



wemake.cc  
#makerspace  
#fablab

# Opensourcing Fashion System

Zoe Romano

tw @zoescop - ig @zoescop\_



FABRICADEMY

# CONTEXT



# FASHION AND INNOVATION



*"Fashion marketing is governed by greed and not by vision. There's no innovation any more because of that."*

*"Everything we do is from the 20th century"*

*"We still educate our young people to become catwalk designers; unique individuals, whereas this society is now about exchange and the new economy and working together in teams and groups, which happens in every other discipline, yet not in fashion"*

Li Edlekoort – dutch trend forecaster

# BOOKS

## THE FASHION CONDITION

The Fashion Praxis Collective



The Fashion Praxis Collective is a temporary alliance of fashion practitioners, researchers and activists, joining forces for a “book sprint”.

**Six questions** followed them through the book sprint.

Ask yourself

1. Why is fashion powerful today?
2. Who makes fashion?
3. Where does fashion exist?
4. What makes fashion political?
5. When did you personally experience the power of fashion?
6. What can fashion do?

# FASHION CONGLOMERATES



# FASHION CONGLOMERATES



EDWIN  
DKNY  
DON KARAN NEW YORK

EMILIO PUCCI  
PINK  
FREDERICK FURLA  
FRANCO ARBUSTI LONDON

FENDI  
MARC JACOBS

GIVENCHY

KENZO

Berluti  
LOEWE

CÉLINE  
LOUIS VUITTON

Dior

sergio rossi

STEEL/MCCARTHEY

CHRISTOPHER RANE

Brioni

BALENCIAGA  
ALEXANDER  
MQUEEN

SAINT LAURENT  
PARIS

BOTTEGA VENETA

GUCCI

NET-A-PORTER.COM

LANCEL

dunhill  
LONDON

SHANGHAI TANG  
EST. 1908

ALAÏA  
PARIS

Chloé

CAROLINA HERRERA  
NEW YORK

paco rabanne

Jean Paul  
GAULTIER

NINA RICCI  
PARIS

ZAGLIANI

JIMMY CHOO

BELSTAFF  
ENGLAND

BALLY  
SWITZERLAND

DIESEL

VIKTOR&ROLF

MARNI

Maison Martin Margiela  
PARIS

LVMH  
MOÛT HENNESSY & LOUIS VUITTON

KERING

RICHEMONT

PUIG

LAD CLUX

OTB

Just *six* companies own over  
*forty* fashion brands.

# FAST FASHION

**INDITEX**

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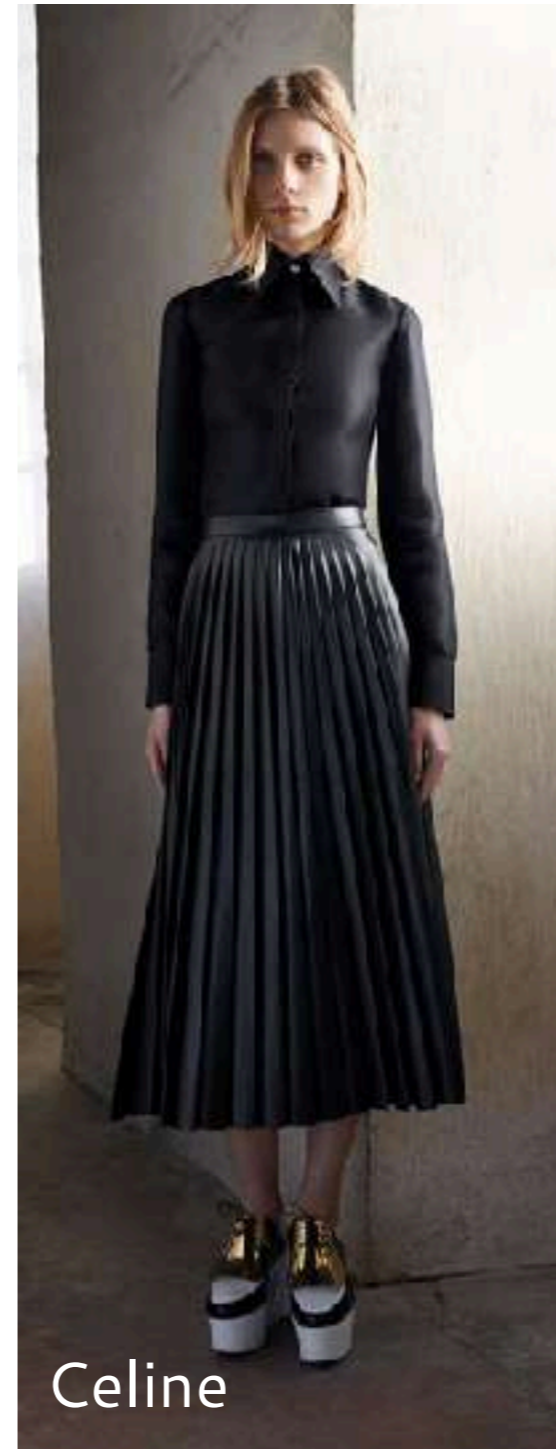
ZARA ZARA HOME

Bershka Oysho *Stradivarius*

Pull and Bear Massimo Dutti

Kiddy's Class

UTERQÛE



Celine



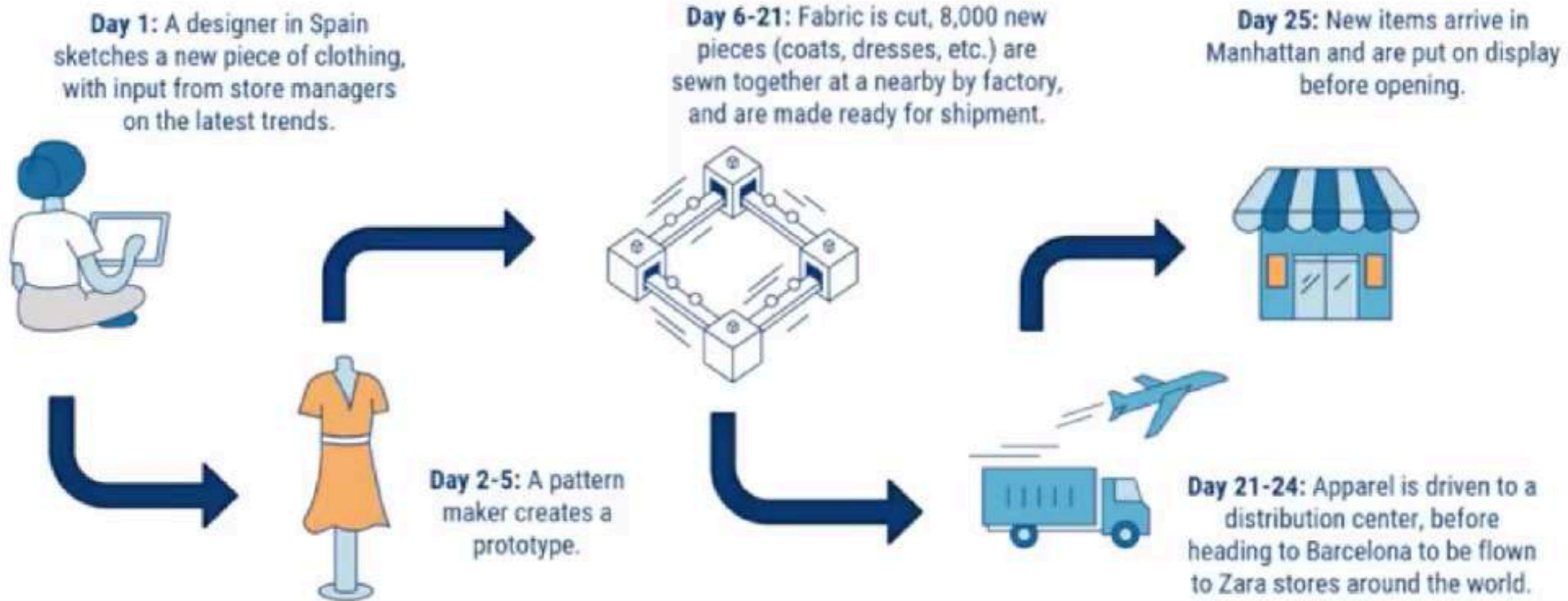
Zara



# FAST FASHION

## Fast fashion's speedy supply chain quickly caters to new trends

Fast fashion retailer Zara, owned by Spain-based Inditex, can get a piece of apparel from a design workshop in Spain to a display rack in a Manhattan store in **25 days**.

