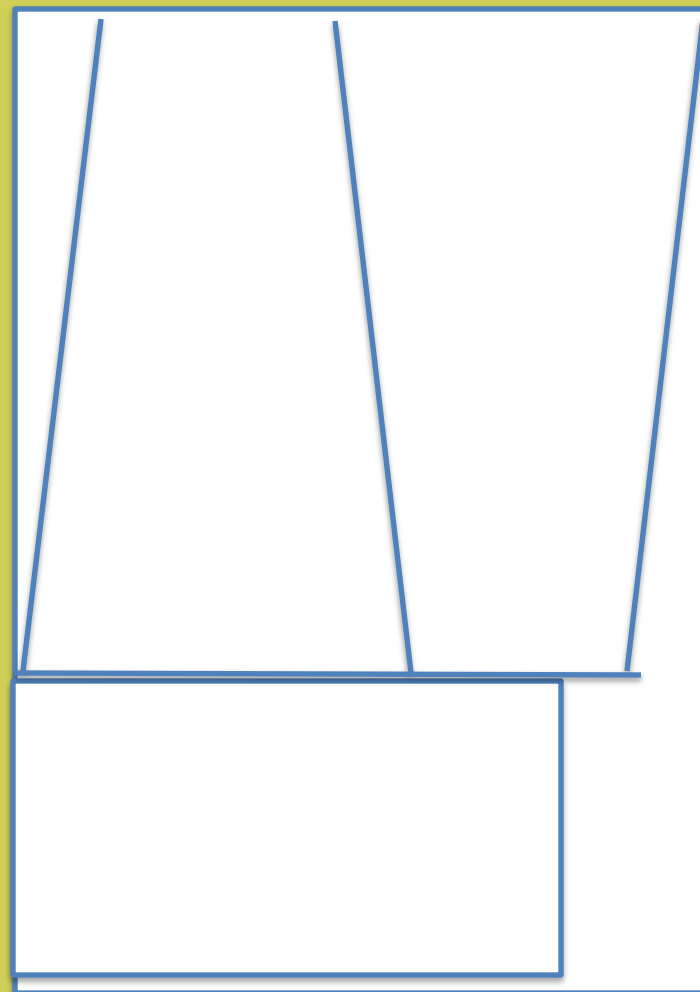
Case study / EVADIFRANCO

TOWEL MAXI SWEATER

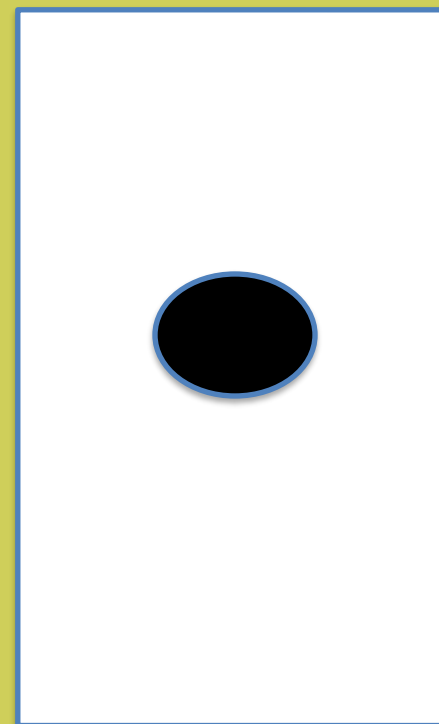
Big Jacquard towel + 1 plain white towel

Zero Waste

Sleeves + Neck piece



Body



Case study / EVADIFRANCO



Caitlin Tomlinson photography



The top part of the cloth was folded instead of cut away, creating more structured shoulder with a soft padding look. Slits on the sides allow movement and easy walking.

