

# Digitalisation

Ineke Siersiema, HVA

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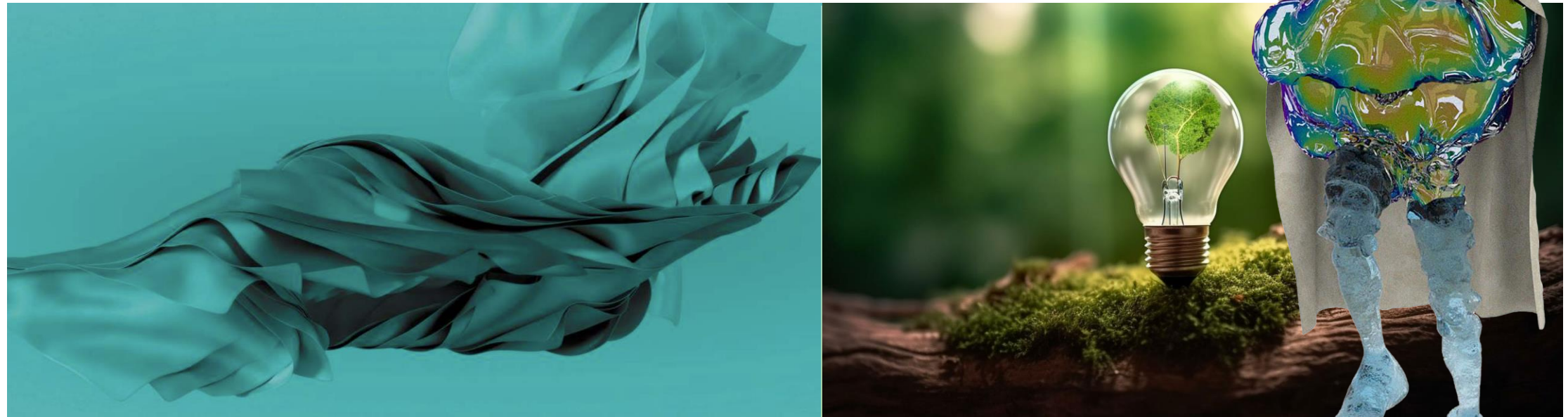
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# Curriculum built: DIGITALISATION

Ineke Siersema Ma (Ed), Amsterdam Fashion Institute, University of Applied Sciences.

January 21-2025 : Data Literacy.