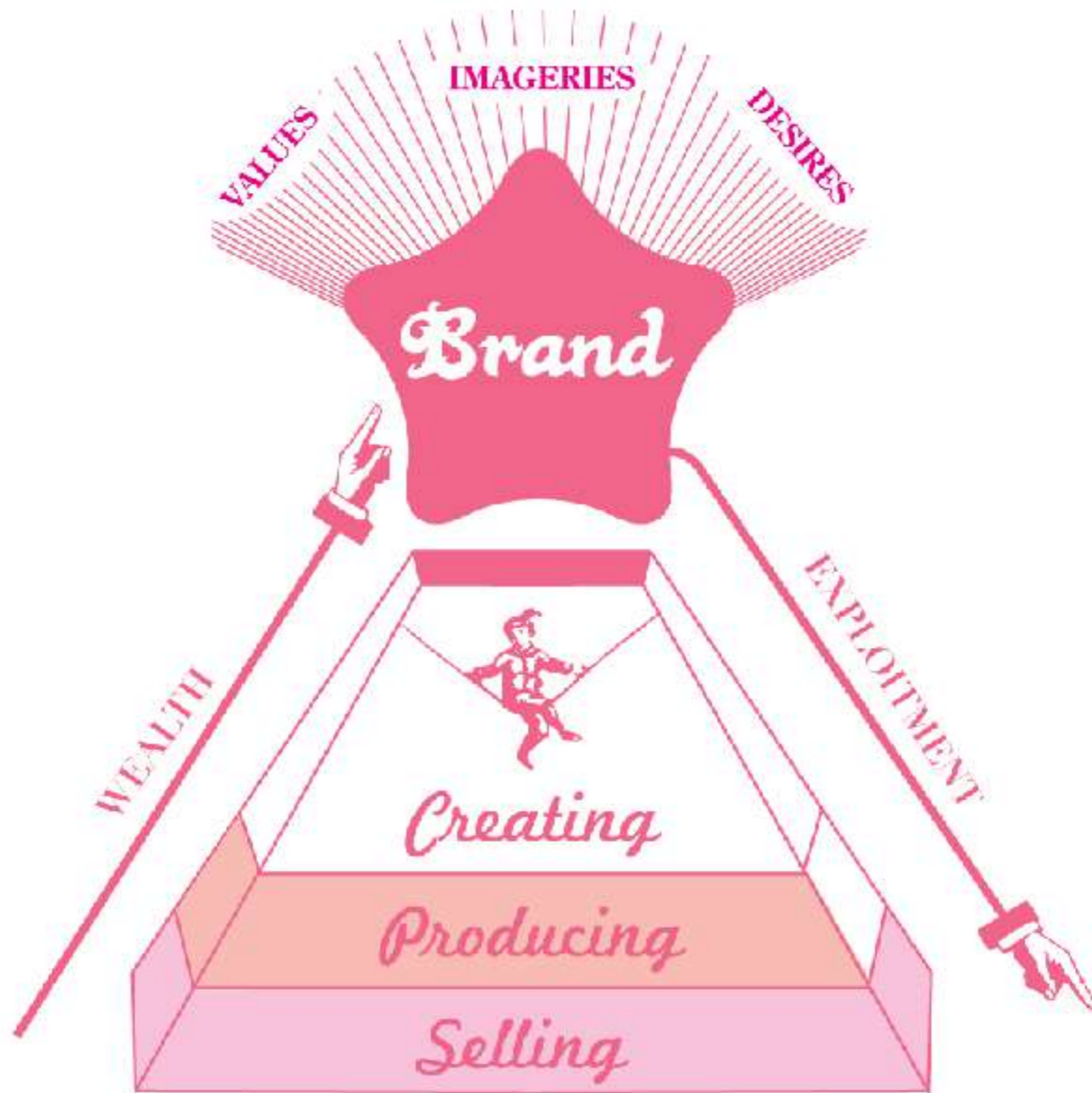


# FAST FASHION

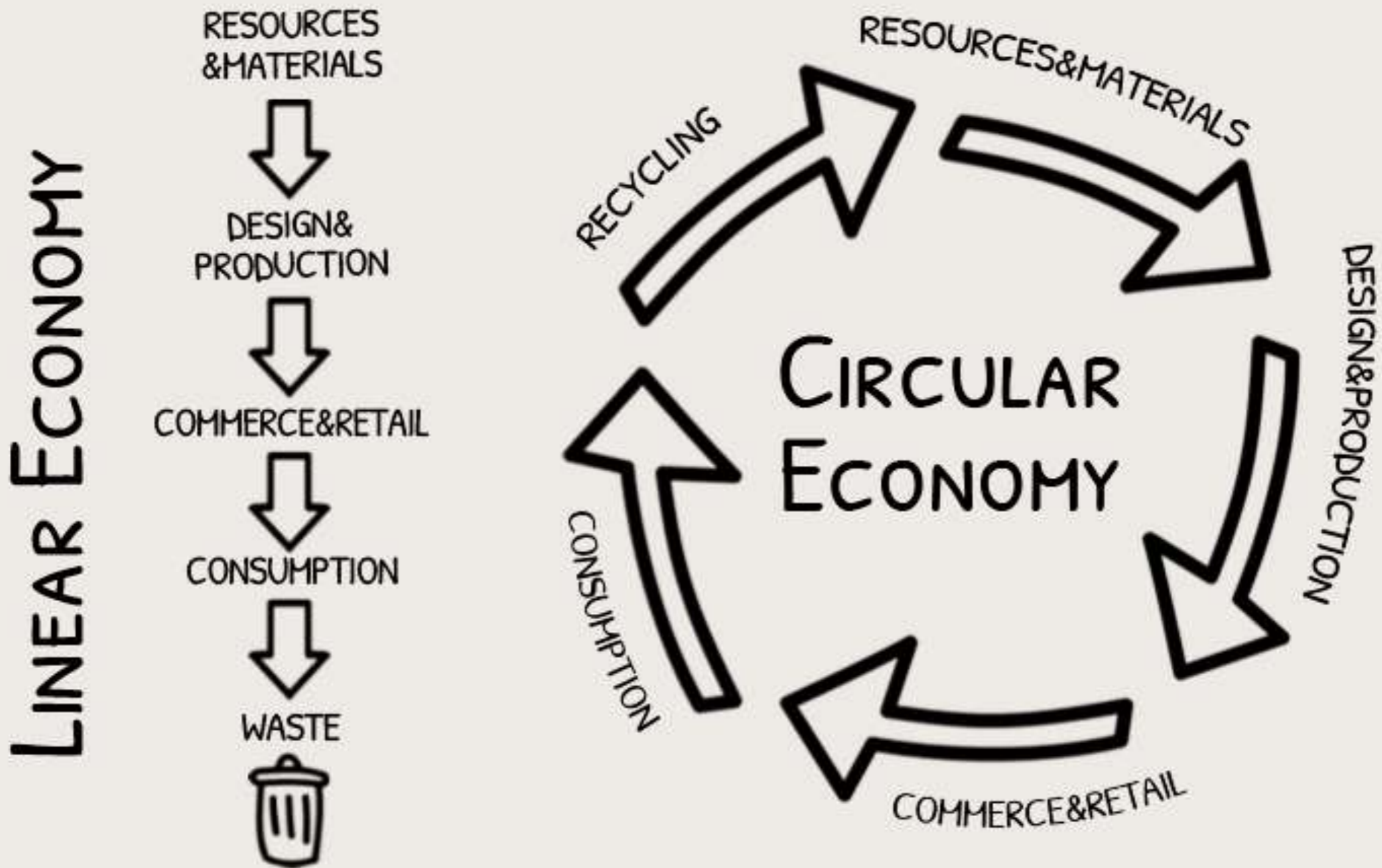
## H&M Group Worldwide

Number of countries in which brands of the H&M Group were present in 2016





# CIRCULAR ECONOMY



# CIRCULAR ECONOMY?



**60% OF OUR CLOTHING  
CONTAINS POLYESTER.  
MADE FROM CRUDE OIL,  
IT EMITS 3 TIMES MORE  
CO<sup>2</sup> THAN COTTON.**

*Slow down Fast Fashion!*

# GREENPEACE RESEARCH

“Mechanical recycling of fibers such as cotton and wool, which involves chopping up the fibers, degrades the quality of the material, meaning only a limited amount can be reused in clothing. (The rest is used in things such as insulation.)

Startups such as Worn Again are working on chemical recycling methods, but no method is in wide use yet.”

# GREENPEACE RESEARCH

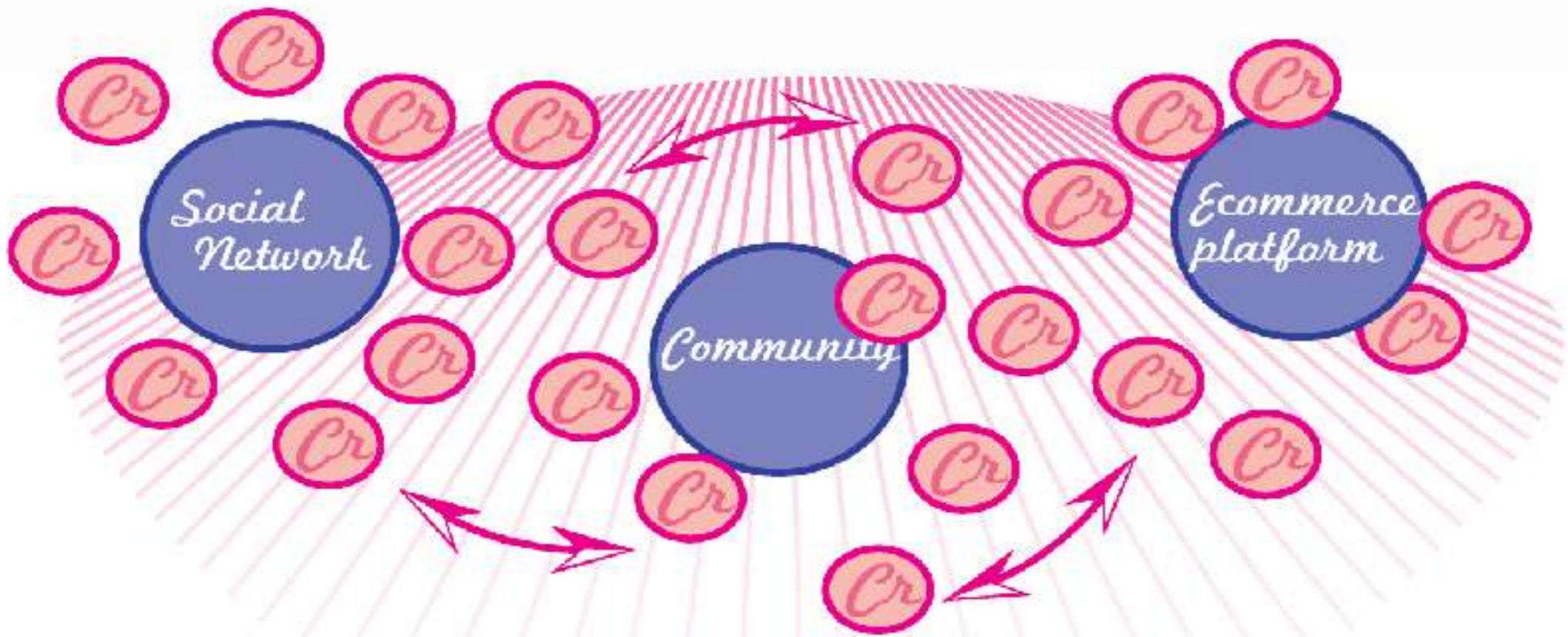
“Fashion brands need to urgently re-think the throwaway business model and produce clothing that’s durable, repairable and fit for re-use,”

