FASHION ALIVE

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RESPONSIBLE	CREAMODITE
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AUTHORS & INSTITUTES	Gisela Fortuna, Martina Gesell, CREAMODITE

ABSTRACT

The following portfolio presents a comprehensive overview of the Zero Waste Fashion design methodologies developed by Creamodite.

It documents the Zero Waste Fashion creation and iterations around fabric consumption, documented through patterns, technical drawings and lookbook images of the final collection.

TABLE OF MODIFICATIONS

Version	Date	Author	Reason for change
v0.1	23/03/2023	Martina Gesell, CREAMODITE	
v0.2	12/04/2023	Gisela Fortuna, CREAMODITE	Comments and suggestions
v0.3	28/04/2023	Martina Gesell, CREAMODITE	Final version

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Introduction

Fashion Alive is a project dedicated to sustainable fashion. It was born from the spirit of collaboration between people, companies and Universities in the European Union, within the framework of the Creative Europe program.

Its mission is to promote the future of sustainable fashion, studying and developing sustainable fashion design, production and communication standards.

To that effect, project partners CREAMODITE, UCAMPANIA and UMINHO are each working on their own approach to sustainable fashion.

CREAMODITE, the project leader, has focused their research on Zero Waste Fashion, a design methodology that rethinks conventional design and patternmaking to tackle pre-consumer waste production.

As part of the project's mission to disseminate innovative sustainable fashion design methods and raise awareness about the importance of a circular textile and fashion industry, each partner will showcase their collections in an innovative format combining conventional runway shows with performative elements, such as dancers, music and digital engagement strategies.

The creations described in the following portfolio will be showcased in a series of three day events in Madrid, featuring masterclasses and roundtable discussions about sustainable fashion, followed by the performance runway show and a closing event consisting of a sustainable arts and design store tour.

The need for sustainable fashion

Through the course of history, many cultures have been known to produce clothes in a way that wastes little or no fabric. Yet, since the industrial revolution, the economic system has focused on expanding production and consumption without consideration of the impacts of these behaviours on resource extraction and waste production.

This concept is based on the idea of a linear economy, where the life cycle of resources begins at extraction of raw materials, which are then processed and transformed for consumption and end up discarded as waste.

In the fashion industry, this translates to a vast scale of oil and raw-materials extraction, processed through waste-inducing production schemes at a scale that leads to some not ever being purchased and result in an astounding accumulation of textile waste.

Textile waste falls under two broad categories: pre-consumer and post-consumer waste. Pre-consumer waste originates during the manufacture process of fibres, yarns, fabrics and garments; whereas post-consumer waste is a result of consumer disposal.

The harmful impact of linear resource-extraction-to-waste behaviours are becoming evident, causing devastating biodiversity loss and global warming of 1.5°C above pre-industrial levels according to the IPCC's 2018 Summary for Policymakers (IPCC, 2018).

The circular economy, as opposed to its linear counterpart, addresses the issue of waste by proposing a regenerative system where resource input and waste, emission, and energy leakage are minimised by slowing, closing and narrowing material and energy loops (Geissdoerfer et al., 2017).

On this regard, the European Environment Agency affirms the need for a shift towards circular business models to achieve a circular textile sector via pathways of longevity and durability; optimization of resource use; collection and reuse; recycling and material use.

In recent years, Stahel (2018) identifies the fashion industry has been more preoccupied with "waste management policies instead of efficient use of resource use and waste prevention".

This translates into circular-economy concepts of upcycling, recycling and down-cycling pre- and post-consumer waste being applied, but no tangible efforts are being made at a large scale to eliminate waste at the source.

Source: created by the author

The rise of Zero Waste Fashion

According to National Geographic report: "A scrap of difference: why fashion offcuts don't need to end up in a landfill", one of the most unspoken culprits of pre-consumer waste production is hidden in the manufacturing process.Traditional pattern-making, based on organic body shapes, can produce up to 15% of textile waste during the marking and cutting process.

This evidence points to the fact that the fashion industry's current policy for resource use is inefficient, especially when considering that fabric consists of roughly 50% of a garment's cost (Cooklin, 1997).

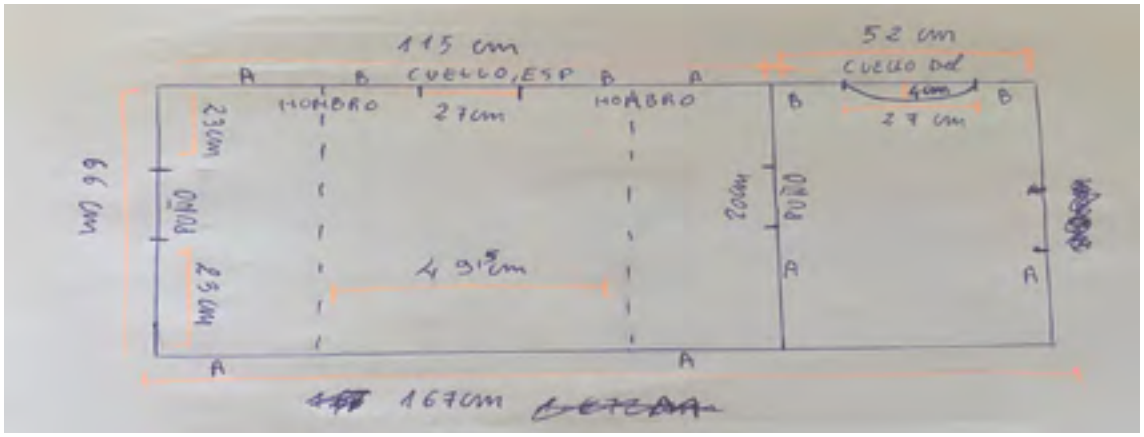
Zero Waste Fashion emerges as an opportunity for designers and manufacturers to implement creative project design methodologies that have a positive impact on waste production, by rethinking conventional design, patternmaking and construction techniques to work with a global context and take advantage of the entire fabric width.

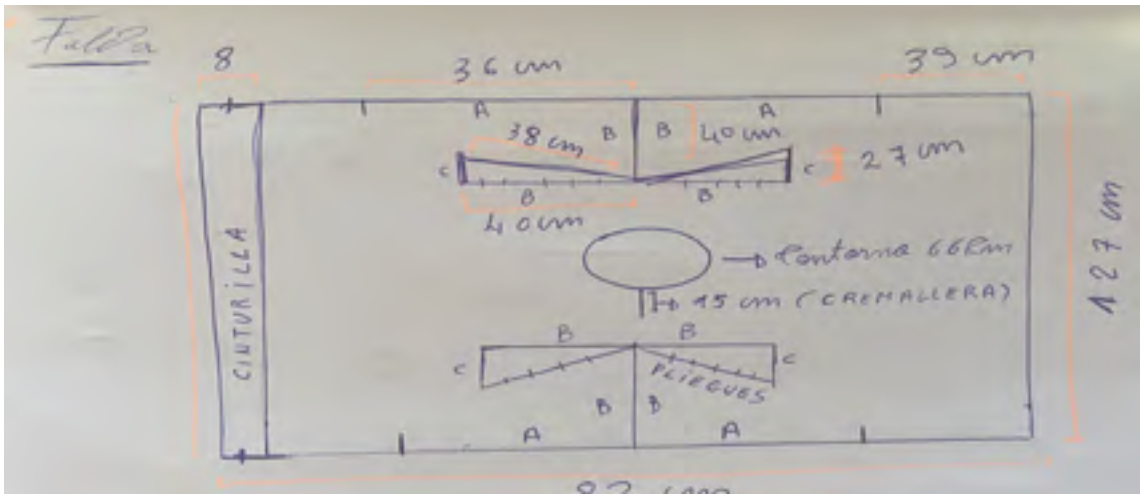
Therefore, Zero Waste Fashion design methodologies require unlearning traditional notions of silhouette and patternmaking. The main focus is shifted to the raw material, the backbone of any garment, factoring in the width of the fabric to maximize material utilization.

Design is no longer based on a body or a mannequin, nor are fashion figures drawn as a source of inspiration. Rather, the design is based on the optimization of the fabric through the geometric figures that will form the volumetric body grid on which the design will be based, which requires a three-dimensional approach, to visualize the planes fitted on the grid of the human body and transformed into volume.

Designing without generating waste poses considerable improvements on the creative process. The resulting silhouettes will not be restricted by body shape or the latest trends, but rather by the need to prevent wasting textiles, as well as ensuring the garment's comfort, durability and versatility.

In addition, Zero Waste Fashion introduces a new way of designing, pattern making and tailoring, thus making brands and designers feel more protected from counterfeiting and copying that haunt the fashion industry. Patterns have new shapes and fit together in unconventional ways, construction requires technical specifications of operation sequences in order to build the garment, but at the same time they are straightforward to construct if one has access to these specifications. This method can not only provide a solution to real sustainability in the fashion sector, but could be a great breakthrough for the recovery of local manufacturing and the solution to the great problem of copying as a protectionist policy.





Source: sketches by Santiago Iglesias Alonso

Zero Waste Fashion method and experimentations

The challenge behind Zero Waste Fashion design is creating patterns that can both fit the body, while not producing waste and generating an attractive design considering shapes, volumes and silhouettes.

This poses a significant difference to conventional design methods; where designers draw inspiration from moodboards, create illustrations and flat sketches which are later handed over to patternmakers to interpret.

Zero Waste Fashion designers must have a thorough understanding of the design fundamentals, raw materials, and different methods of pattern making and construction. In addition, they must be armed with a set of tools to project how the entire width of the fabric can be transformed into a design. To do this, various methods and techniques for creating shapes based on moulage can be applied and combined: body grids, subtraction and folding.

Body grids

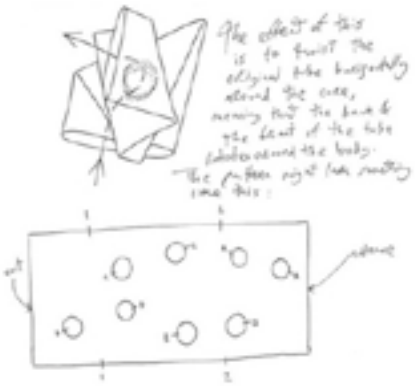
Body grids consist in a prior selection of the type of garment type (trousers, dresses, tops, outerwear) or area of the body the designer wants to target, and then interpreting its dimensions and proportions.

The objective of this process is to provide a reference for scale in the fabric width, resulting in a grid that the designer may later divide and transform to create their desired style and silhouette.

Source: created by the author

Substraction

Subtraction methods are based on negative space. In this sense, the piece of fabric is intervened by the designer, creating subtractions or "holes" which allow for the material to be twisted or transformed by draping and joining, or constructing conventional garment elements such as armholes and necklines. This technique was popularized by Julian Roberts' "School of subtraction cutting".



Source: Free cutting by Julian Roberts

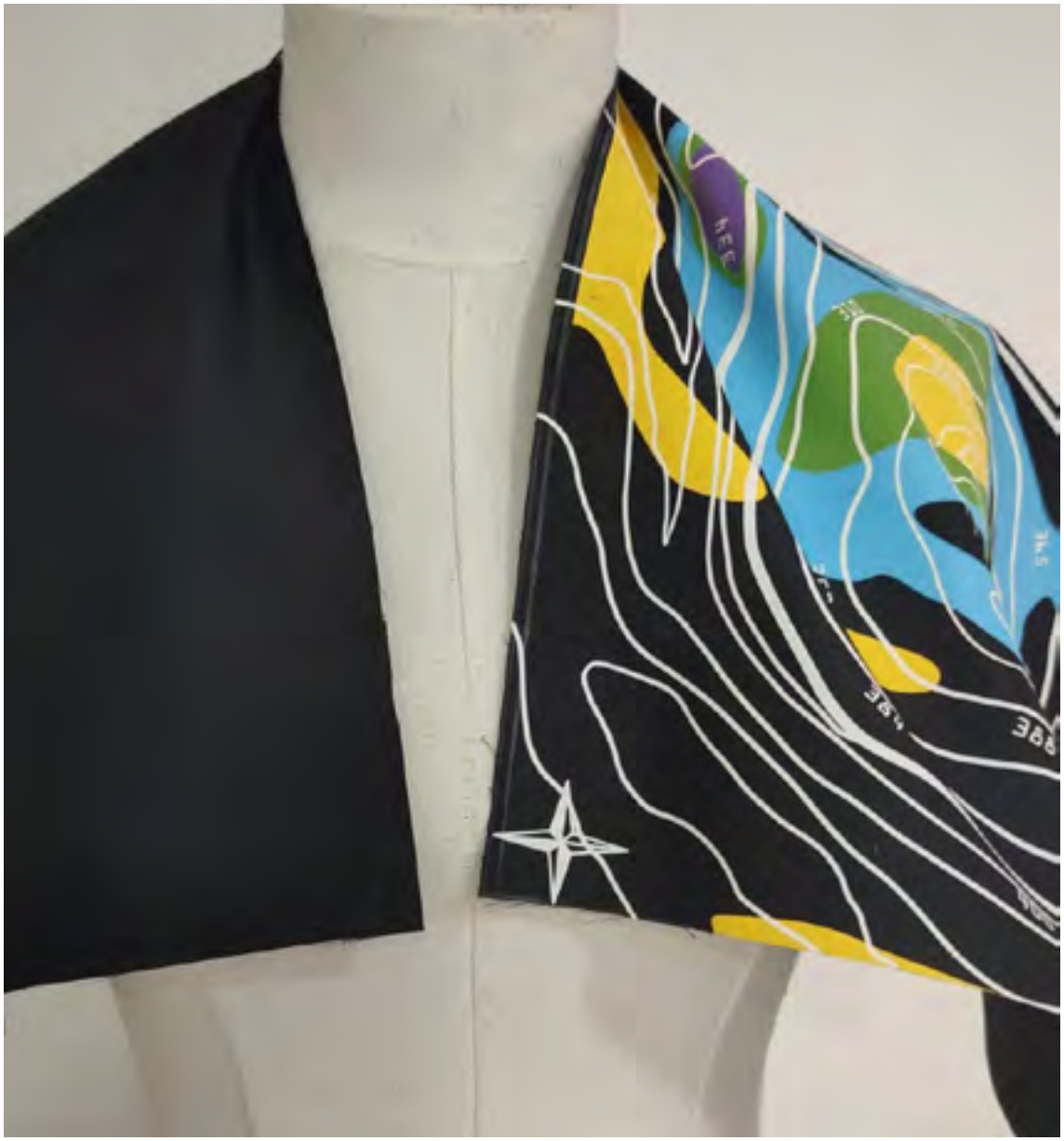
Source: Free cutting by Julian Roberts

Folding

Folding techniques are based on origami, where the width of fabric is transformed into a garment by strategic folding procedures that result in the creation of different planes, held together by seams, trimmings or hand stitching. Used in its pure form, this method uses the fabric in its totality in a manner similar to draping.