THE COLUMN DRESS

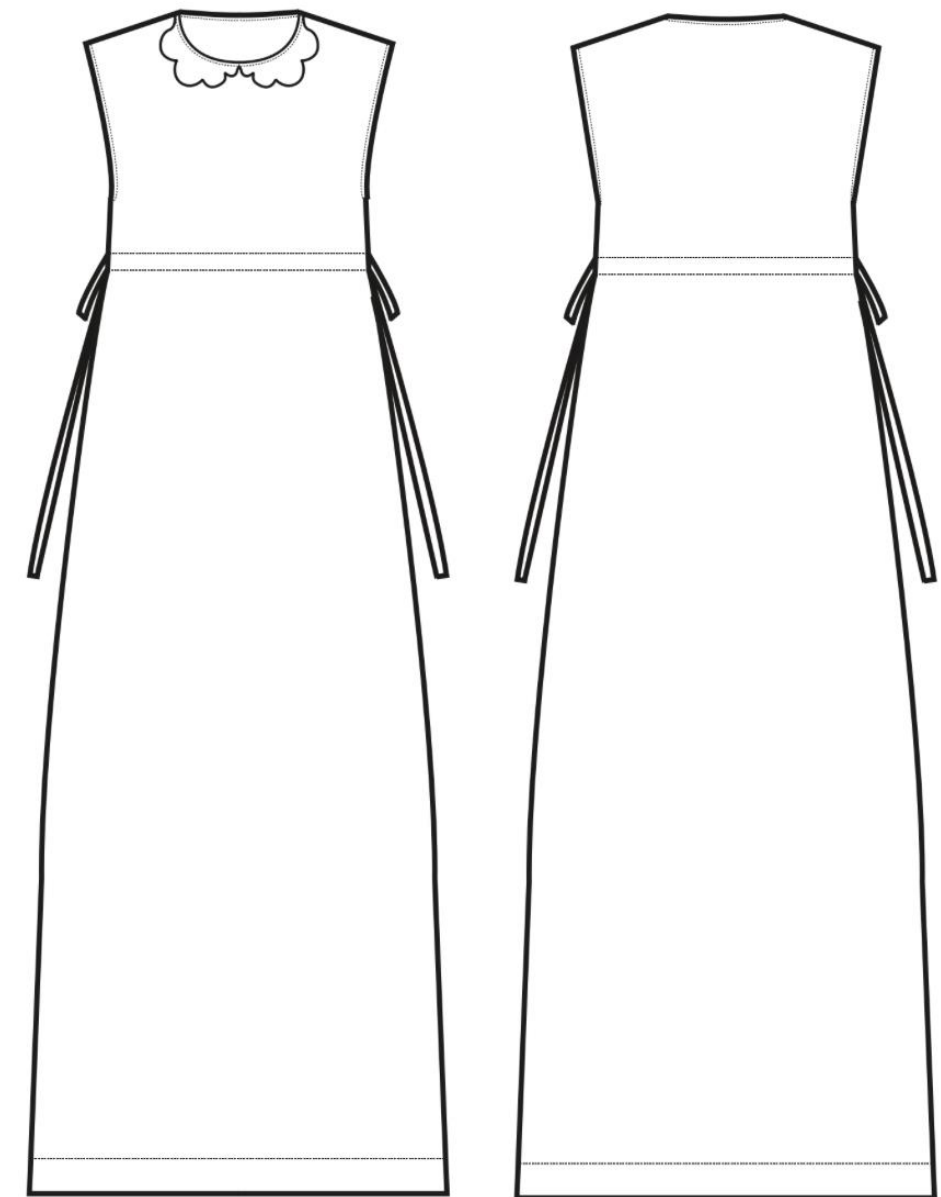
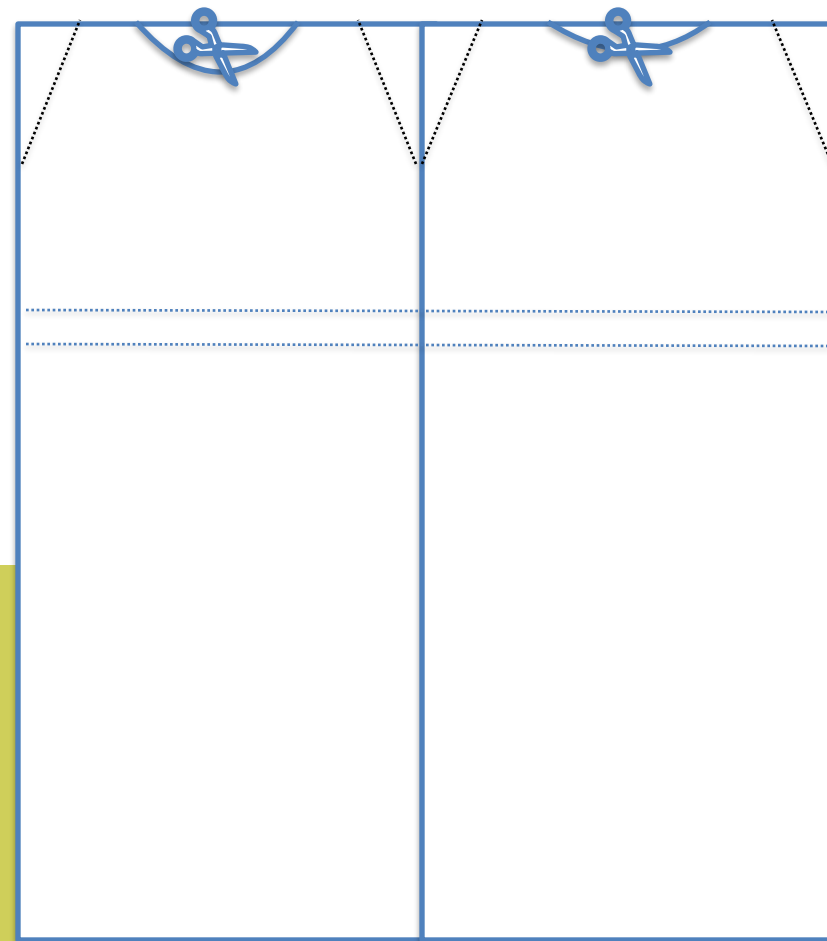
From half of a single bedsheet // one size fits most
Folding method / No Waste