# FROM DIY TO DO IT TOGETHER





Do it yourself



Cr = Craftivist

# WHAT IS CHANGING

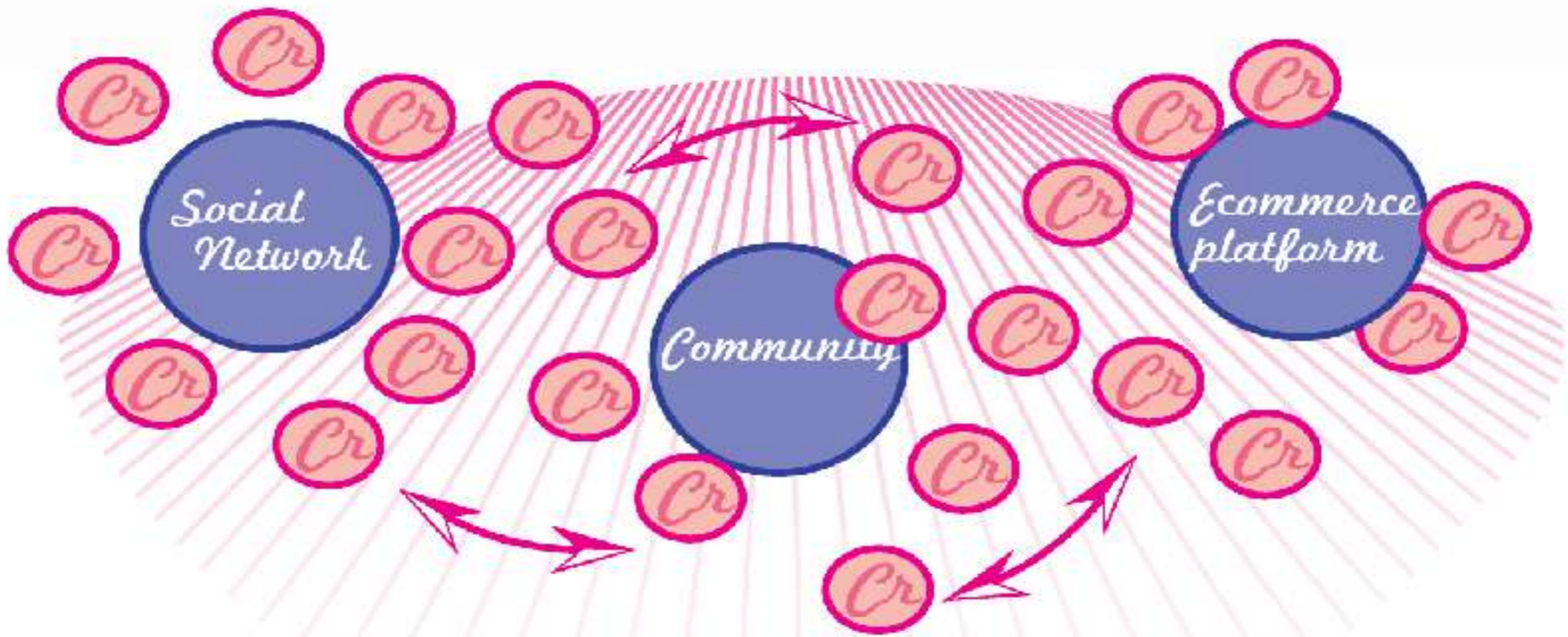
**EASIER THAN EVER  
DATA>OBJECTS>DATA**

- Modularity
- Flexibility
- Open codes

**OFTEN THAN EVER  
BOTTOM UP INNOVATION**

- Interdisciplinarity
- Horizontality
- Self-organization

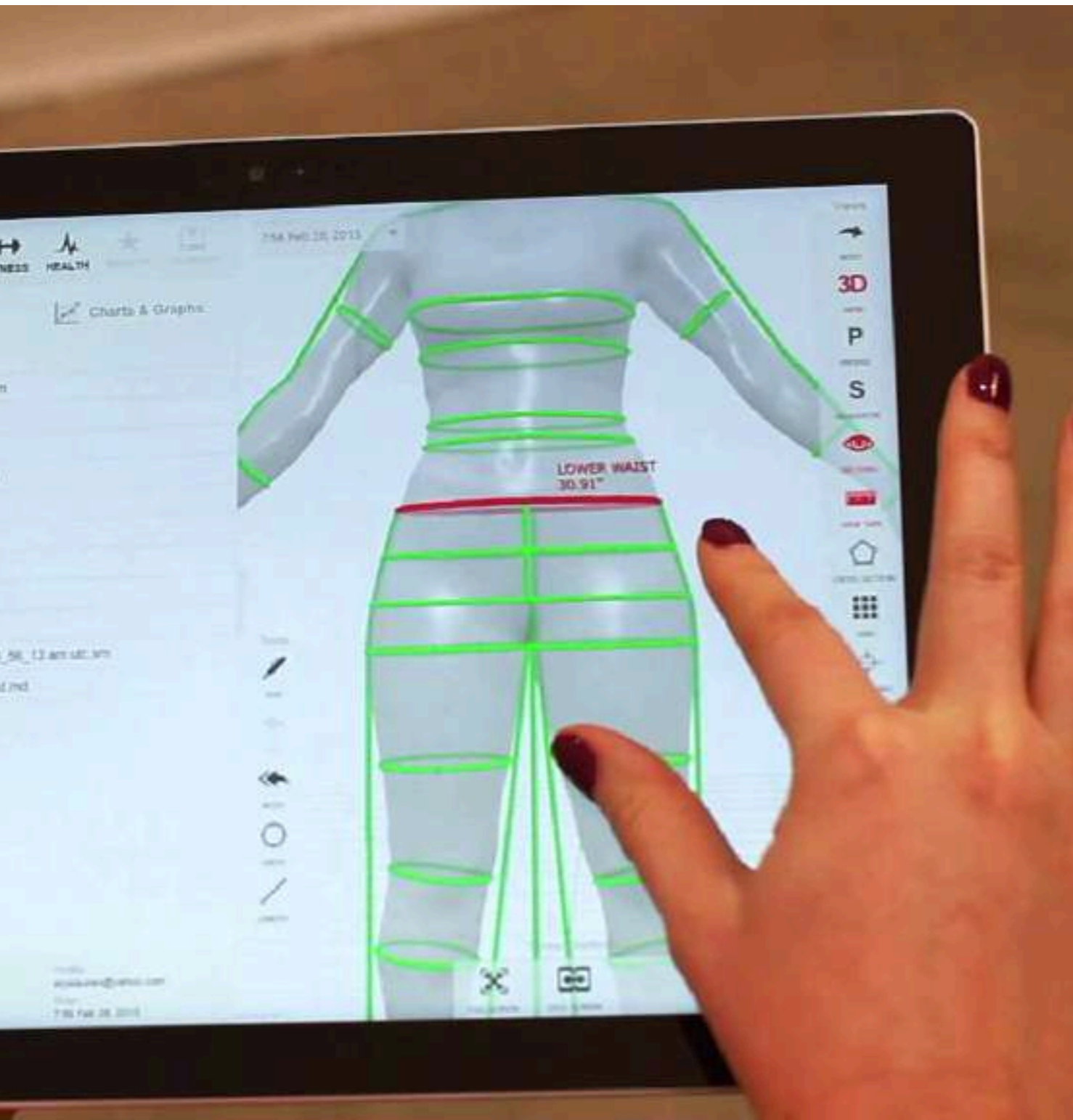
Do it yourself



Cr = Craftivist

Do it together

# CHANGE IS IN THE AIR...



modular - distributed - custom

DATA>OBJECTS>DATA

**... AND CAN BE IN YOUR HANDS**



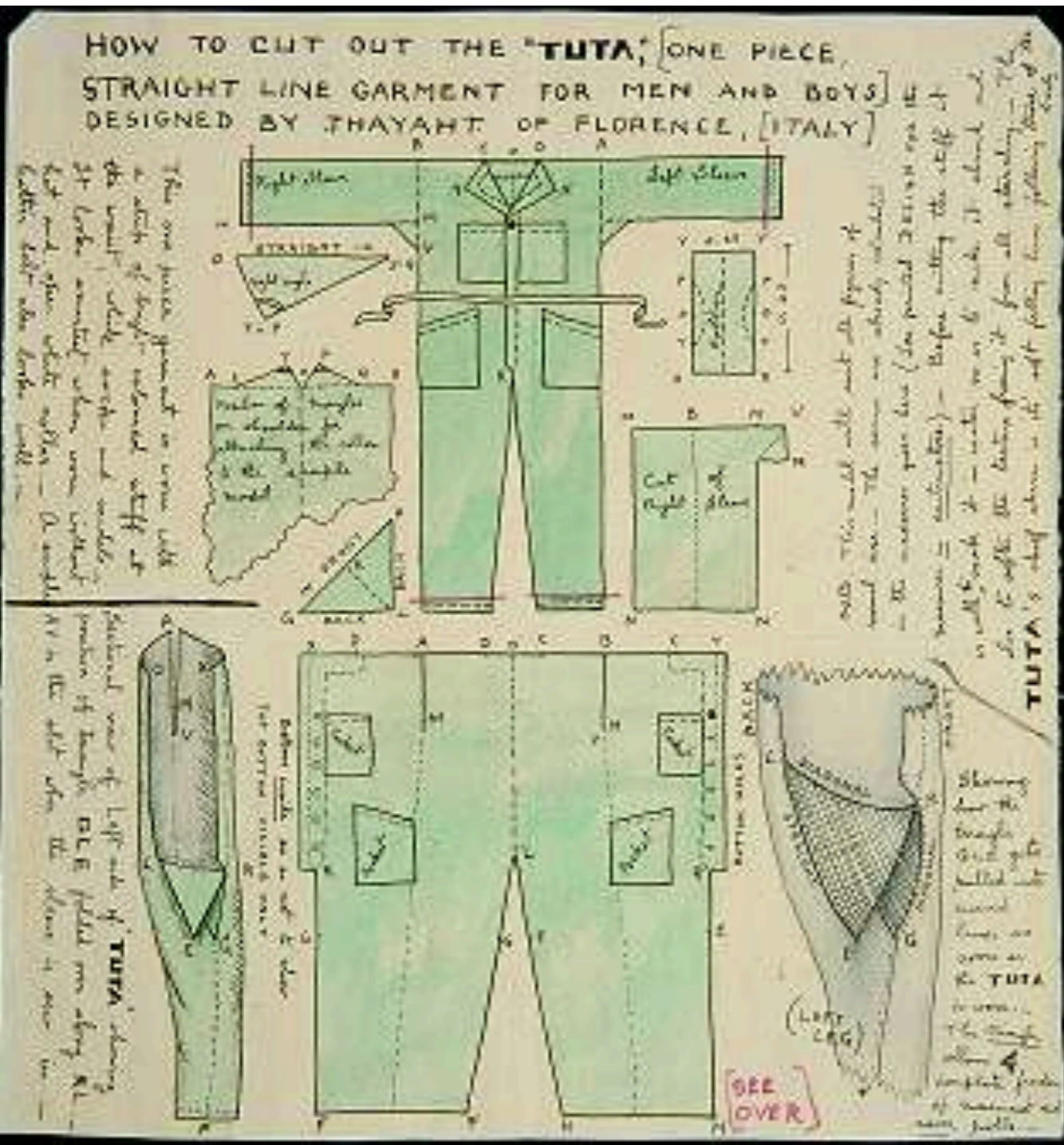
**THE  
FIRST**  
FASHION  
COLLECTION  
3D-PRINTED  
AT HOME