Source: created by the author

Zero Waste Fashion collection



Source: created by the author

Collection development

CREAMODITE's Zero Waste Fashion® collection is the result of a 5-year study of design methodologies by designer Gisela Fortuna, director of CREAMODITE.

Maison Mesa joins in 2022 as creative director to revise the designs of the new generation of sustainable fashion and textile designers who participated in the Zero Waste Fashion design and Print Design contests organized by CREAMODITE.

The Zero Waste Fashion contest consisted on a call for designs that followed this methodology. Over 50 applications from all over the world were received, and the finalists were invited to send over their garments to Maison Mesa's headquarters. for fitting and adjustments.

Designers who lived in the area enjoyed one-on-one sessions with Juan Carlos Mesa, Creative Director for Fashion Alive Madrid, and Gisela Fortuna, specialized Zero Waste Fashion instructor; whereas designers not residing in Madrid sent their garments for revision and received detailed video design critiques and advise.

During these sessions, they were advised on Zero Waste patternmaking, garment construction techniques, fabric selection and finishing. It was decided that the collection would be materialized on woven and knit fabric to test pattern versatility and the different shapes and sillhouettes it allowed for in fabrics of different weights and characteristics.

To convey a unified front for the multiplicity of young-generation designer's voices, the color selection was black, chosen due to its significance in Spanish culture (popularized by Spanish king Felipe II), a color representing extreme elegance but also a minimalistic yet avant-garde restraint.

The result of these sessions is the following collection, which was complimented by the Textile Design contest winner's print designs, who drew inspiration from the power of art to generate awareness about global warming and its effects.

As such, the designs draw inspiration from cartography and have sustainability applications in the sense that the design is made up of several layers that work as a whole or can be reused individually or through different combinations.

Source: created by the author

ZERO WASTE KIMONO COAT

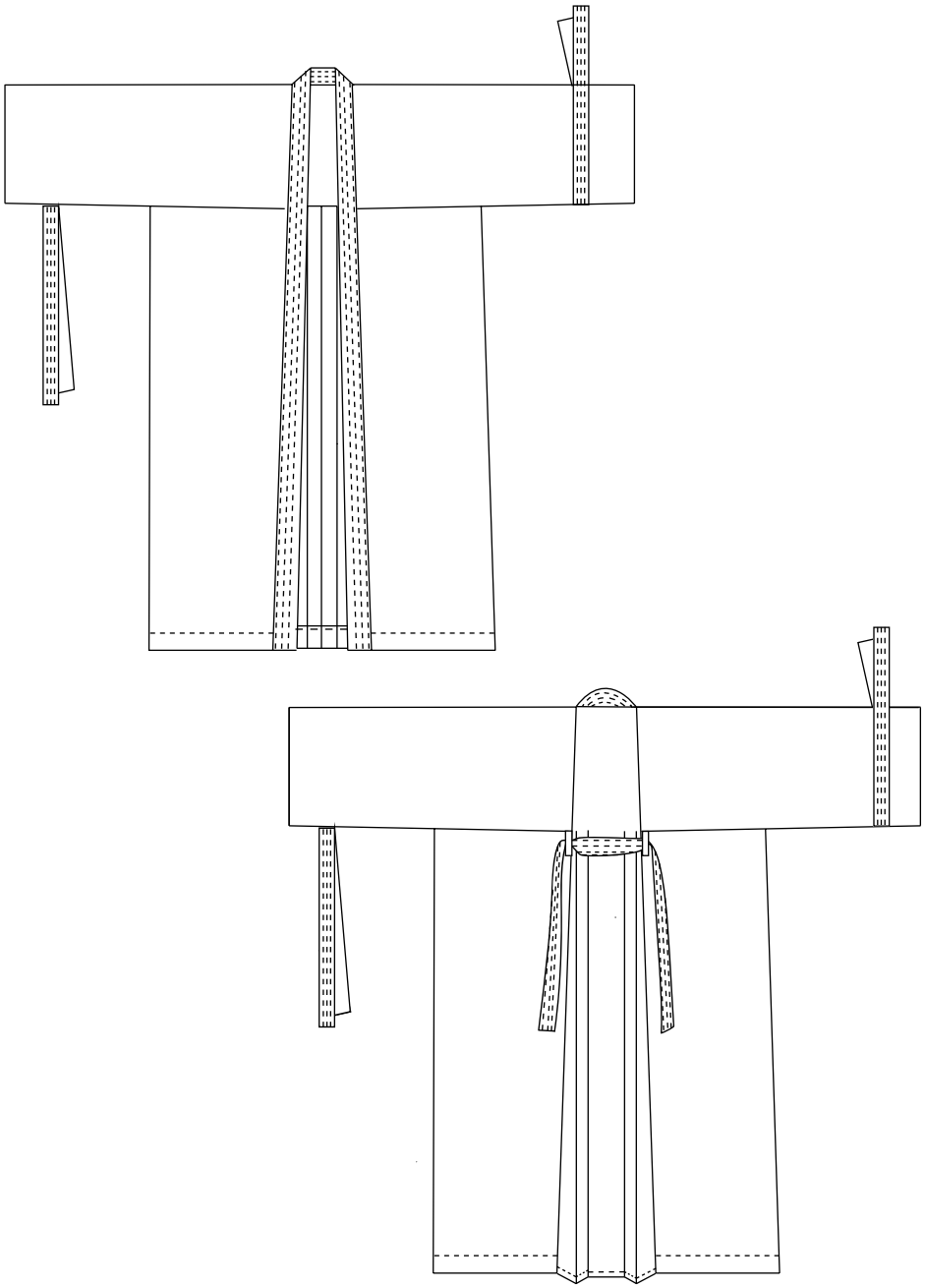
Design by Micaela Clubourg

ZERO WASTE KIMONO COAT

Design by Micaela Clubourg

ZERO WASTE KIMONO COAT

Technical sketch

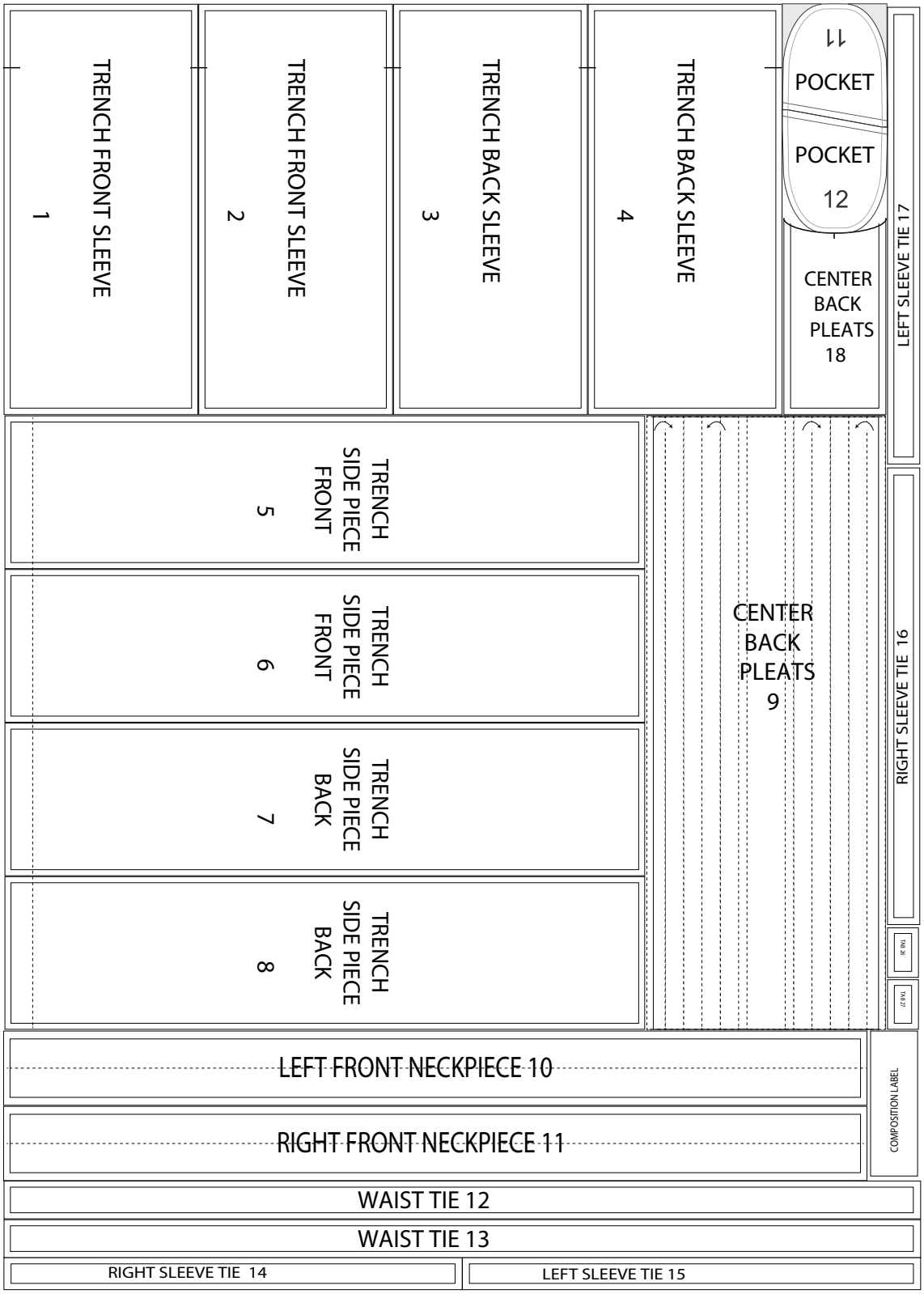


Zero Waste Method: Body grids

Design description: midi-length, long sleeved kimono with wrist and waist ties. It plays with the modesty and minimalism of traditional kimonos with a twist, adding a center-back pleat.

ZERO WASTE KIMONO COAT

Pattern



ZERO WASTE SHORT BOMBER JACKET

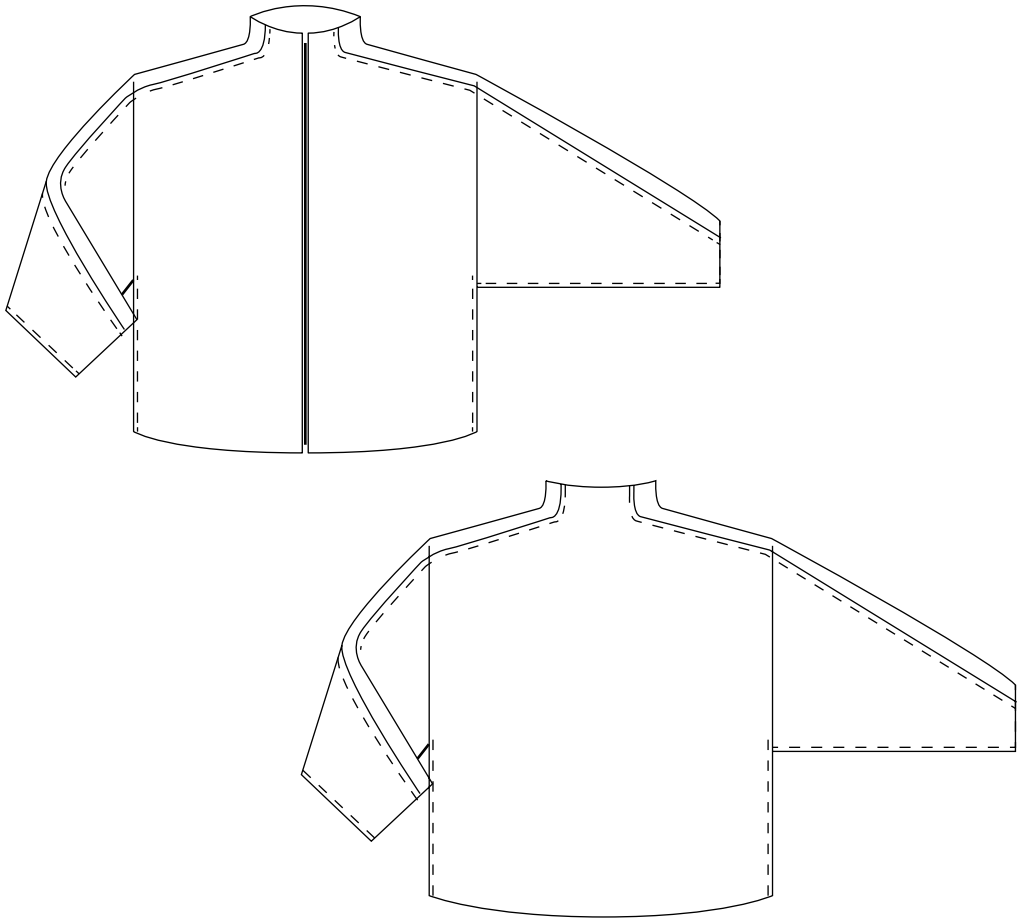
Design by Jamila Fakir-Salhi Akdi

ZERO WASTE SHORT BOMBER JACKET

Design by Jamila Fakir-Salhi Akdi

ZERO WASTE SHORT BOMBER JACKET

Technical sketch

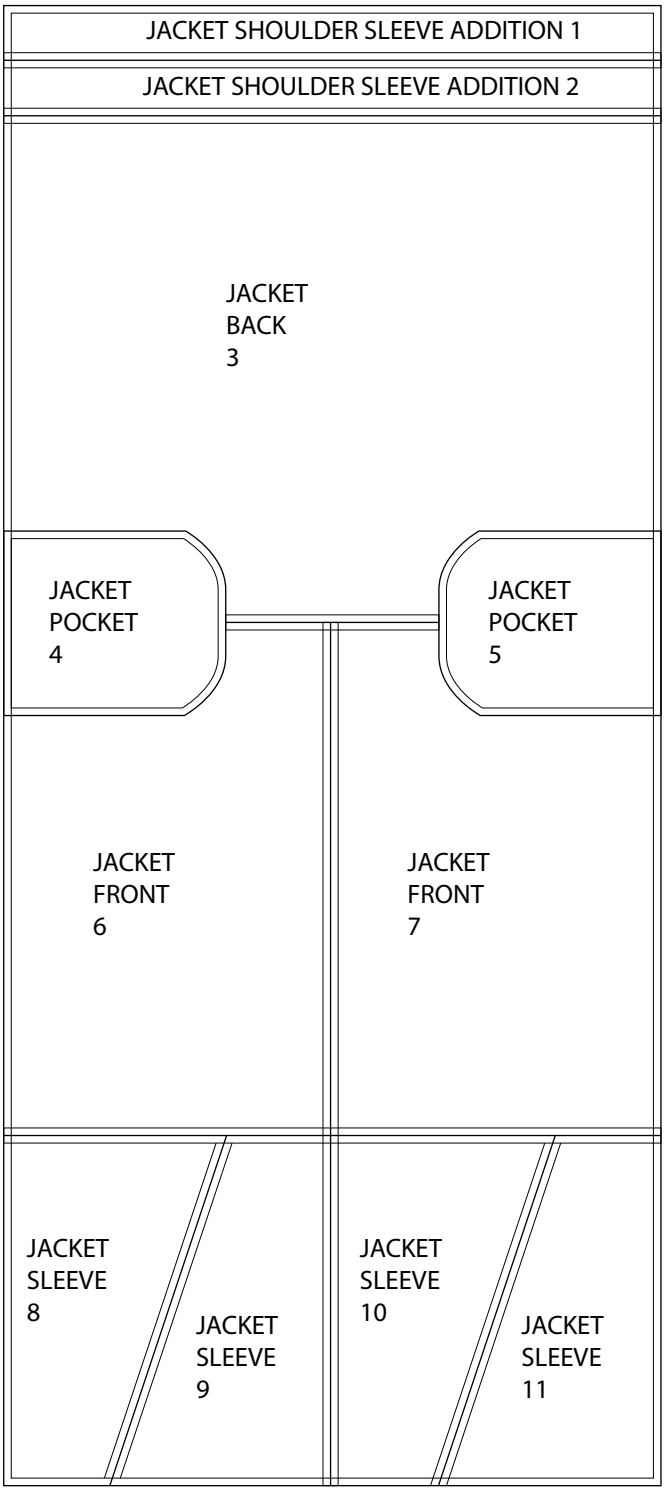


Zero Waste Method: Body grids

Design description: long raglan-sleeve jacket with a high collar, front-zipper and side pockets. It is based on the silhouette of bomber jackets and adapted for Zero Faste Fashion