A drawstring has been created at waist level to customise the fit.
A doily has been added for decoration around front neck.

THE COLUMN DRESS

From half of a single bedsheet // one size fits most
Folding method / No Waste





Practical application / 3 hours THE ROUNDED TABLECLOTH (damaged)

Handmade, crochet method. Stain
around 5 cm
Subtraction method / No Waste





EASY MAKE

Drape the rounded tablecloth on the mannequin

To figure out the best placement for the head opening. Here the central piece has been cut off.

Also pin on the sides to then sew the front

EASY MAKE

Rounded piece has been used as a pocket to cover the stain area. Double function!

Insert a drawstring or your favourite belt to customise the fit on the body.





Unit Summary



The unit focuses on creating garments using modular clothing items like towels, scarves, and handkerchiefs, emphasizing modular design and zero-waste pattern cutting techniques. Drawing inspiration from folklore and traditional costumes, the unit promotes sustainable design practices and explores the creative potential of reusing everyday textiles.

References

- Timo Rissanen, Holly Mc Quillan, Zero waste fashion design, Bloomsbury Visual Arts, 2024
- Thayaht, un artista alle origini del made In Italy, Museo Del Tessuto Edizioni, Prato, 2008
- Elena Fava, Vestire Contro, Il dressing Design di Archizoom, Mondadori, 2018
- Kirke B., Madeleine Vionnet, Chronicle books, San Francisco, 1998
- Mitchell L., The cutting edge: fashion from Japan, Powerhouse Publishing, New York, 2005
- Strizenova T., Moda e design in Russia, 1917-1945, Olograf Edizioni, Verona, 1991
- Patricia Rief Anawalt, Storia Universale del Costume, Mondadori, Milano, 2008
- Rosemary Grill, Jennifer Wearden, Verity Wilson, World Dress Fashion In Detail, V&A Publishing, London, 2009
- Dario Colombo, Franca Pauli, 455 abiti, ROBA, costruisci un abito, Depop 2007, Libero Concorso di Design Popolare, Balilla Enterprises, 08.2008

ONLINE

- <https://elbetextiles.com.au/blogs/news/zero-waste-pattern-making>
- <https://www.instagram.com/isseymiyakeofficial/reel/C8y9ru2yHNw/>
- <http://www.nannistrada.com>