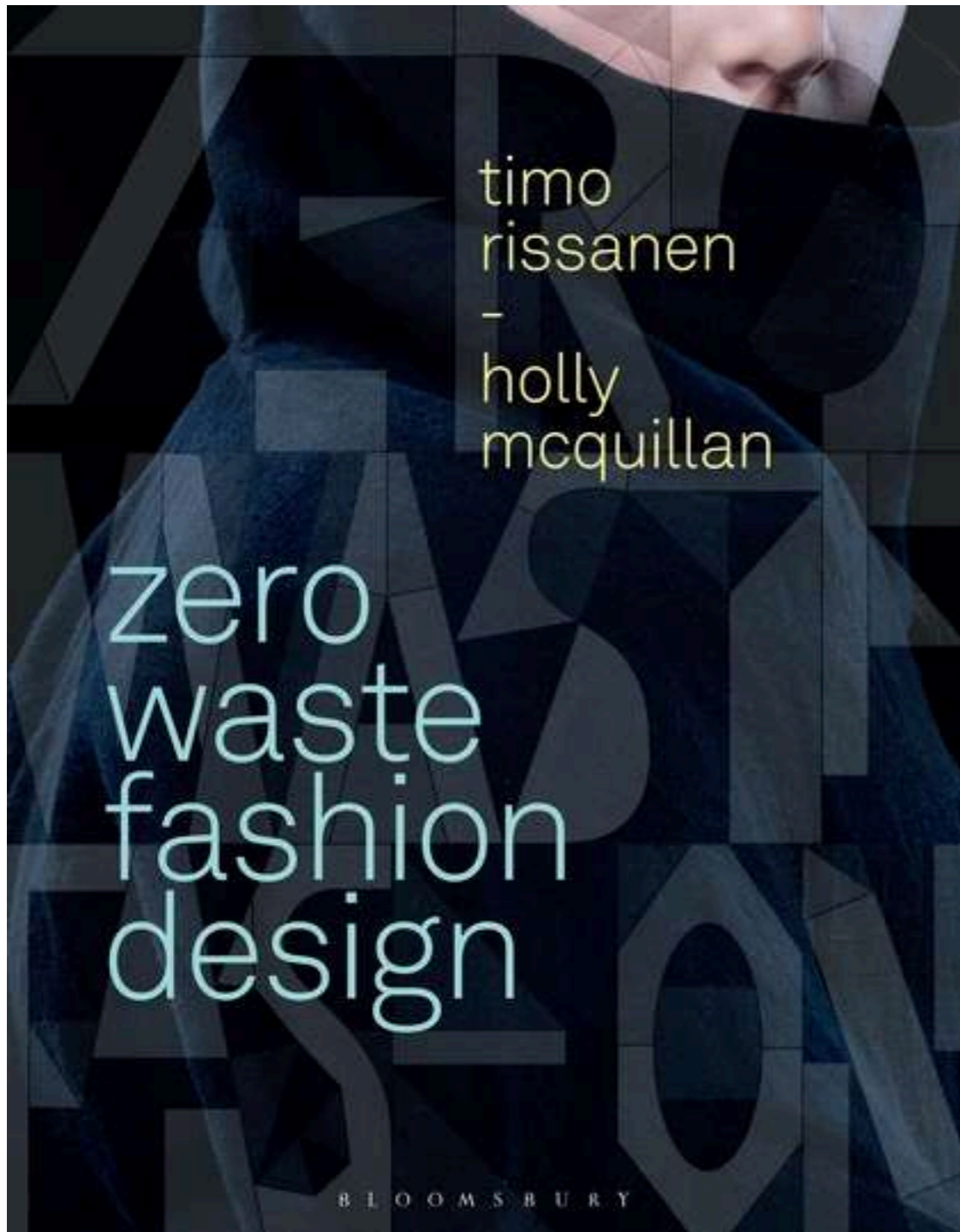
Danit Peleg

interdisciplinar - horizontal - self-organised

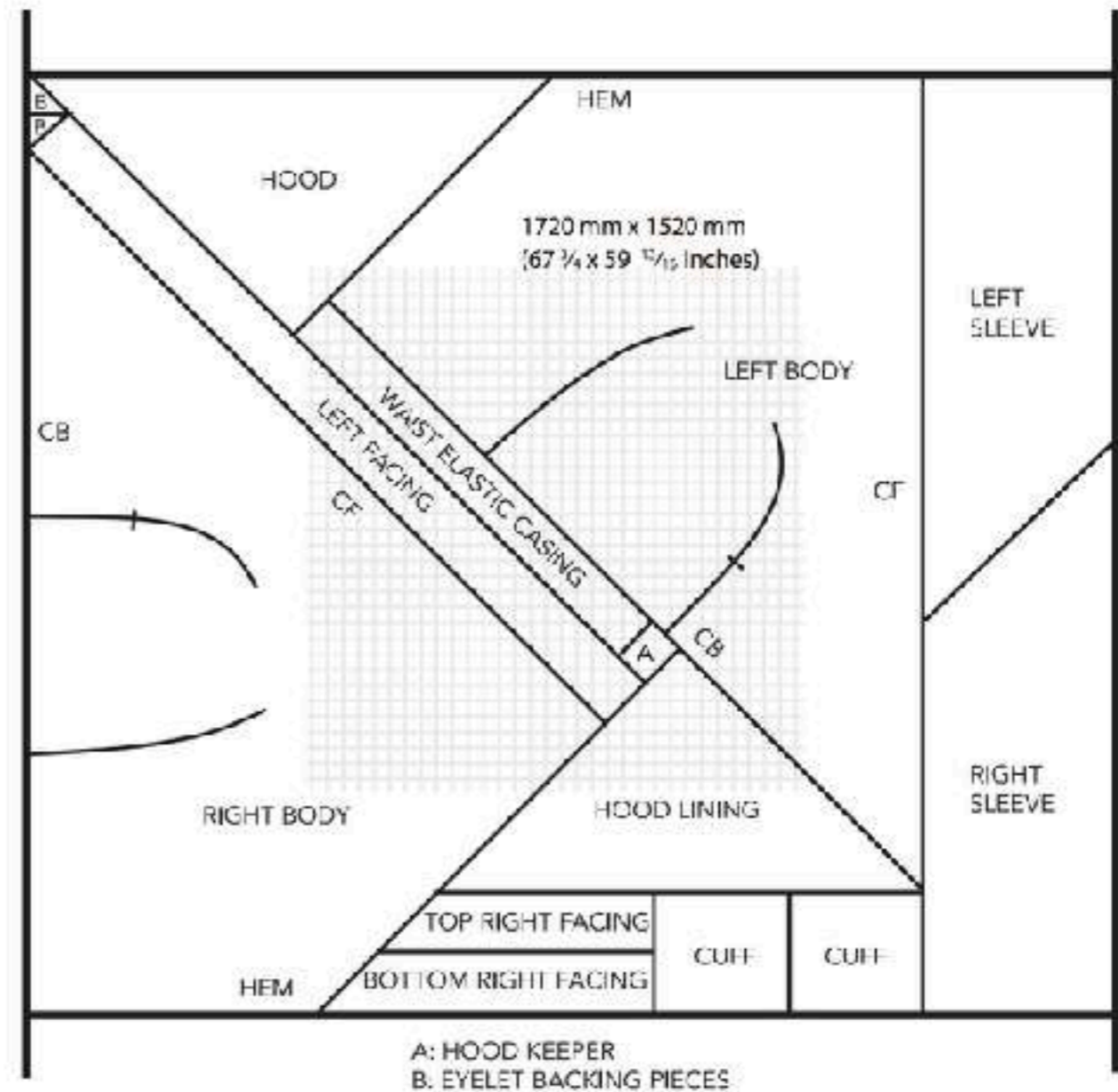
**BOTTOM UP INNOVATION**

# ZERO WASTE



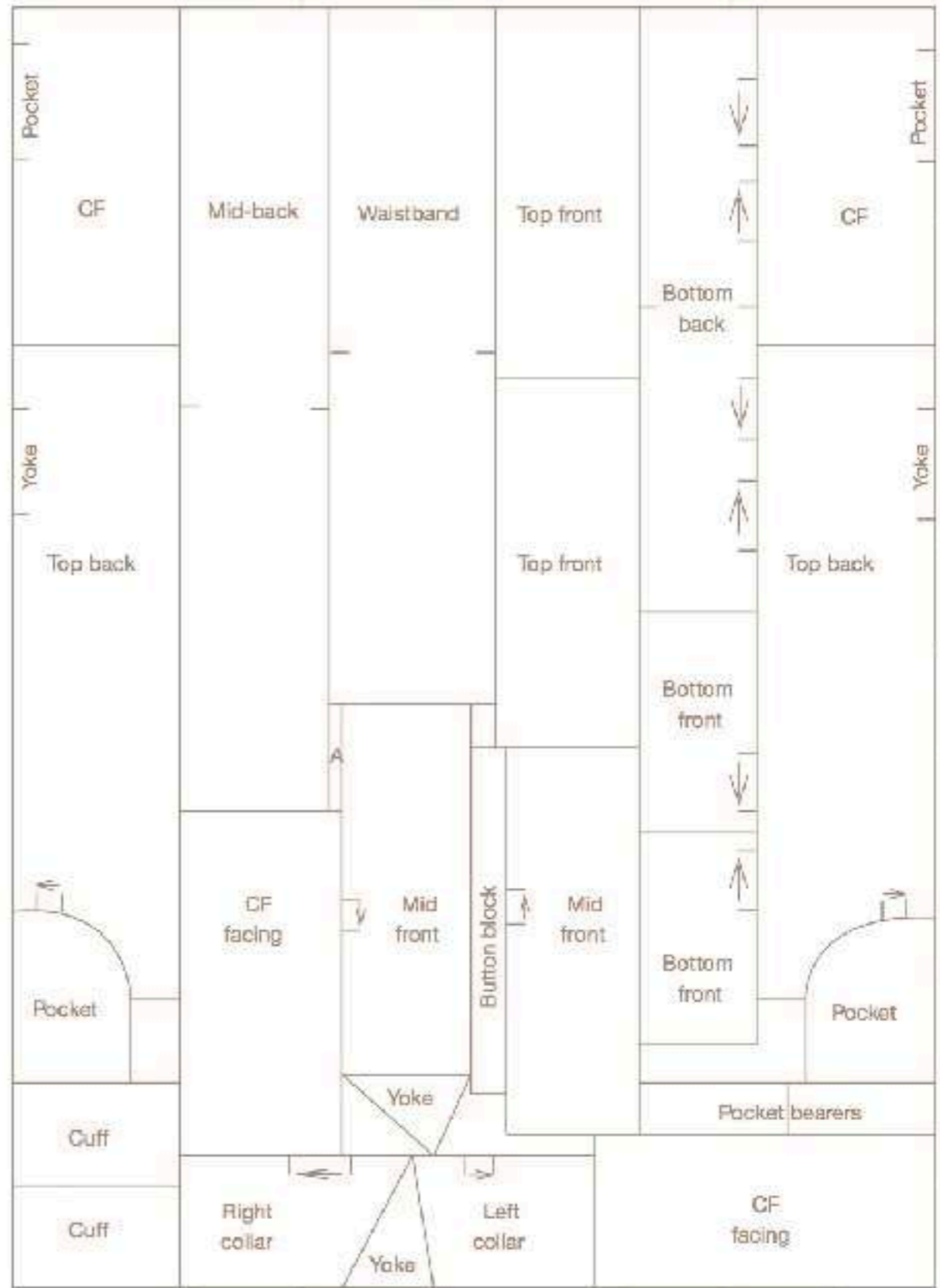
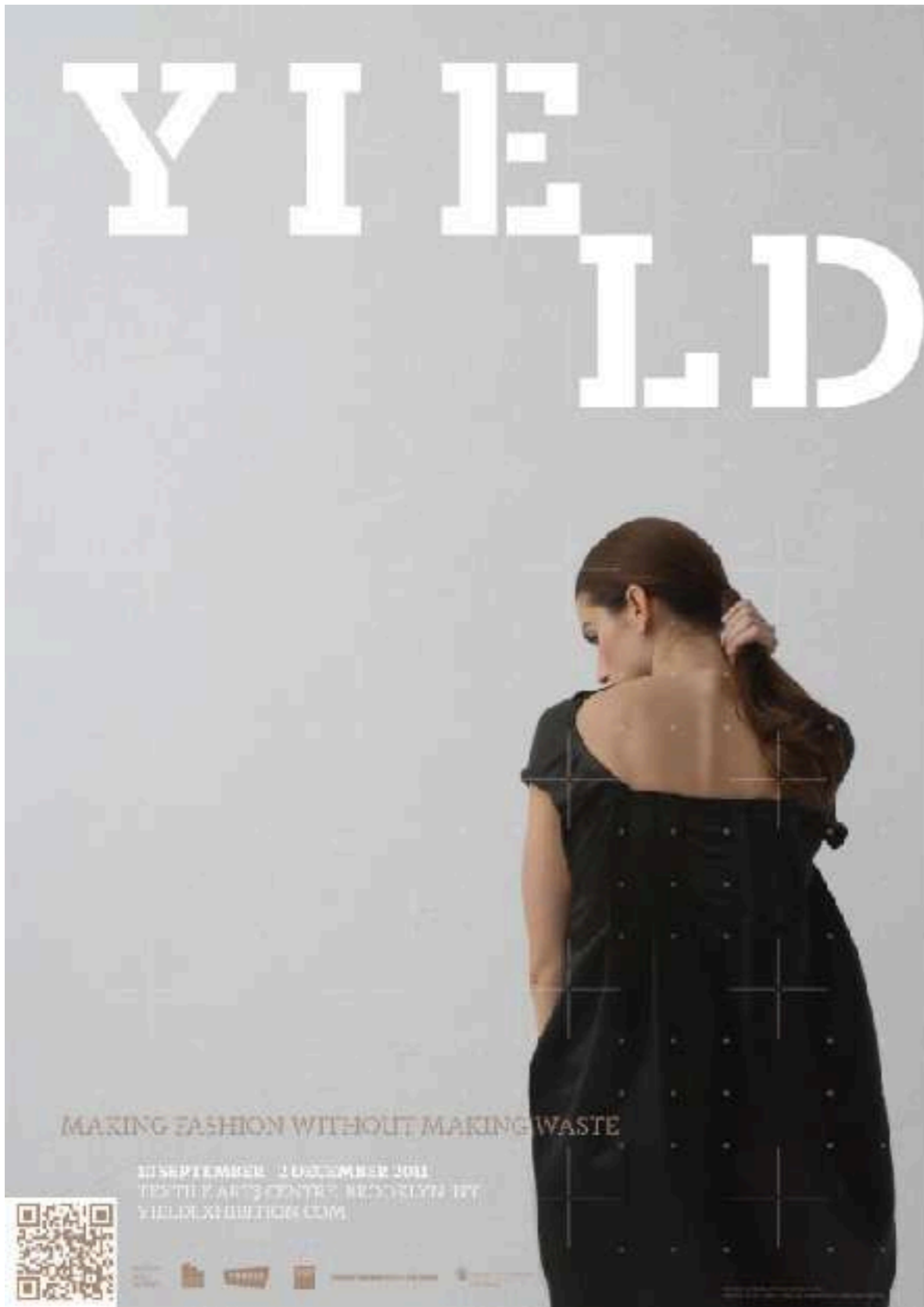


The book offers flexible strategies and easy-to-master zero waste techniques to help you develop your own patterns.



<https://www.bloomsbury.com/uk/zero-waste-fashion-design-9781472581983/>

<https://opus.lib.uts.edu.au/handle/10453/23384>



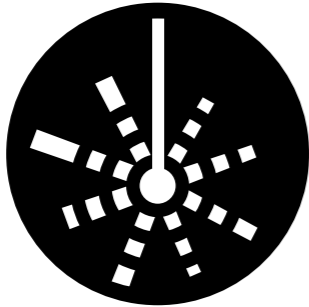




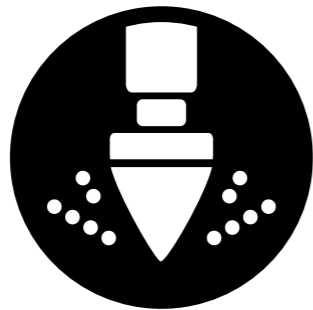
**FABLABS AND MAKERSPACES  
A SPACE TO LEARN AND CREATE TOGETHER**