ZERO WASTE SHORT BOMBER JACKET

Pattern



ZERO WASTE JACKET WITH TRANSFORMABLE HOOD

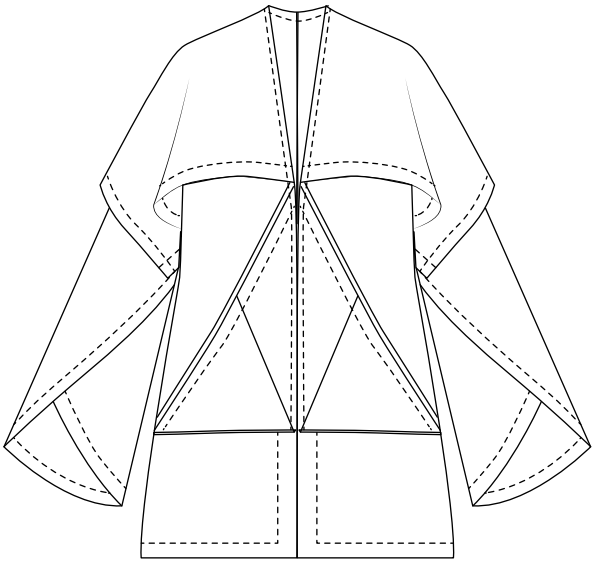
Design by Constanza De Santis

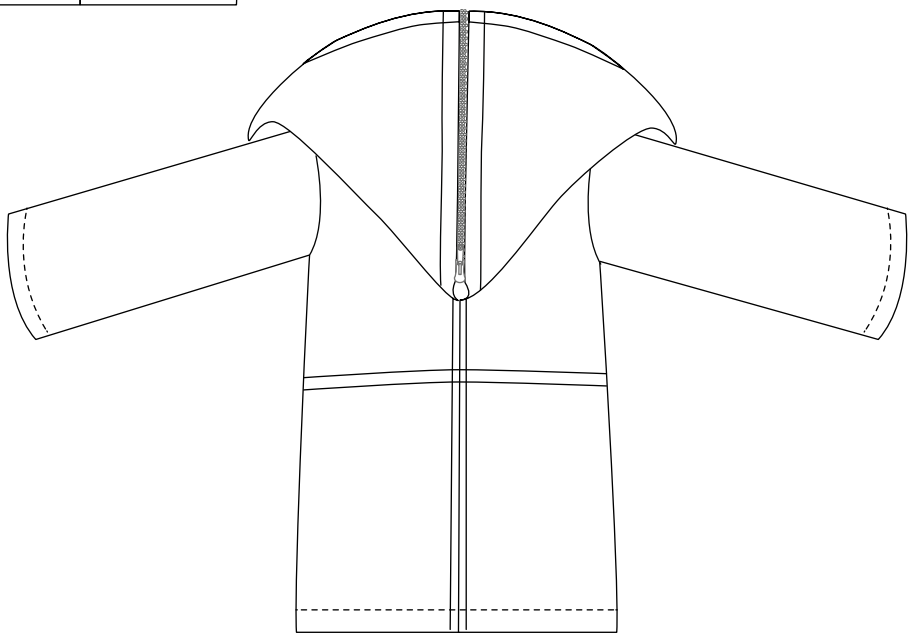
ZERO WASTE JACKET WITH TRANSFORMABLE HOOD

Design by Constanza De Santis

ZERO WASTE JACKET WITH TRANSFORMABLE HOOD

Technical sketch



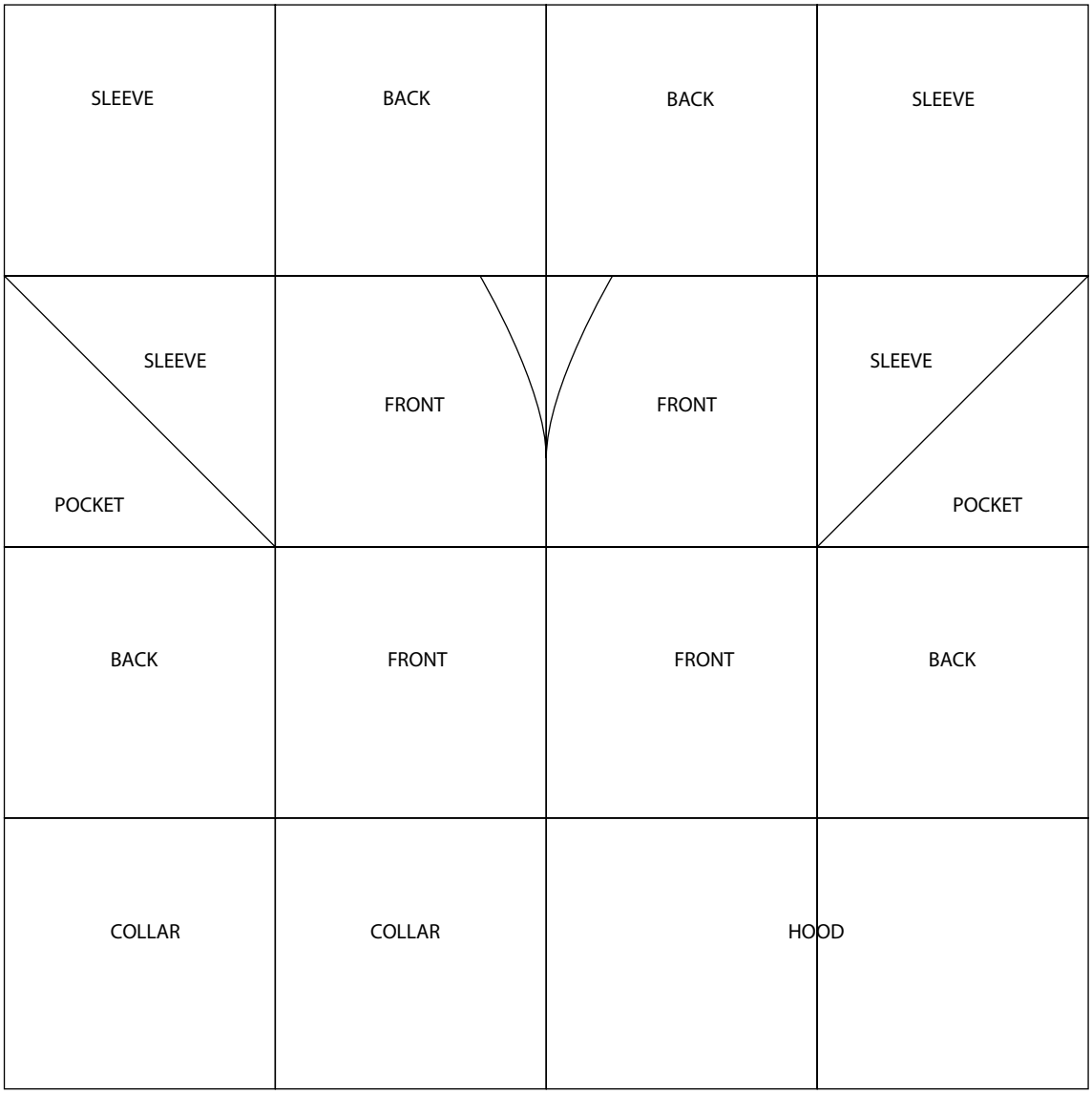


Zero Waste Method: Body grids

Design description: oversize, geometric-shaped jacket, with long sleeves and an open front. It features a transformable hood that can be worn open as a collar or closed, via a zipper.

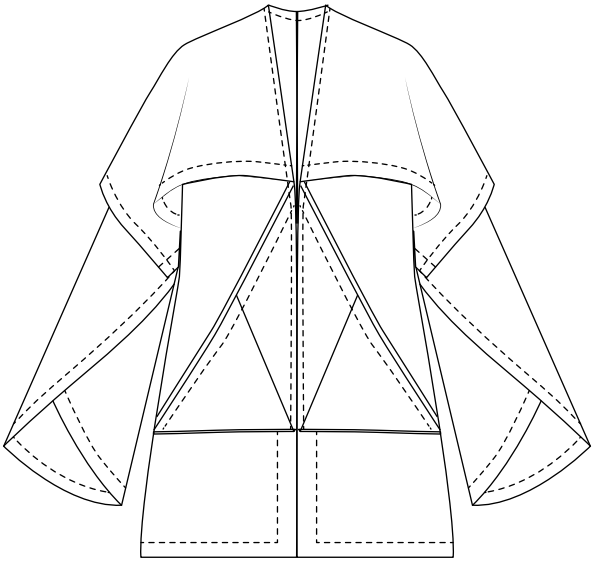
ZERO WASTE JACKET WITH TRANSFORMABLE HOOD

Zero Waste Pattern

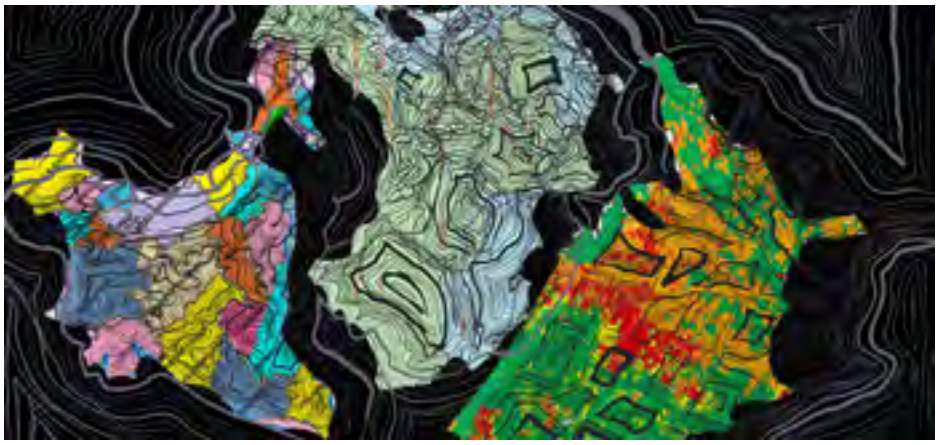


ZERO WASTE JACKET WITH TRANSFORMABLE HOOD

Print details



Print design by Florencia Lomelí Martín



ZERO WASTE KIMONO OVERSHIRT

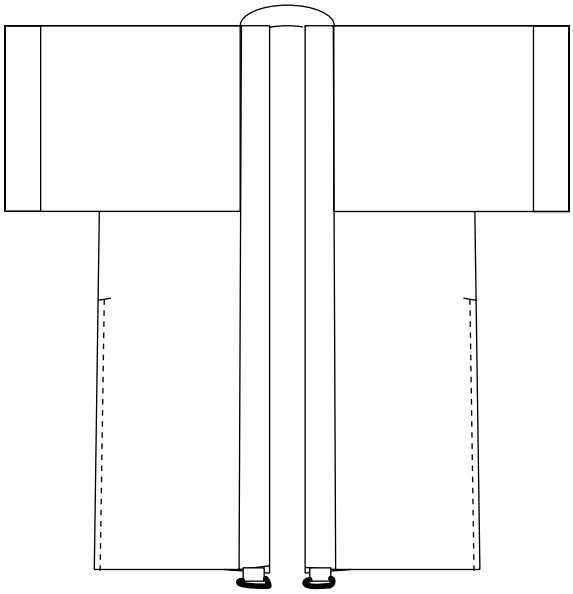
Design by Micaela Clubourg

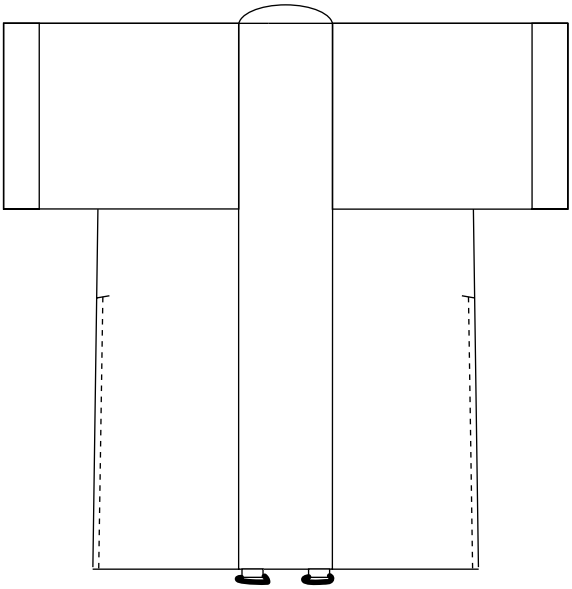
ZERO WASTE KIMONO OVERSHIRT

Design by Micaela Clubourg

ZERO WASTE KIMONO OVERSHIRT

Technical sketch



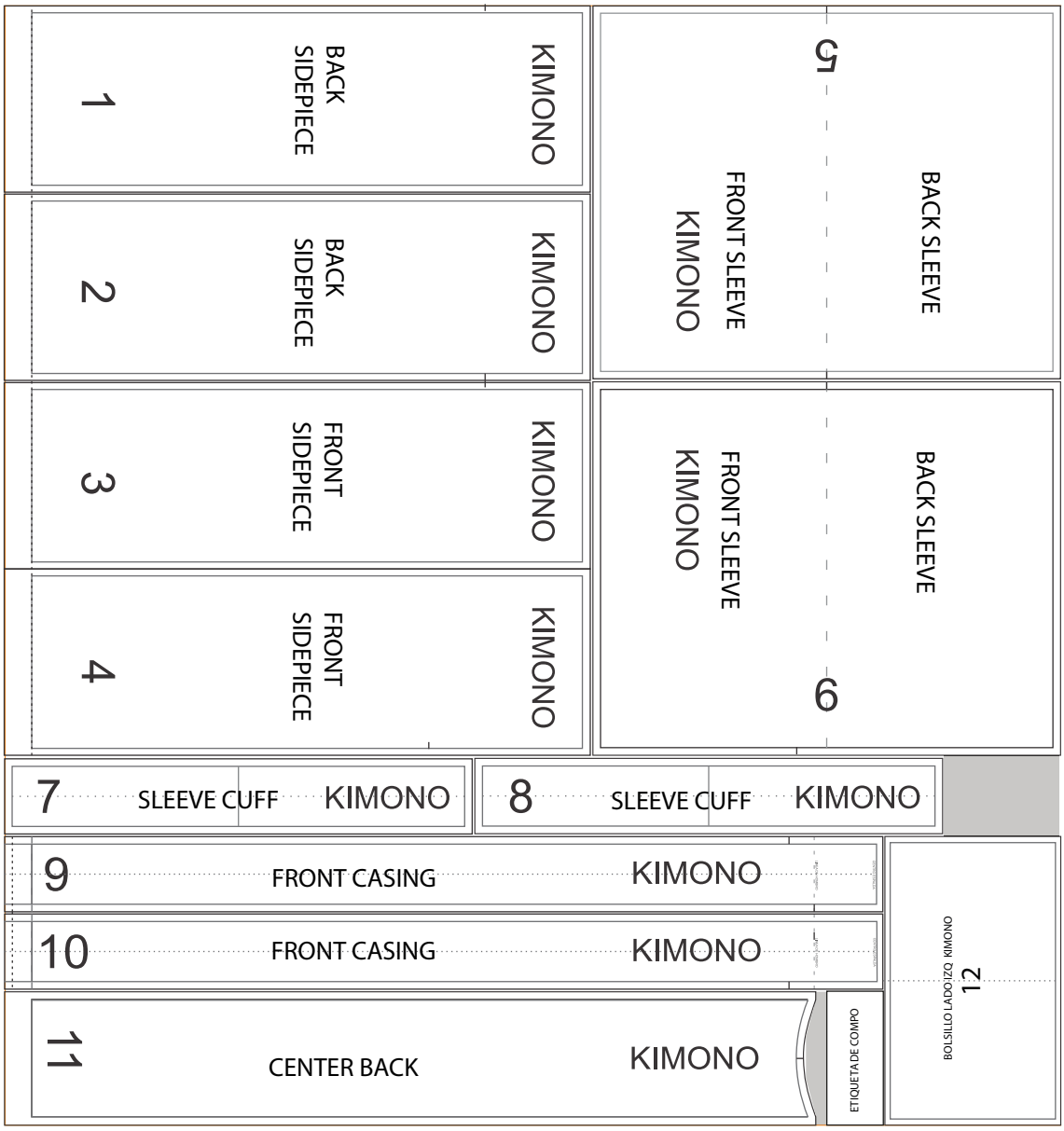


Zero Waste Methods: Body grids

Design description: Midi-length kimono style overshirt with cuffsleeve details, front and back casigns that transform the design via adjustable ribbons

ZERO WASTE KIMONO OVERSHIRT

Pattern



ZERO WASTE CROP V-NECK BLOUSE

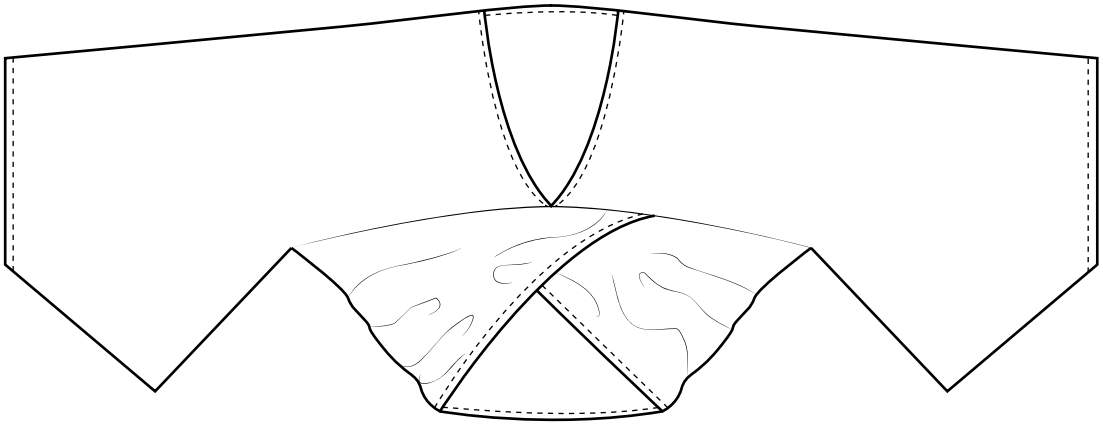
Design by Santiago Iglesias Alonso

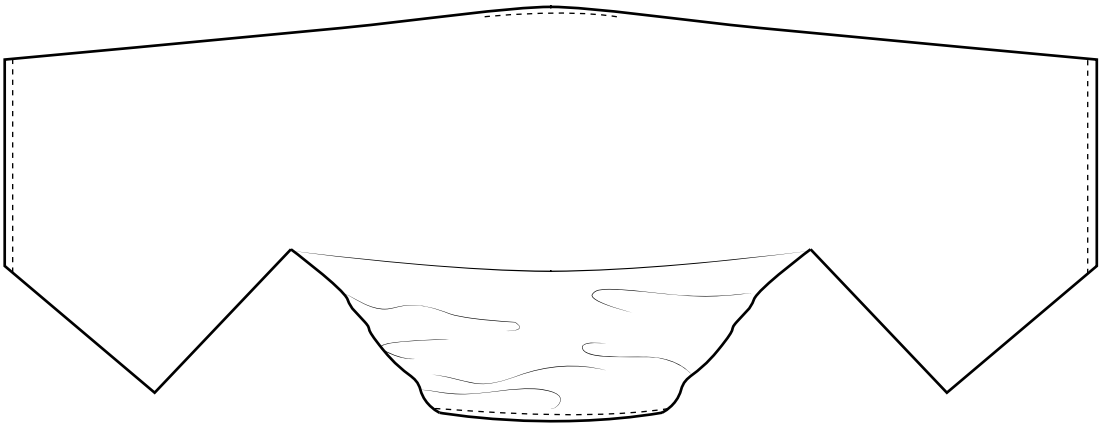
ZERO WASTE CROP V-NECK BLOUSE

Design by Santiago Iglesias Alonso

ZERO WASTE CROP V-NECK BLOUSE

Technical sketch



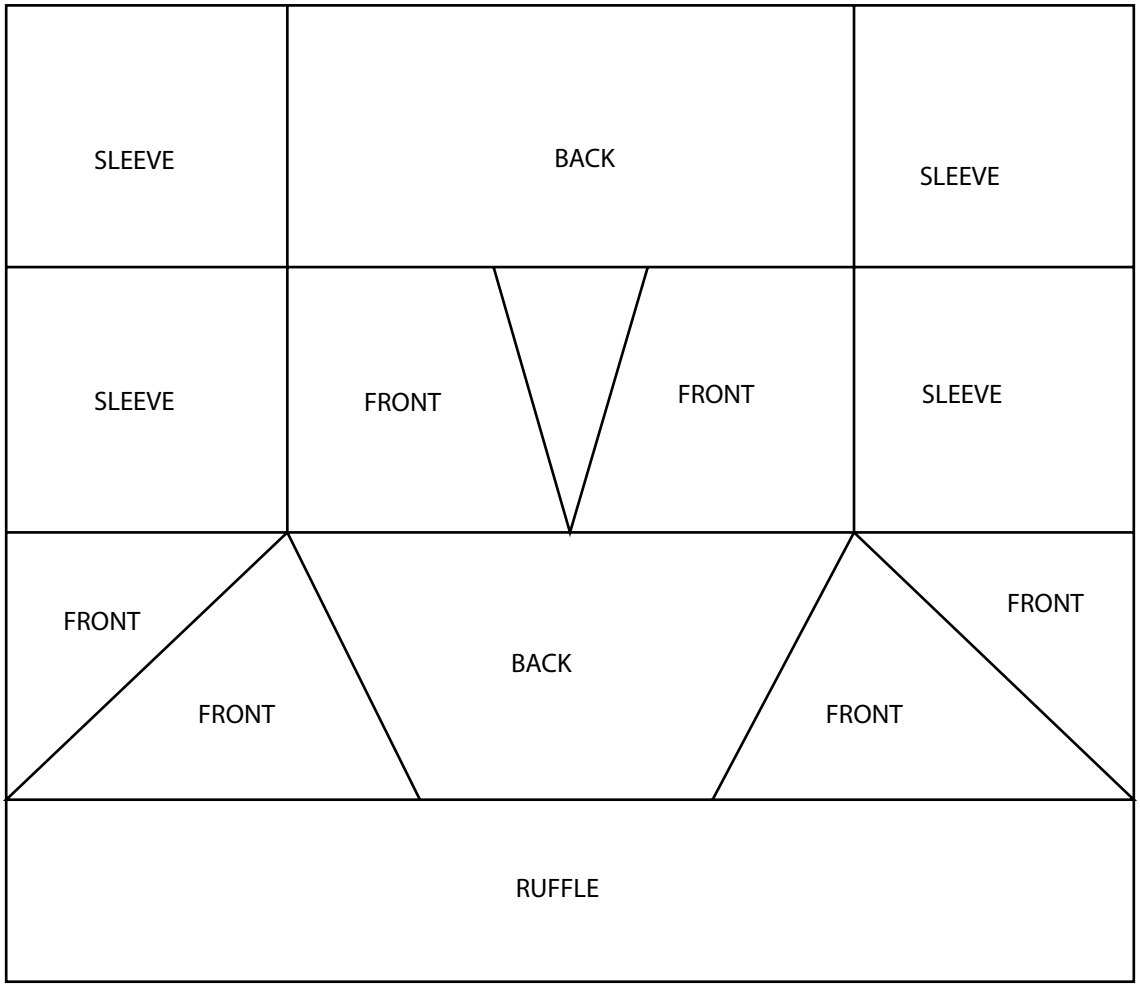


Zero Waste Method: Body grids

Design description: Crop-length, 3/4 geometric bell sleeve blouse with front v-neck and a ruffled elastic waistband.