# NEW FASHION TOOLS

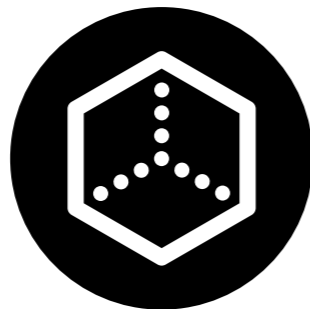
LASERCUT



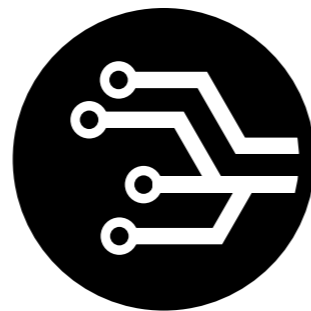
CNC



3D PRINTING



ELECTRONIC



(hacked)

- Sewing machines
- Knitting machines
- Embroidery machines
- Soft Circuits
- Bio Composites
- New materials

# TYPES OF OPENNESS

Open source software (OSS) is computer software with its **source code made available** with a **license** in which the copyright holder provides the rights to study, change, and distribute the software to anyone and for any purpose

## Open source hardware

(OSHW) is hardware whose **design is made publicly** available so that anyone can study, modify, distribute, make, and sell the design or hardware based on that design.