ZERO WASTE CROP V-NECK BLOUSE

Pattern



ZERO WASTE BOX-CUT BLOUSE

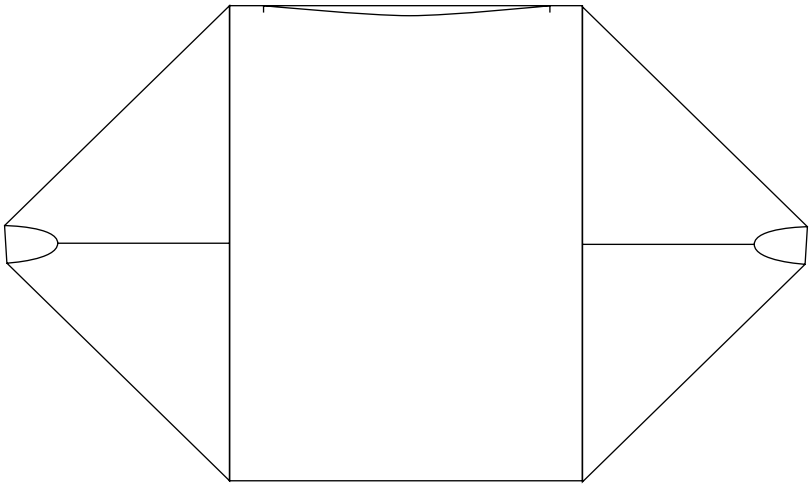
Design by Santiago Iglesias Alonso

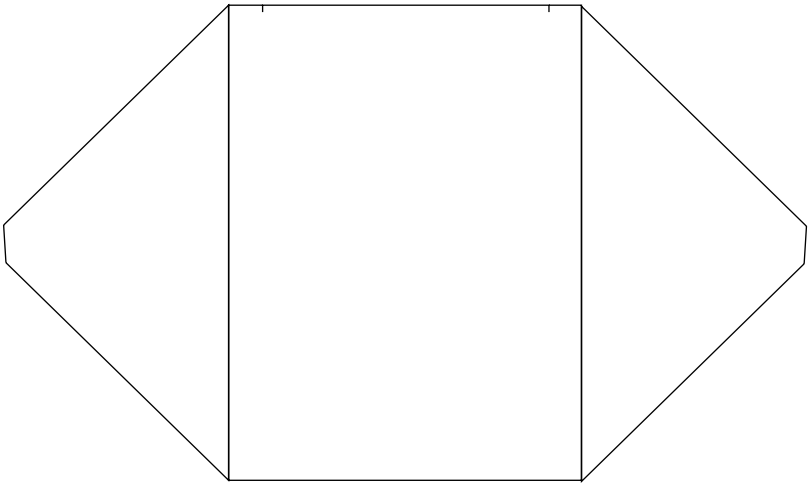
ZERO WASTE BOX-CUT BLOUSE

Design by Santiago Iglesias Alonso

ZERO WASTE BOX-CUT BLOUSE

Technical sketch



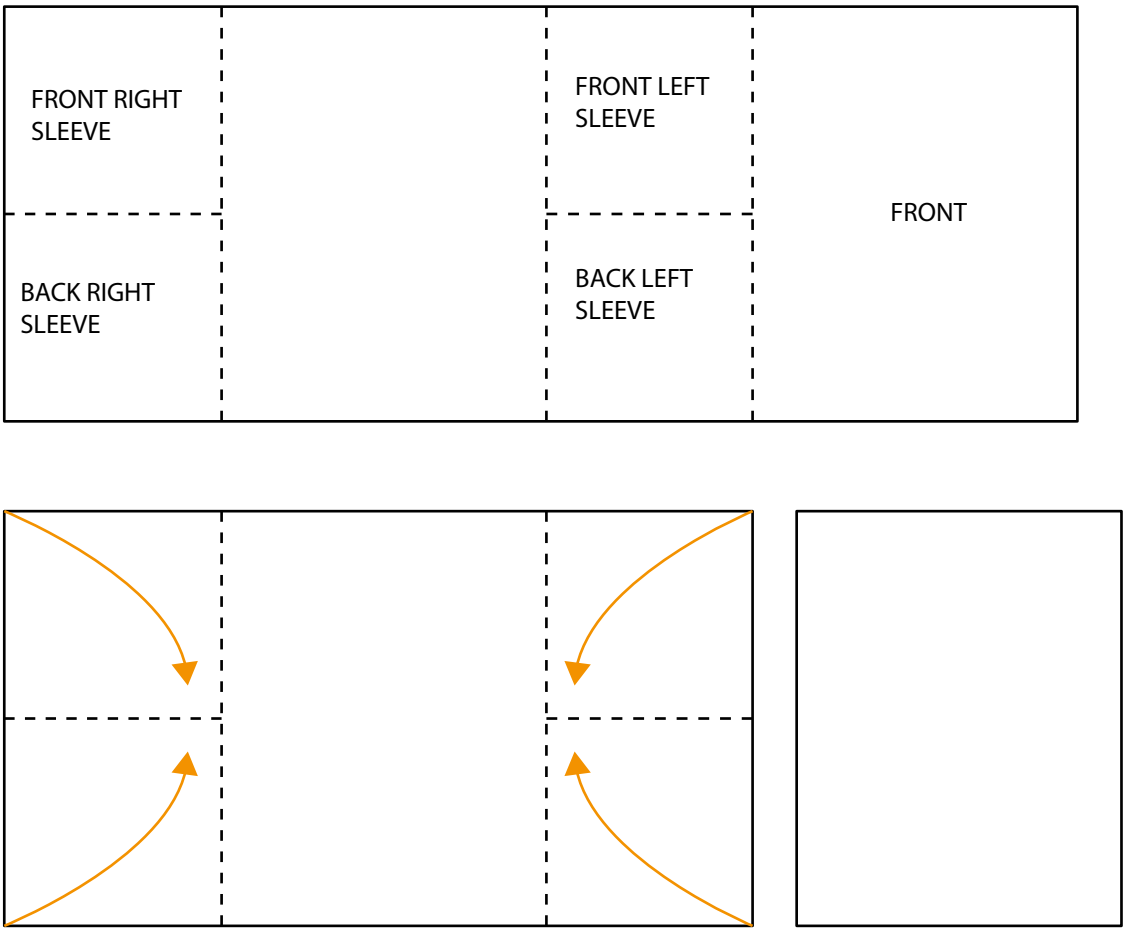


Zero Waste Method: Folding

Design description: Short-sleeve box-cut blouse with a geometric design generating by adapting rectangles to fit the shape of the body. It was tested in knit and woven fabric of different weights to obtain different silhouette types.

ZERO WASTE BOX-CUT BLOUSE

Pattern



ZERO WASTE RUCHED BLOUSE

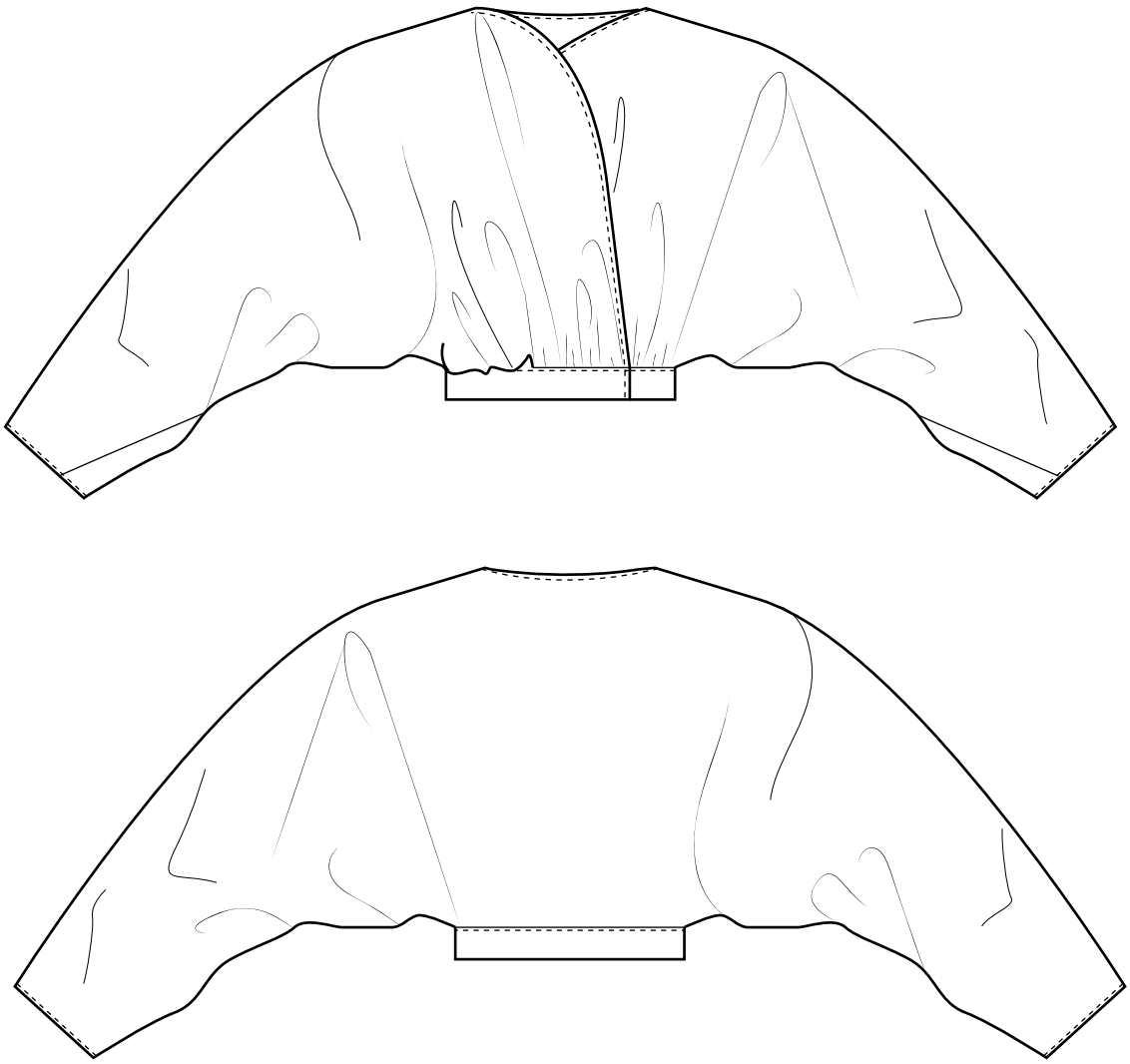
Design by Santiago Iglesias Alonso

ZERO WASTE RUCHED BLOUSE

Design by Santiago Iglesias Alonso

ZERO WASTE RUCHED BLOUSE

Technical sketch

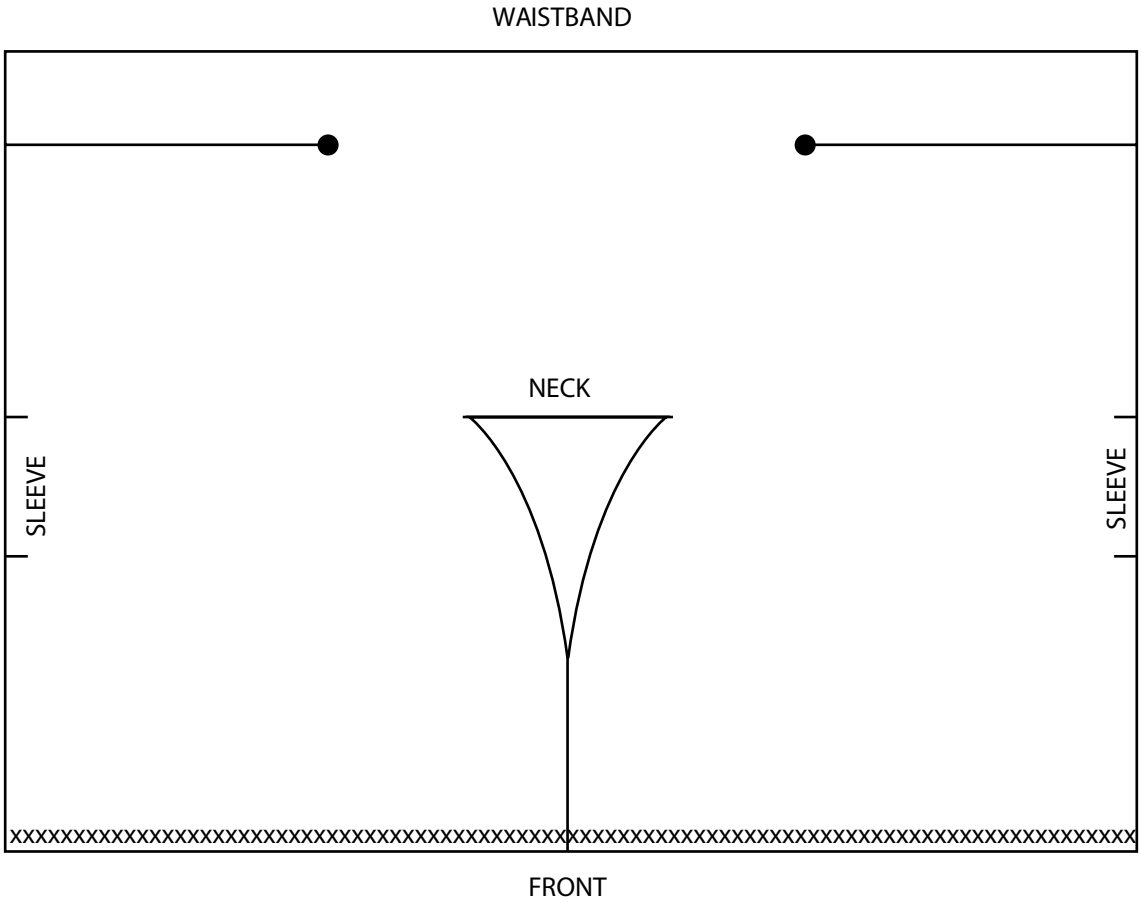


Zero Waste Method: Substraction

Design description: Crop-length long dollman sleeve blouse with overlapping front v-neck. The textile is adapted to fit the body shape by incorporating ruching. It can be worn front or back, and the pattern was tested in knit and woven fabric obtaining different volumetric results.

ZERO WASTE RUCHED BLOUSE

Pattern



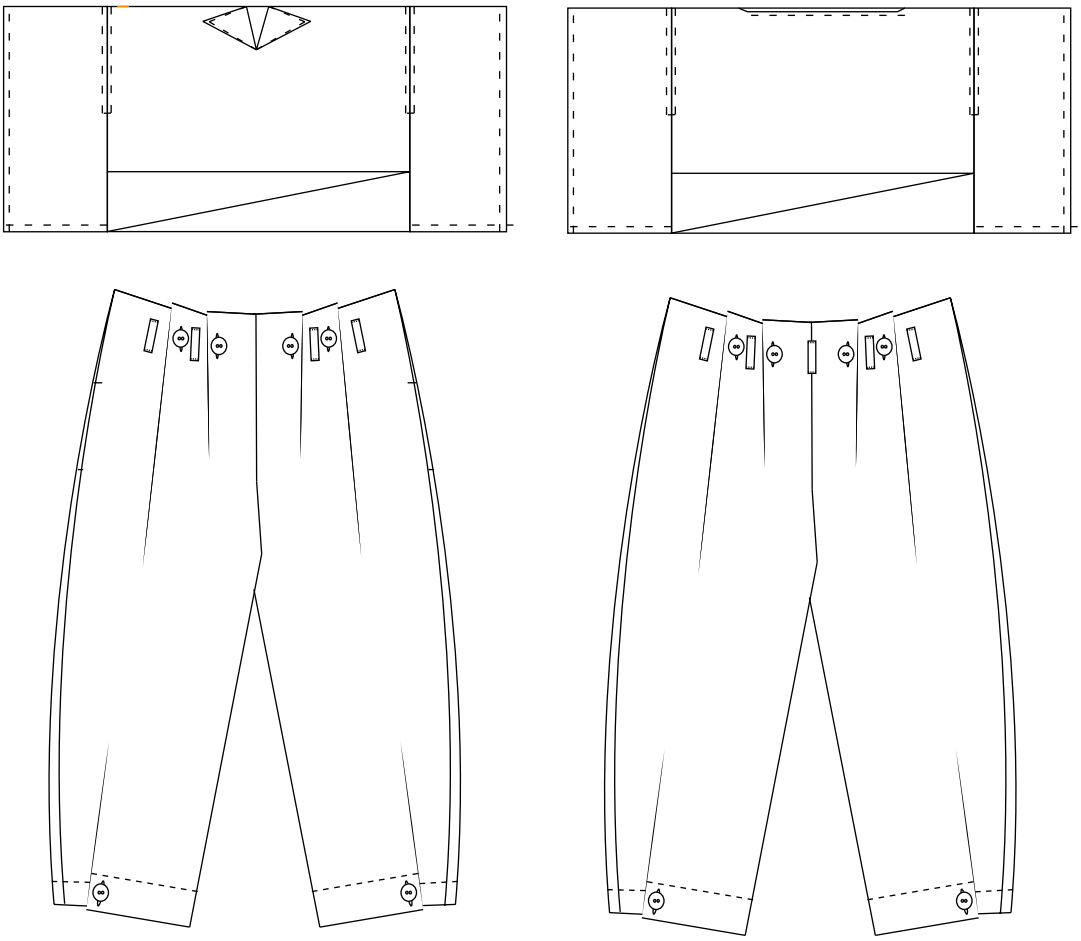
ZERO WASTE PLEATED TROUSERS AND BLOUSE

Design by Micaela Clubourg

Design by Micaela Clubourg

ZERO WASTE PLEATED TROUSERS AND BLOUSE

Technical sketch

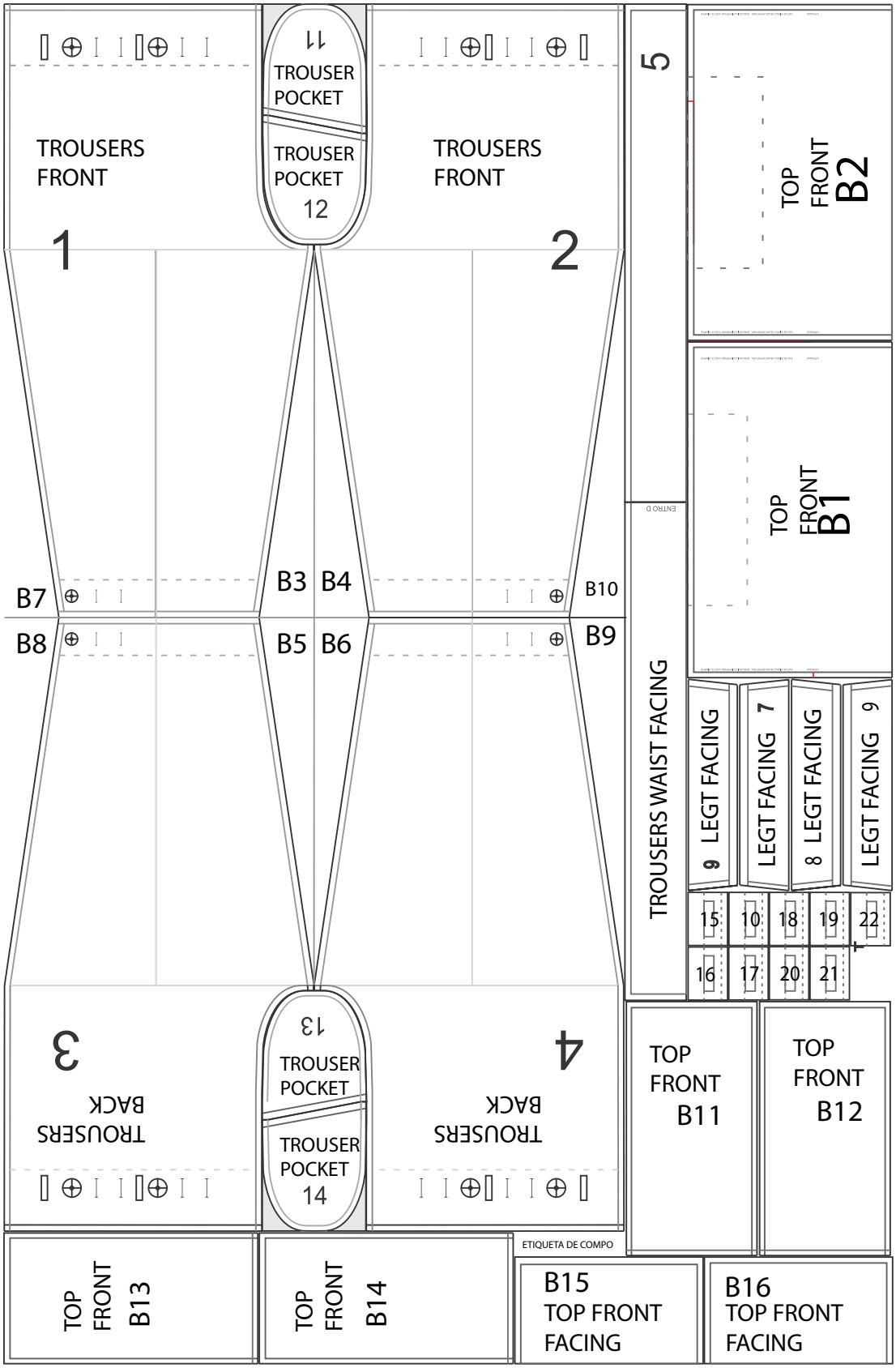


Zero Waste Method: Body grids

Design description: To optimize fabric consumption, two designs were conceived as a whole: an oversize blouse with a folded collar and pleated, ankle-length trousers.

ZERO WASTE PLEATED TROUSERS AND BLOUSE

Pattern



ZERO WASTE GEOMETRIC TRANSFORMABLE TROUSERS

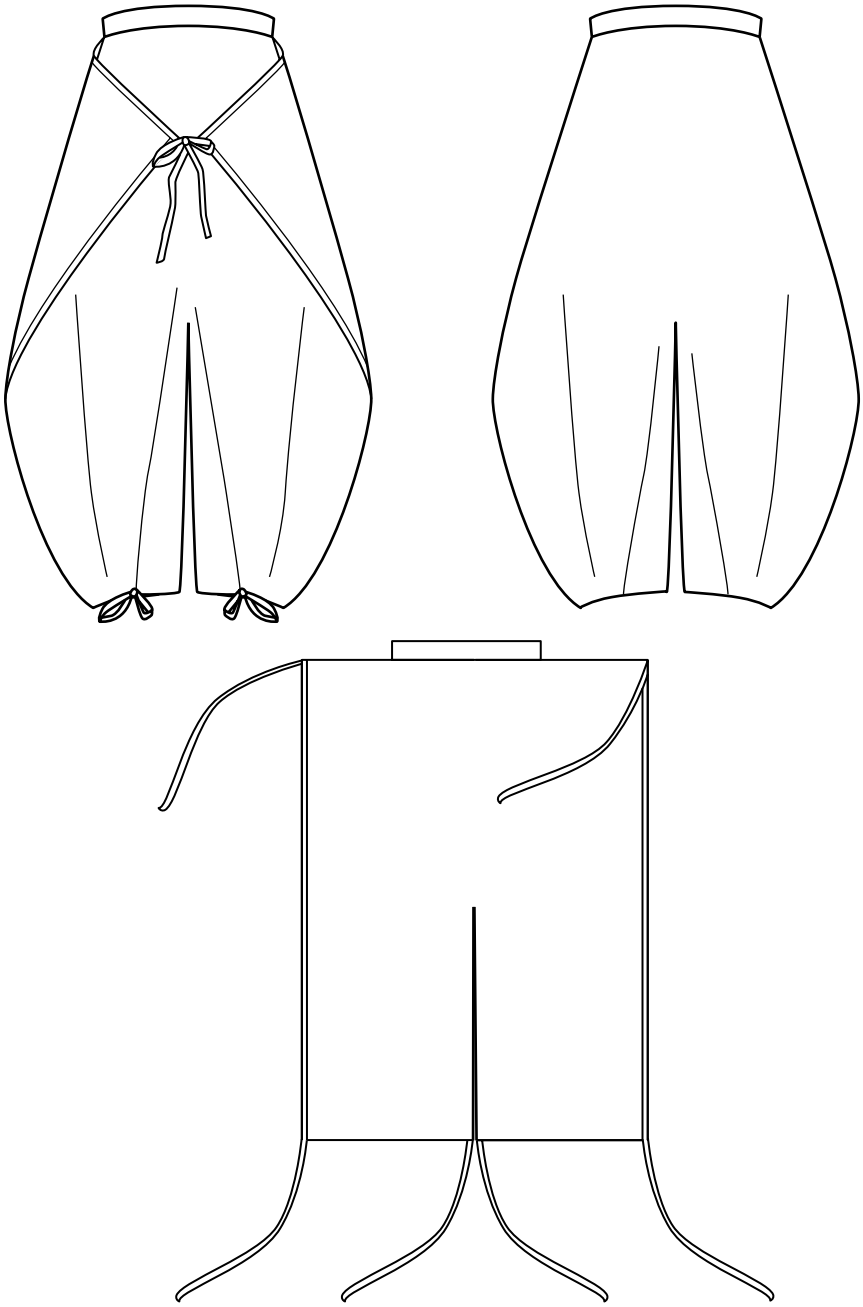
Design by Santiago Iglesias Alonso

ZERO WASTE GEOMETRIC TRANSFORMABLE TROUSERS

Design by Santiago Iglesias Alonso

ZERO WASTE GEOMETRIC TRANSFORMABLE TROUSERS

Technical sketch

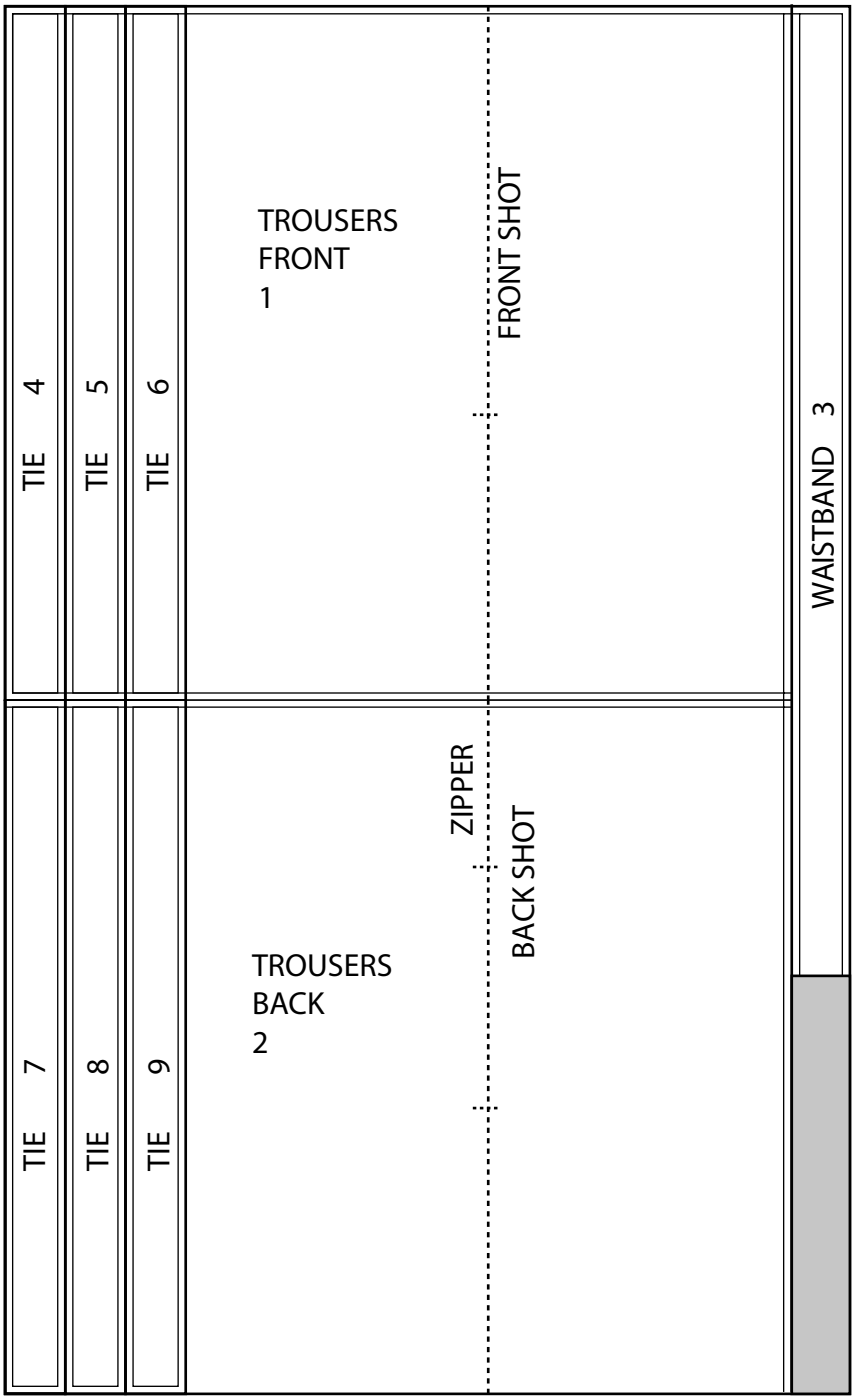


Zero Waste Method: Body grids

Design description: Volumetric trouser that offers infinite combinations to style, provided by the straps included in the waist-line and the bottom. The pattern was tested in knit and woven fabric of different weights to explore different silhouettes and styles.