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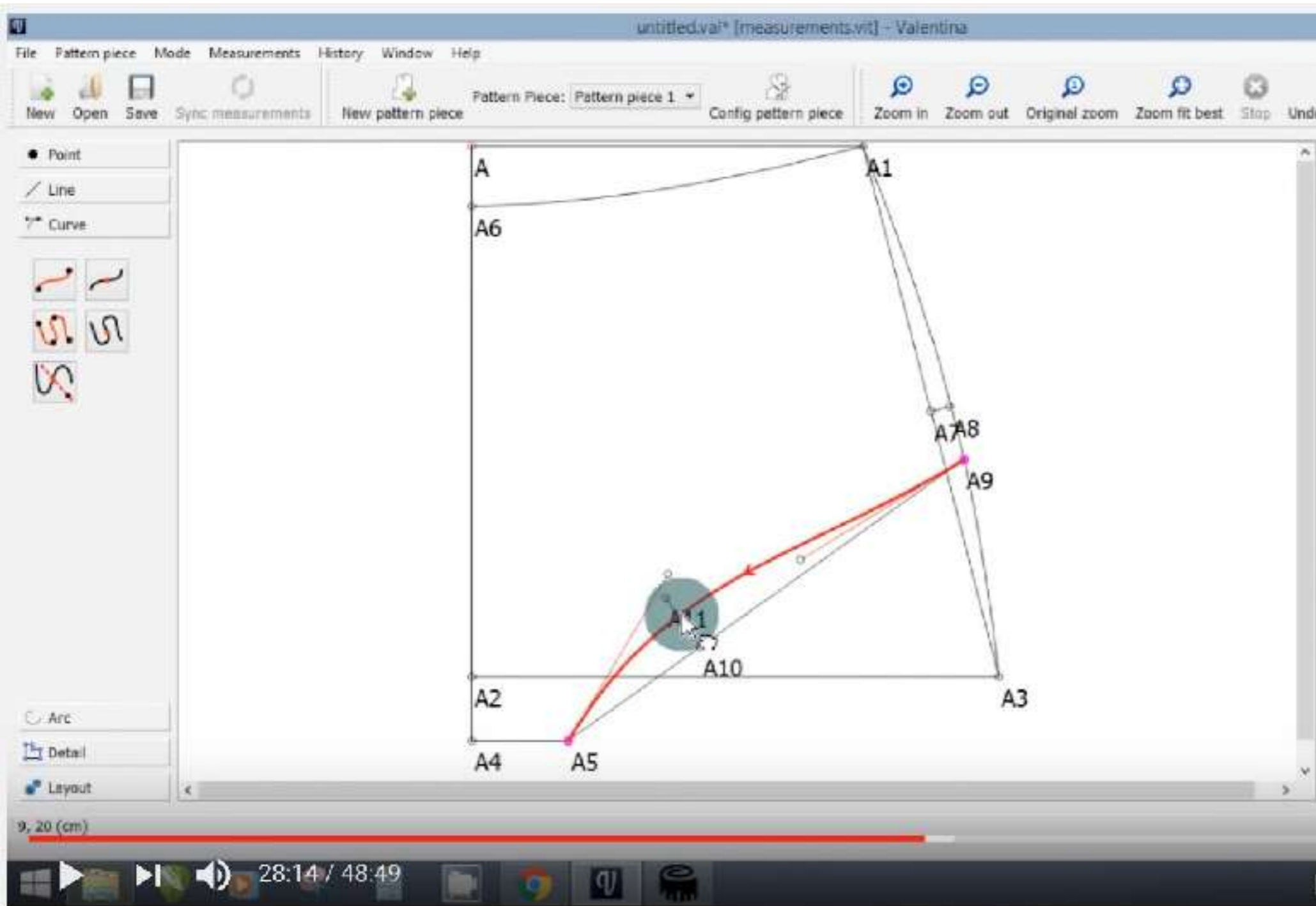
Open design is the development of physical products, machines and systems through use of publicly shared design information.

Open data is data that distributed in a **convenient and modifiable form** which can be freely used, re-used and redistributed by anyone – subject only, at most, to the requirement to attribute and sharealike.

# **OPEN SOURCE SOFTWARES**

# VALENTINA/Seamly3D

Open source pattern making software



Lack of affordable softwares for pattern making tasks

- Seam allowance
- Truing a dart
- Easy multi-sizing

# Ink Stitch

An open source machine embroidery design platform based on inkscape



Features

Documentation

Tutorials

Get Help

Get Involved



## FEATURES

## DOCUMENTATION

Installation

Workflow

Get Help

## TUTORIALS

Artwork Galleries

Sample Files

Templates

Tutorials

## GET INVOLVED

## NEWS

## SELECT LANGUAGE

Deutsch

## Ink/Stitch

An open source machine embroidery design platform based on Inkscape.



[InkStitch.org](http://InkStitch.org)

# OKNITME

Creating punch card from 2-color images – by Serpica Naro

# oknitme

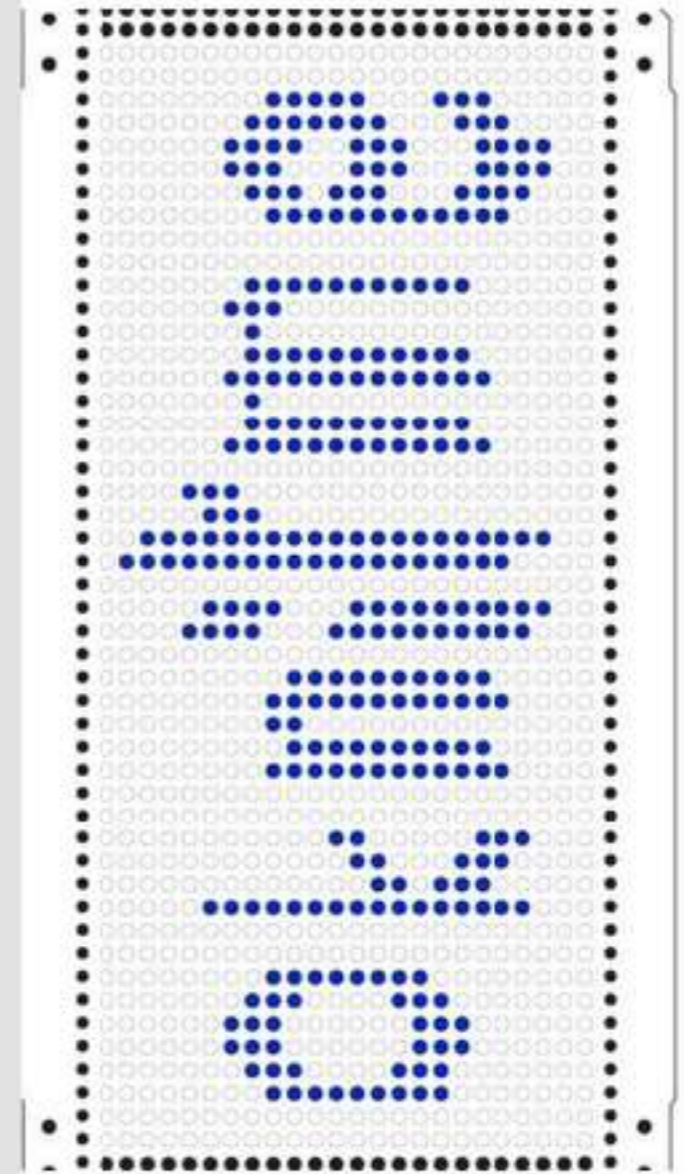
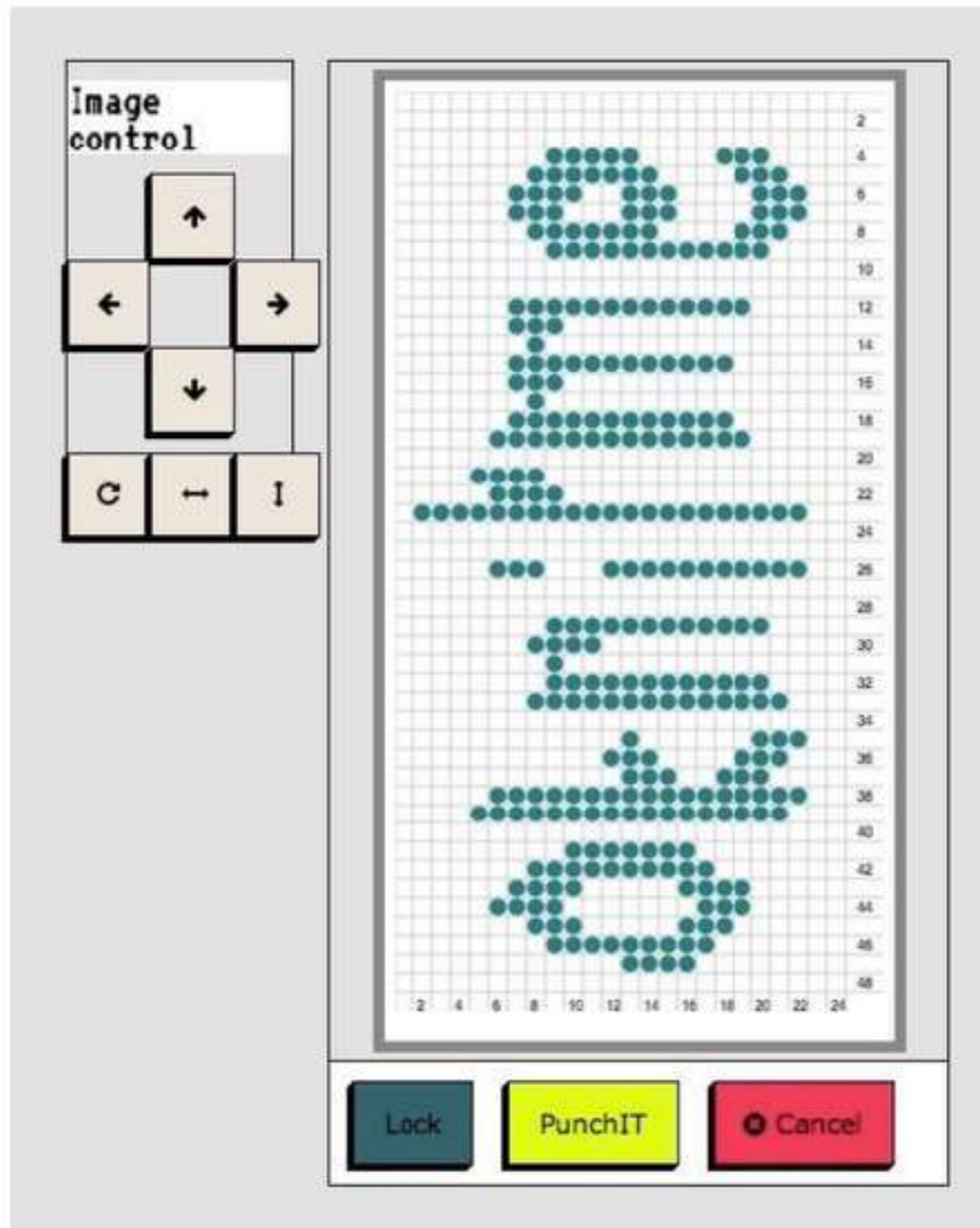
[HOME](#) [GALLERY](#) [THE PROJECT](#) [ABOUT US](#)

CREATE CUSTOM PUNCH CARDS FOR YOUR KNITTING MACHINE!