ZERO WASTE GEOMETRIC TRANSFORMABLE TROUSERS

Pattern



ZERO WASTE MIDI RUCHED SKIRT

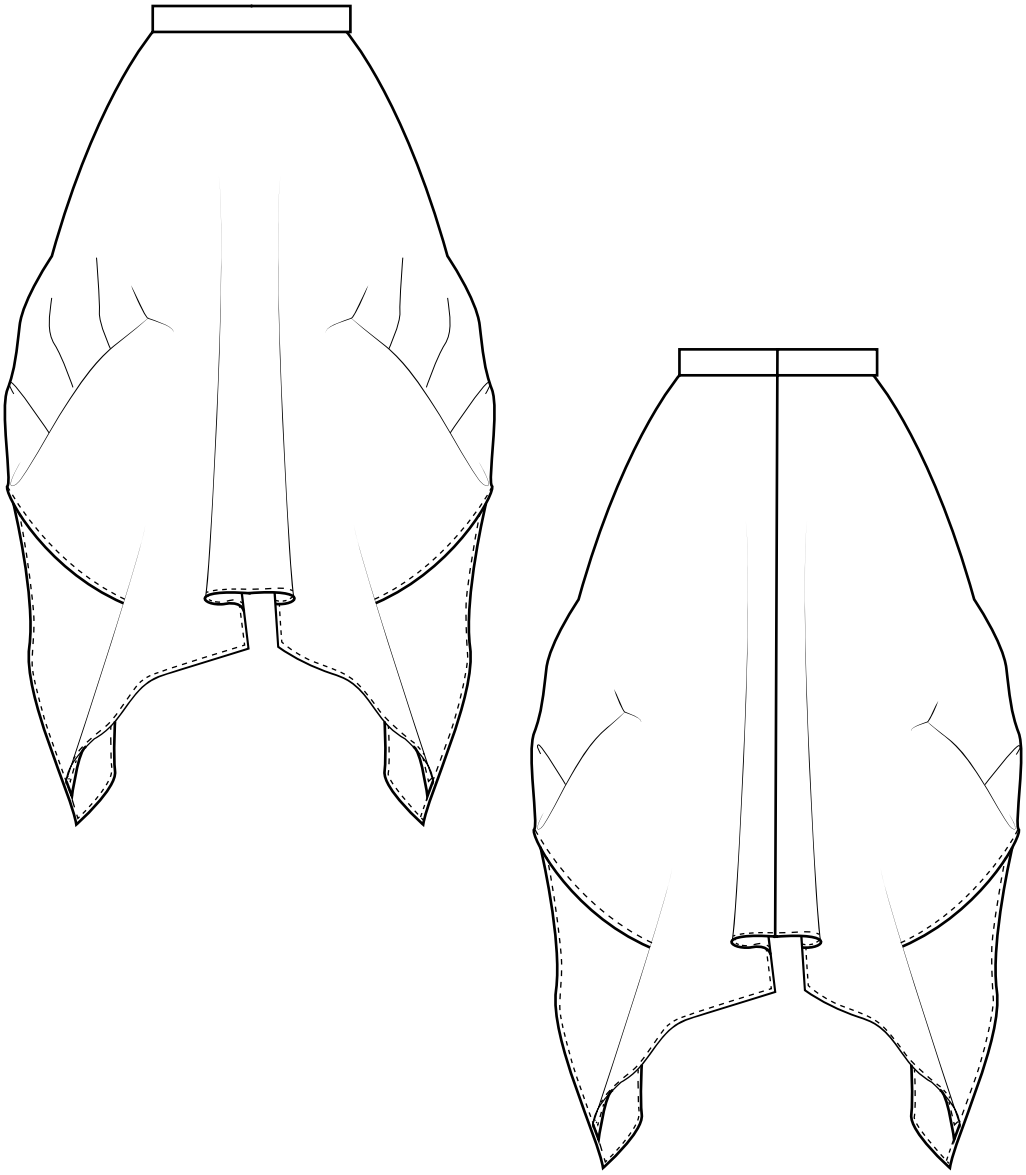
Design by Santiago Iglesias Alonso

ZERO WASTE MIDI RUCHED SKIRT

Design by Santiago Iglesias Alonso

ZERO WASTE MIDI RUCHED SKIRT

Technical stetch

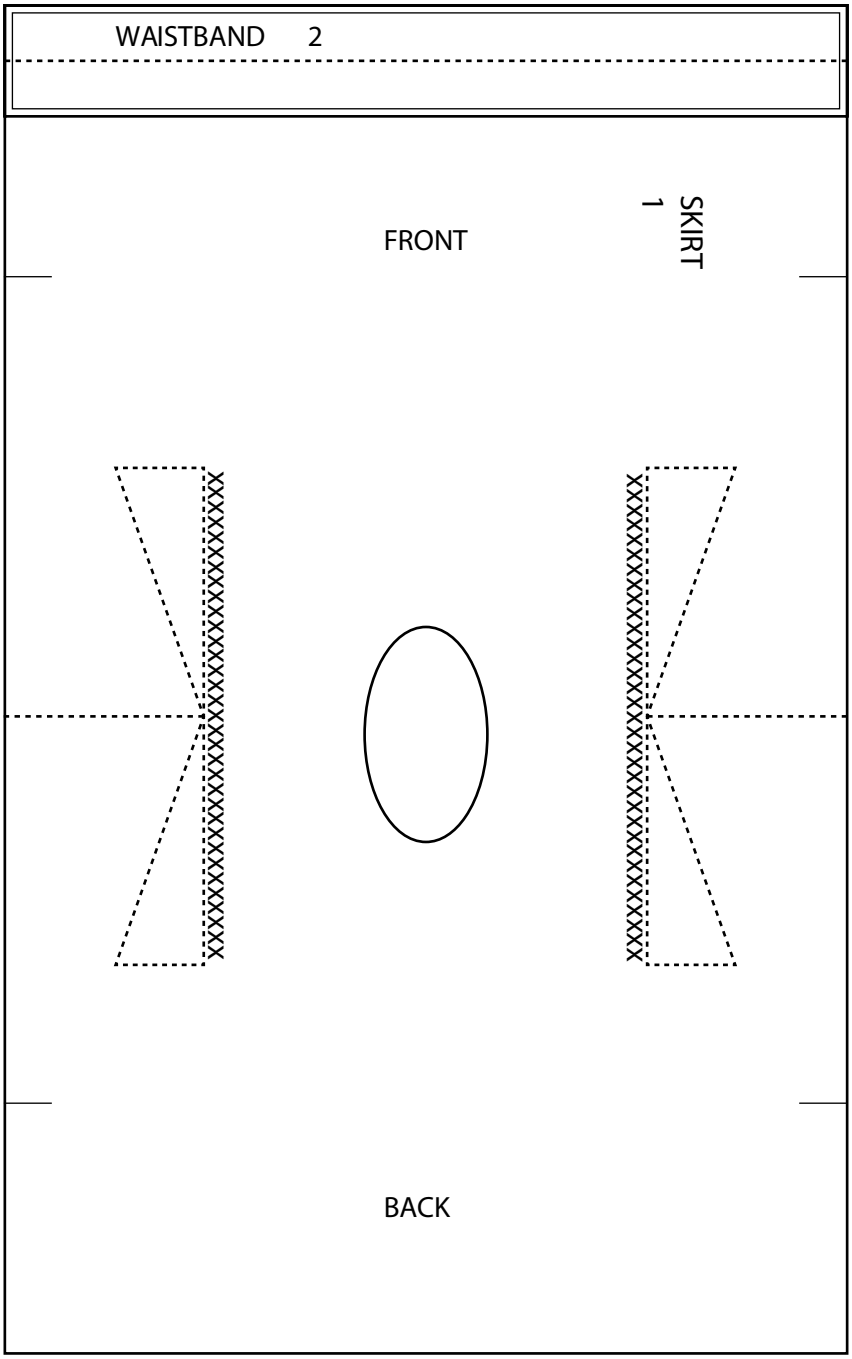


Zero Waste Method: Substraction

Design description: Midi-length volumetric skirt with ruffled details on the side. The pattern was tested in knit and woven fabric of different weights to explore different silhouettes and styles.

ZERO WASTE MIDI RUCHED SKIRT

Pattern



ZERO WASTE PLEATED TROUSERS

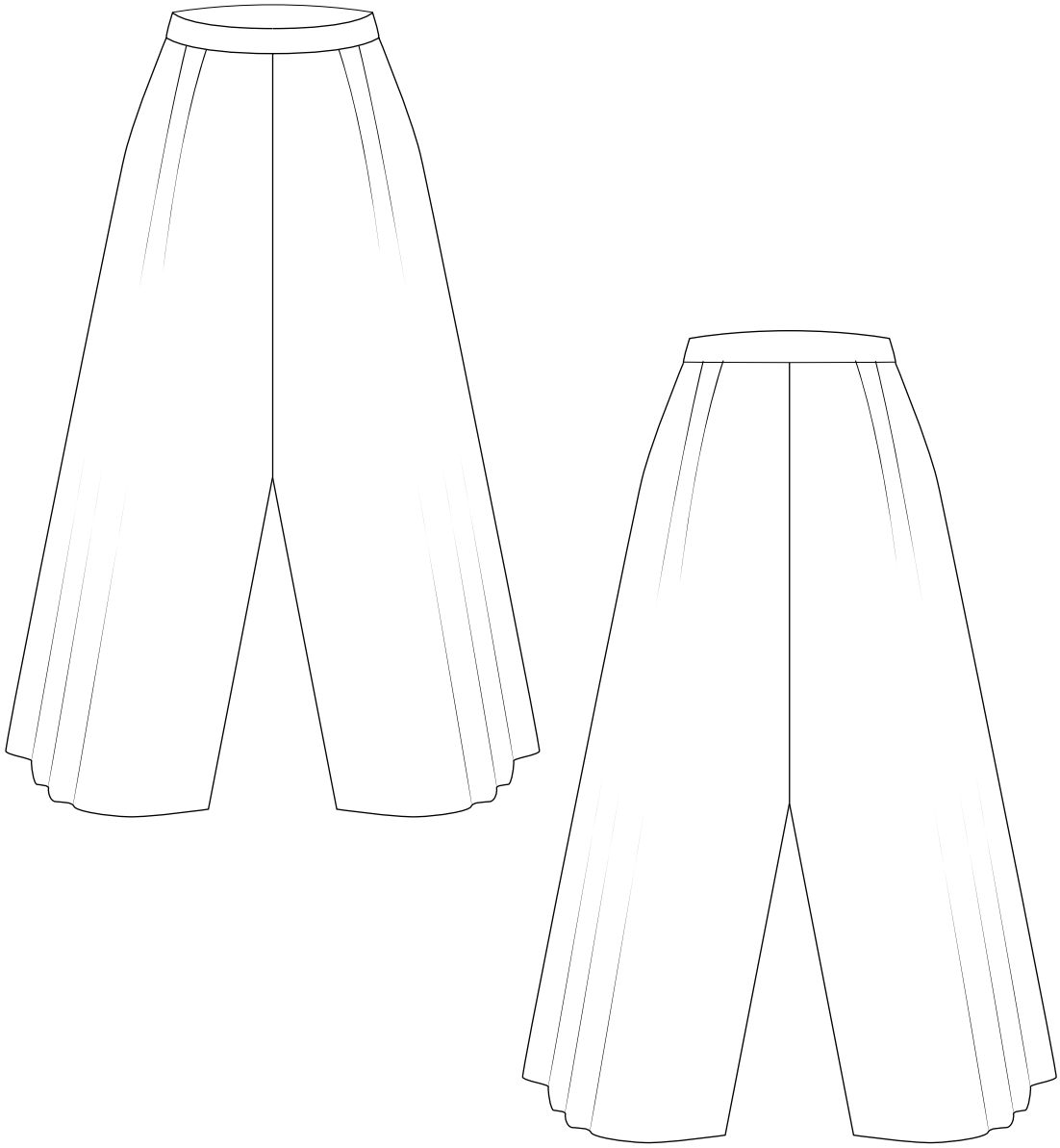
Design by Santiago Iglesias Alonso

ZERO WASTE PLEATED TROUSERS

Design by Santiago Iglesias Alonso

ZERO WASTE PLEATED TROUSERS

Technical stetch

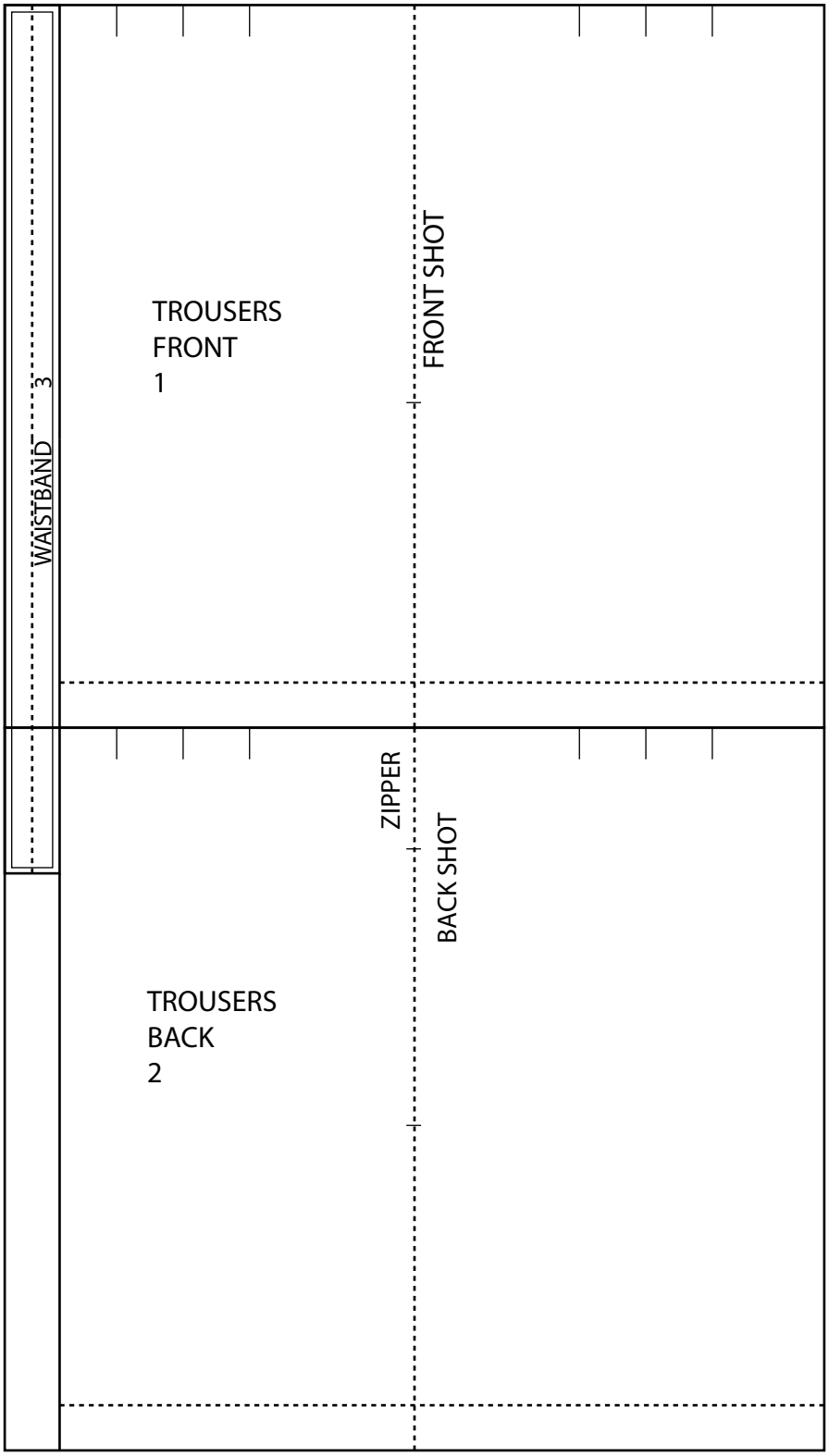


Zero Waste Method: Body grids

Design description: Wide leg, ankle-length volumetric palazzo trouser with side-pleats in place to adjust the fabric with to the bodily shape and create interesting volumes.

ZERO WASTE MIDI RUCHED SKIRT

Pattern



ZERO WASTE MIDI FLOUNCED DRESS

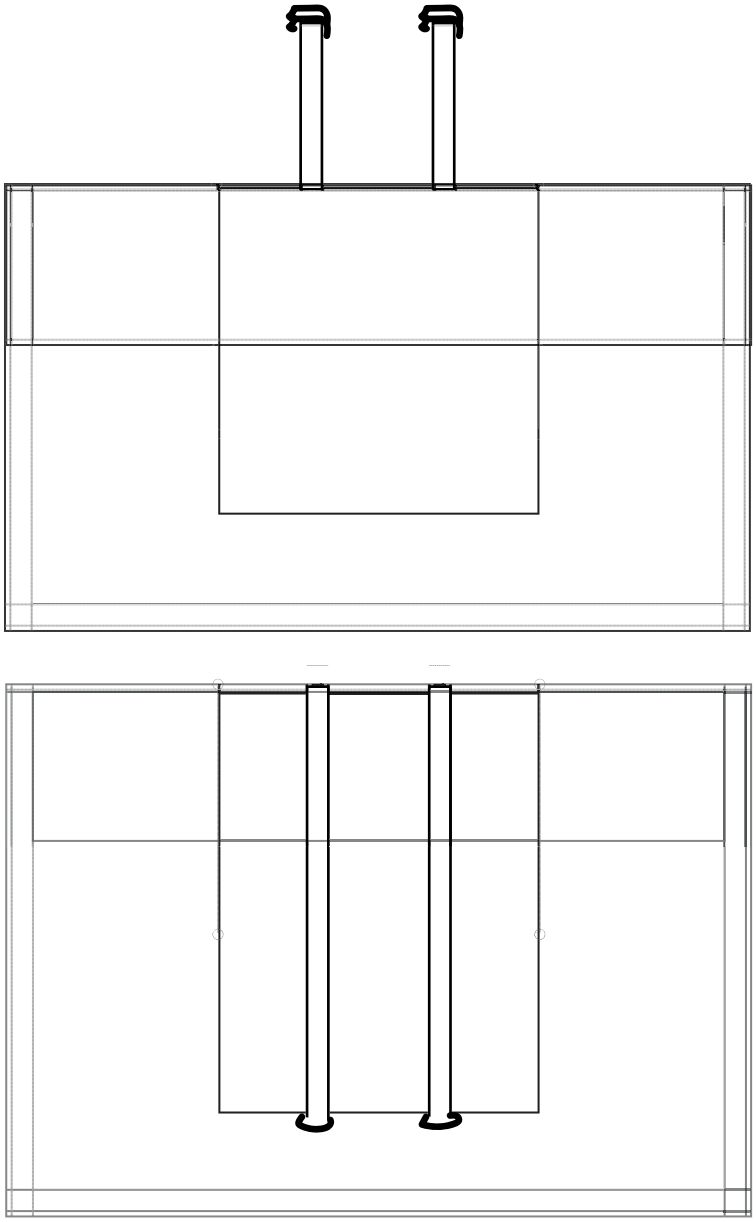
Design by Micaela Clubourg

ZERO WASTE MIDI TIERED DRESS

Design by Micaela Clubourg

ZERO WASTE MIDI TIERED DRESS

Technical stetch

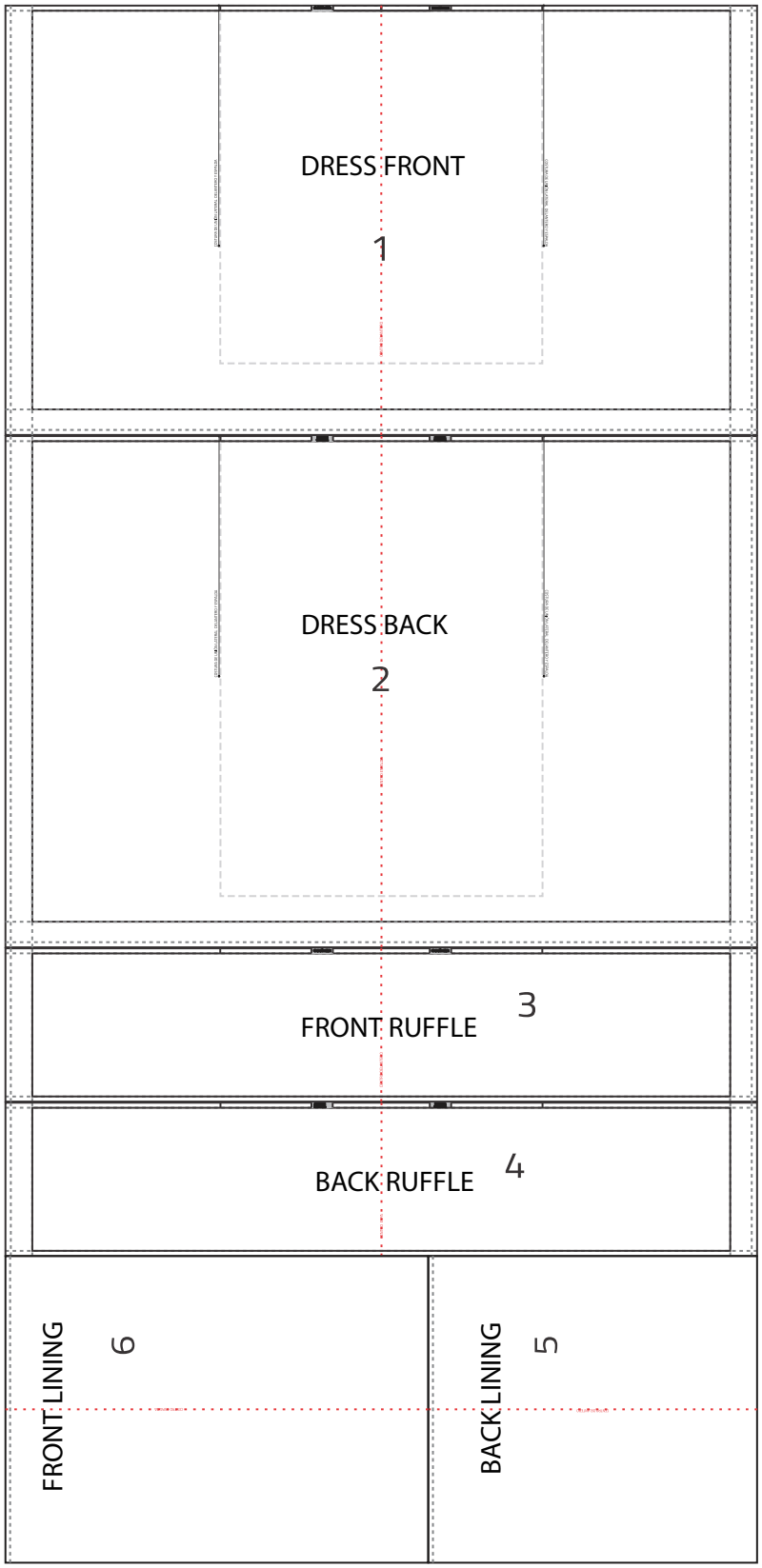


Zero Waste Method: Body grids

Design description: Midi-length volumetric flounced dress with adjustable oversized straps in combination material.

ZERO WASTE MIDI TIERED DRESS

Pattern



ZERO WASTE TAILORED JUMPSUIT

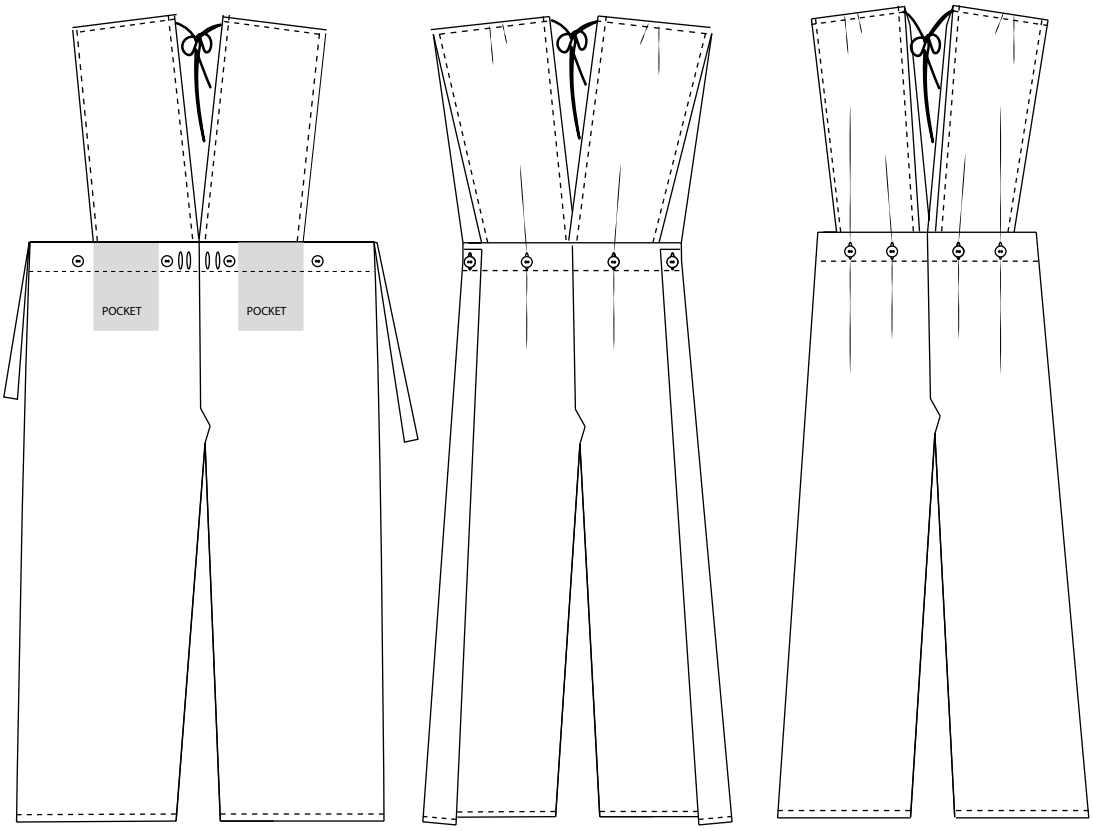
Design by Micaela Clubourg

ZERO WASTE TAILORED JUMPSUIT

Design by Micaela Clubourg

ZERO WASTE TAILORED JUMPSUIT

Technical stetch

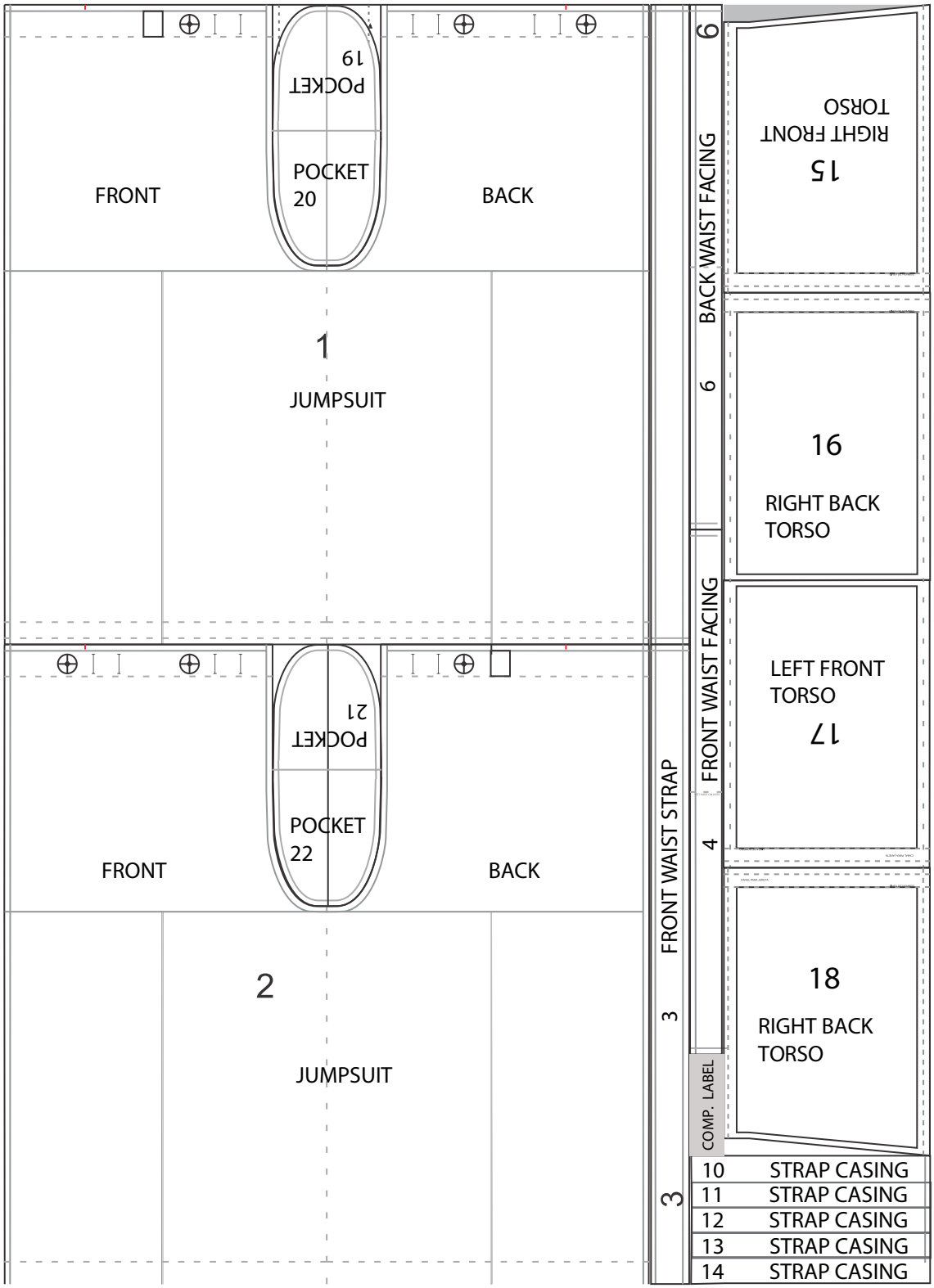


Zero Waste Method: Body grids

Design description: Sleeveless, v-neck jumpsuit with wide palazzo-style leg, adjustable waist, open back and hidden front pockets.

ZERO WASTE TAILORED JUMPSUIT

Pattern



Analysis of results and conclusions

Through the experimentation carried out by contest winners, Gisela Fortuna and Juan Carlos Mesa, Creamodite's collection for Fashion Alive resulted in a versatile and rich collection of Zero Waste Fashion designs, which convey a sustainable and inclusive message by offering genderless and Zero Waste designs.

One of the biggest contributors to its success is the open inter-generational dialogue between experienced designers and instructors with a new generation of designers with fresh voices and ideas.

Moreover, the versatility and adaptability of the patterns was succesfully tested by introducing knit and woven textiles of different weights and structures.

The most notorious example of this strategie's success is evidenced in the transformable trousers and skirt, where a structured woven fabric conveys a more formal and elegant style, whereas its knit fabric counterpart embodies luxurious athleisure or leisurewear.

After the garments are showed in the Madrid Performance Runway show, feedback from the public will be collected to further analyse the success of CREAMODITE's Zero Waste Fashion collection and developments. These results will be used to further develop the sustainable designs created and open the door for future projects and collaborations.

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