[BROWSE](#) or DROP 2-COLOR IMAGE HERE

# OKNITME

Creating punch card from 2-color images





# OKNITME

Creating punch card from 2-color images



# **OPEN SOURCE HARDWARE**

# AYAB Shield

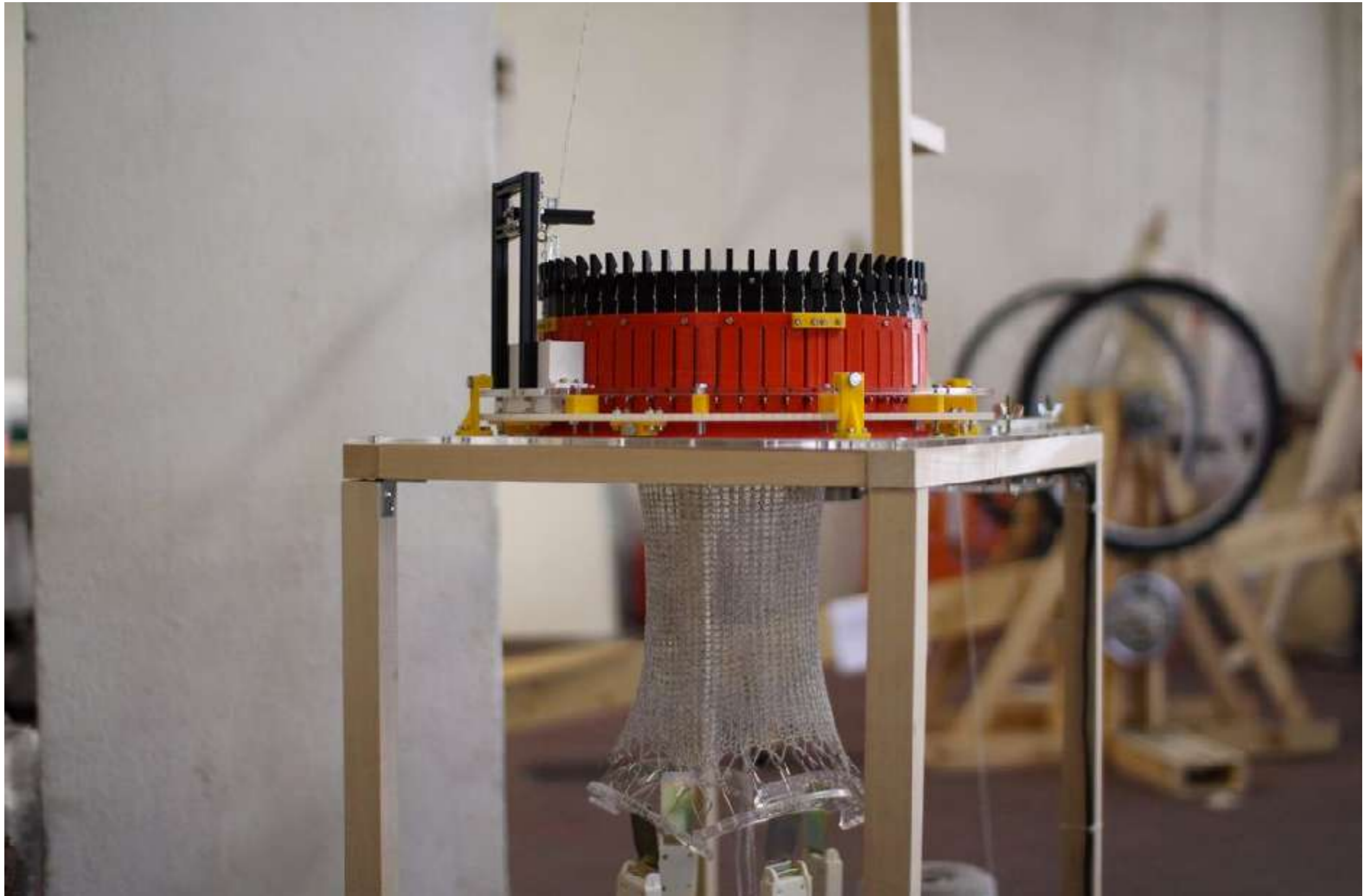
Arduino shield to hack digital knitting machines



Knitted bag by RATATATA – Claudia Scarpa – Made at WeMake

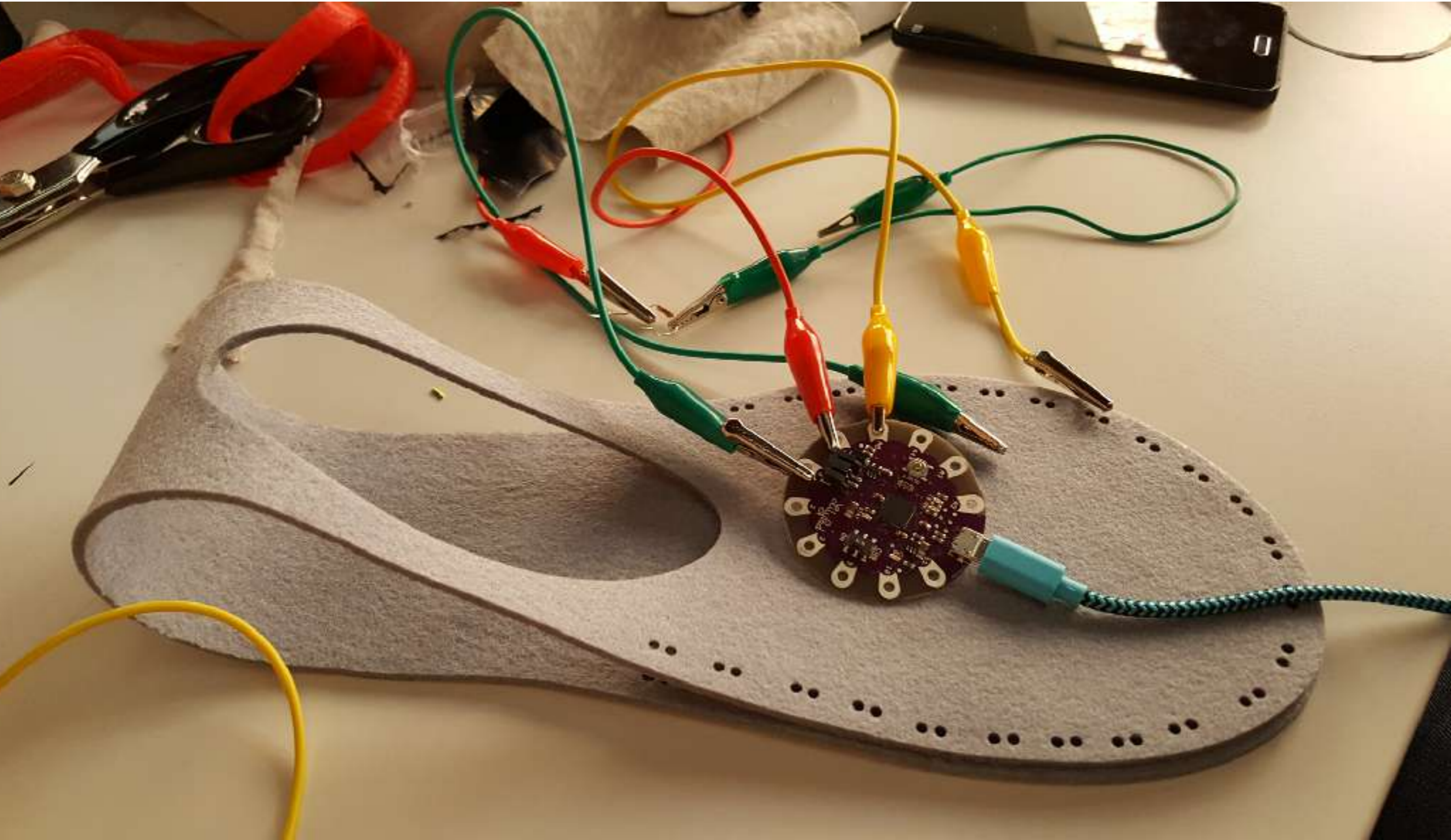
# Circular Knitic

Integrating textile manufacturing into the contemporary makers' culture



# Smart textiles - Open Design for wearables

Empowering people with wearables and soft circuits



# **OPEN SOURCE BRANDING**

# SERPICA NARO



In 2005 the first **open source brand** in fashion created from a hoax during Milan fashion week

## THE JOURNAL OF DESIGN STRATEGIES

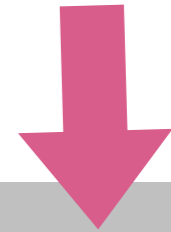
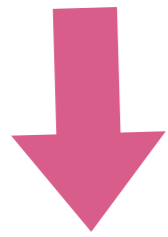
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Alternative Fashion Systems  
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**VOL. 7, NO. 1 | FALL 2014**

**PARSONS THE NEW SCHOOL FOR DESIGN**

[http://sds.parsons.edu/designdialogues/?post\\_type=article&p=634](http://sds.parsons.edu/designdialogues/?post_type=article&p=634)

# FROM IDEA TO PRODUCT



Share the code  
(non commercial use)

Sell the kit  
(involve local  
hubs)

Sell out-of-the-  
box after a  
crowdfunding  
campaign

Sell the  
collection  
edition

**BUILD AN AUDIENCE**

**REACH EARLY ADOPTERS**

**FULLFIL CONSUMERS**

**CREATE EXCLUSIVITY**



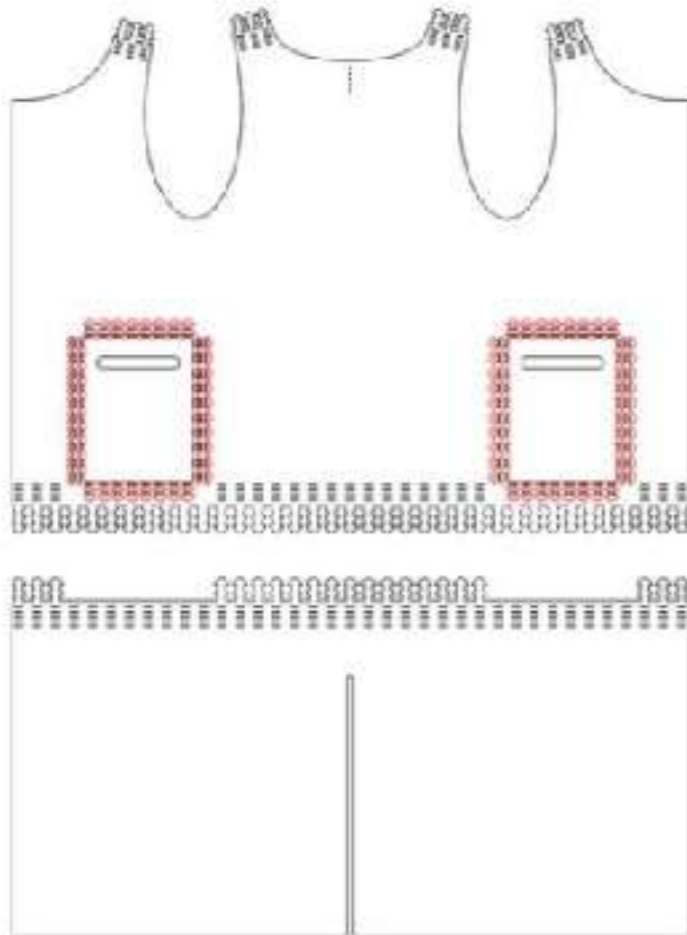
# POST-COUTURE



MAKE

SHOP

# POST-COUTURE



post-couture coat  
digital design file  
€ 5



post-couture croptop  
digital design file  
€ 5

# ANOTHERSHOE



Open source footwear.  
Cut by a laser. Assembled by hand.



DIY

Download it Yourself



MIY

Make it Yourself



AIY

Assemble it Yourself



WIIY

Wear it Yourself

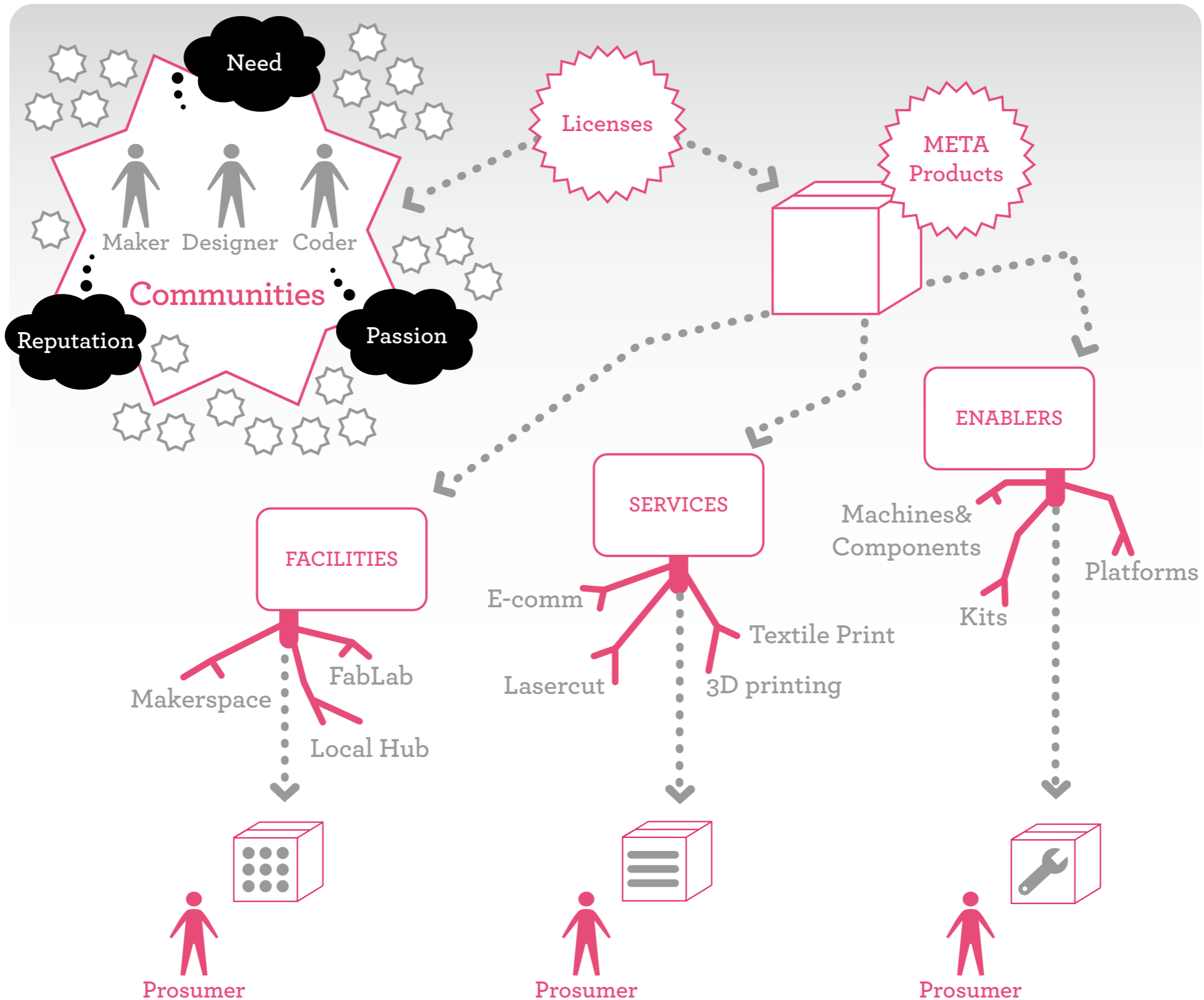
# DEADWOOD



more than 30 percent waste while millions of used garments are added to the landfill each year.

**A NEW ECOSYSTEM OF PRODUCTION  
NEW SERVICES?**

# ECOSYSTEM



# THE COLOR SOUP

THECOLORSOUP

GRAFICHE TESSUTI GIFT CARD BLOG AIUTO [CREA IL TUO TESSUTO](#)

## STAMPA IL TUO TESSUTO 100% PERSONALIZZATO

CREA IL TUO TESSUTO



ALTA QUALITÀ  
DI STAMPA



VASTA GAMMA DI  
TESSUTI



MINIME QUANTITÀ  
UN SOLO METRO  
DI STAMPA



STAMPA E CONSEGNA IN 6 GIORNI  
LAVORATIVI



Animali, TCS Kids

**Grey cats**  
by Mala Strella

♡ 5



Animali, Natura

**Brushwood**  
by Mala Strella

♡ 7



Animali, Natura

**Dark Age**  
by Mala Strella

♡ 15

# WOVNS

Wovns platform turns digital designs into on-demand Jacquard fabric



Create Your Own Woven Fabric



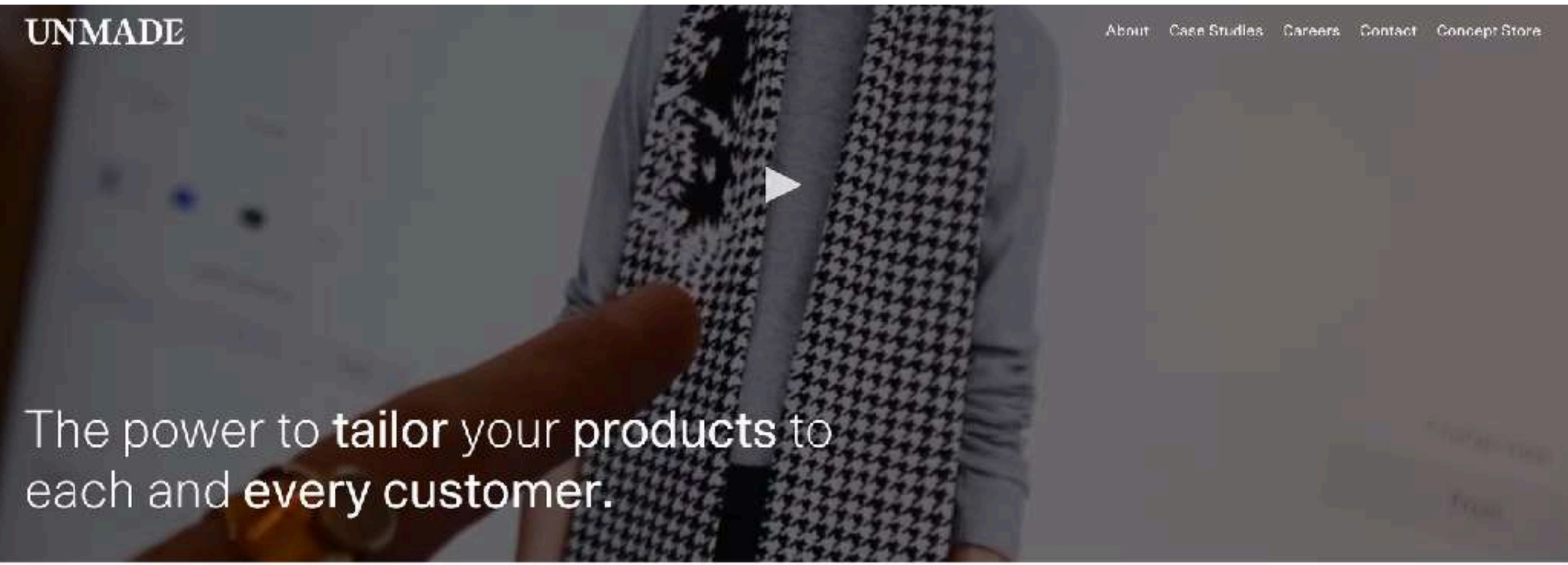


# UNMADE

Unmade is a platform for on-demand knitted products

UNMADE

[About](#) [Case Studies](#) [Careers](#) [Contact](#) [Concept Store](#)

A hand with a gold watch points towards a computer screen. The screen shows a 3D model of a knitted garment, possibly a vest or scarf, with a black and white pattern. A white play button icon is overlaid on the screen.

The power to **tailor** your products to each and **every** customer.

We enable **customisable** products to be manufactured on an **industrial scale**.

# ALTERNATIVE FASHION MODELS

## “AGILE FASHION”

### YESTERDAY

- Product/Closed
- Collection of disposable products
- Series Production
- Shops
- Venture Capital



### TOMORROW

- Platform/Open
- Catalogue of a few evolving products
- On-demand Production
- Direct selling (online/offline)
- Crowdfunding

**TEXTILE**

Open Design

Smart textiles

Wearables

**ELECTRONIC**

Internet of Things

Open Hardware

Arduino

**WE  
MAKE  
HERE!**

**FABRICATION**

Digital Manufacturing

3D Printing

Prototyping



wemake.cc  
#makerspace  
#fablab

**GRAZIE!**