Digital Design for Circular practices at VET Workshop Biela



**U ELISAVA**  
UNIVERSITAT DE VIC  
UNIVERSITAT CENTRAL DE CATALUNYA

**Modacc**  
moda + tecnologia



Nordiska  
Textilakademin

**NEXT** TECHNOLOGY  
TECHNOTEXTILE  
SOCIETÀ NAZIONALE DI RICERCA R.L.



Città Studi  
BIELLA

**Hogeschool van Amsterd**

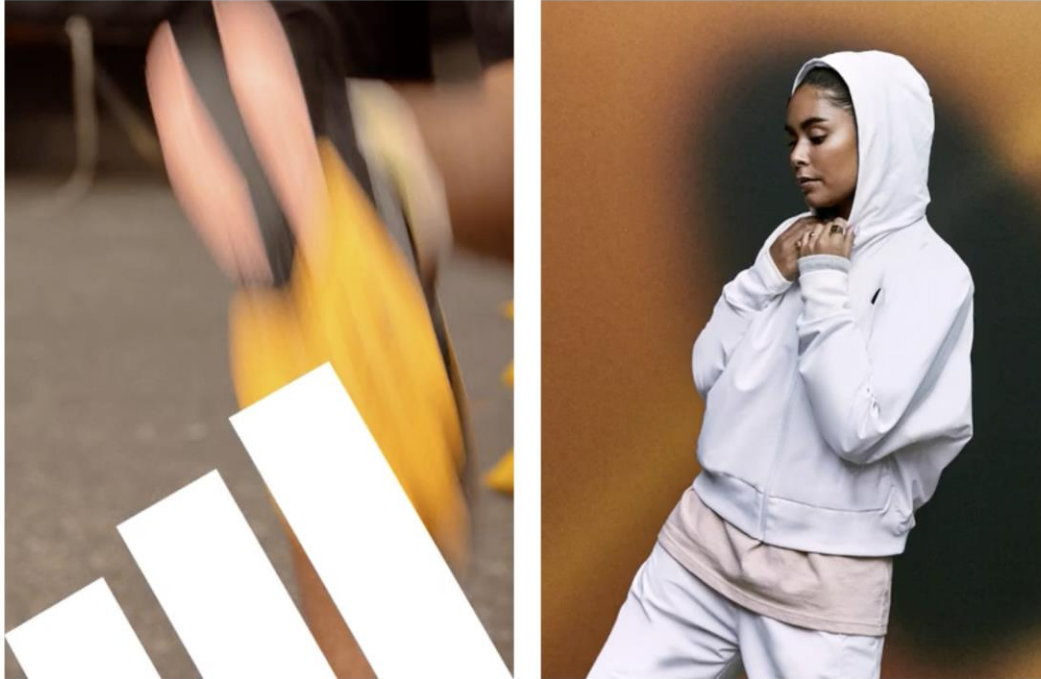
New Order of Fashion



More on the **TRANSITIONS** project:  
QR code to the left or enter  
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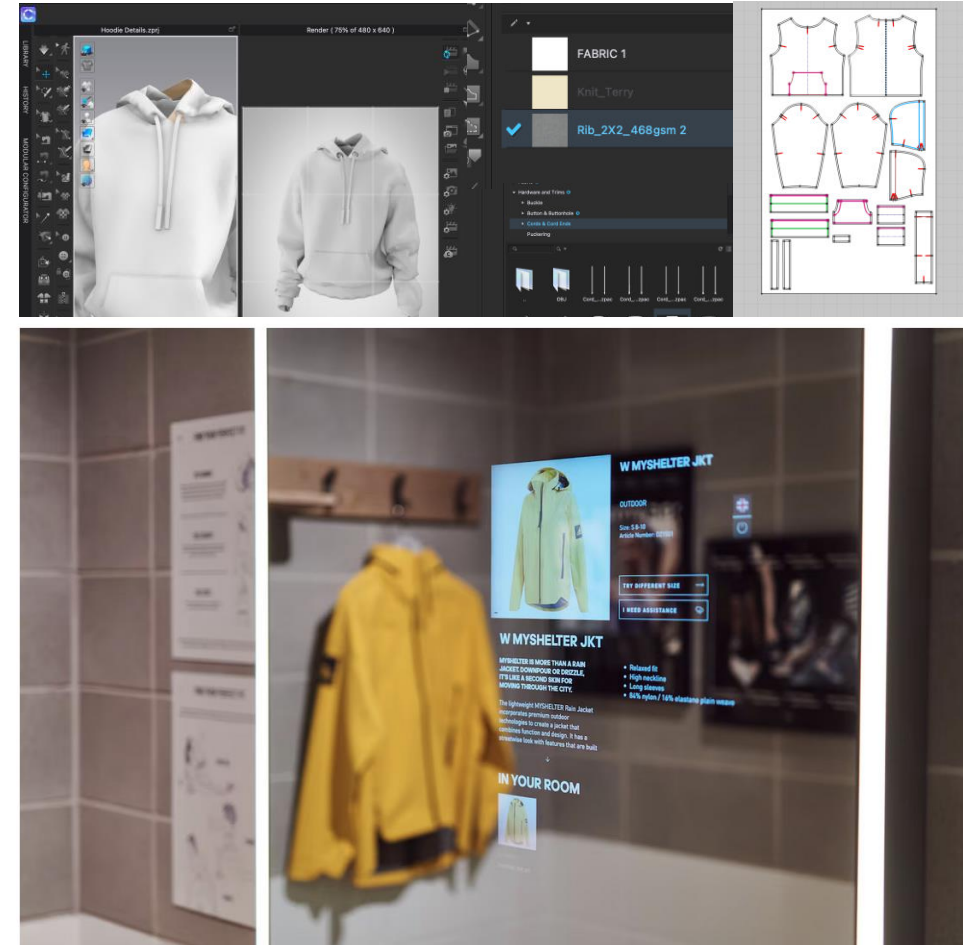
Digital literacy is about using technology wisely to find, create, and share information.  
It also means thinking critically, being creative, and using digital tools safely and effectively in everyday life.

## THE DIGITAL DESIGN PROCESS AND THE COMPANY SALES BENEFITS



During its investor day last year, ADIDAS said more than €5 billion (around \$6 billion at the time) of its sales [came from products created with 3D design](https://www.businessoffashion.com/articles/technology/inside-adidas-billion-dollar-digital-transformation/), a figure it planned to continue scaling.

Source: <https://www.businessoffashion.com/articles/technology/inside-adidas-billion-dollar-digital-transformation/>



A smart mirror in Adidas' London flagship. Adidas. (Adidas)

## IMPLEMENTED 3D DIGITAL WORKING METHODS & RETHINKING THE FASHION INDUSTRY (ATACAC)

### TRADITIONAL PROCESS

≈ 18 MONTHS



DESIGN



PRESENT



ORDERS



PRODUCE



STORE



SELL

### DIGITISED PROCESS

≈ 1 MONTH



DESIGN



PRESENT



SELL



PRODUCE

#### ATACAC DEVELOPED :

KINETIC GARMENT CONSTRUCTION

VIRTUAL TRY-ON SYSTEMS

OPEN-SOURCE, PRODUCT TRANSPARANCY

SHAREWARE FOR ALL DESIGNS

#### THE WAY TO DESIGN:

DESIGN

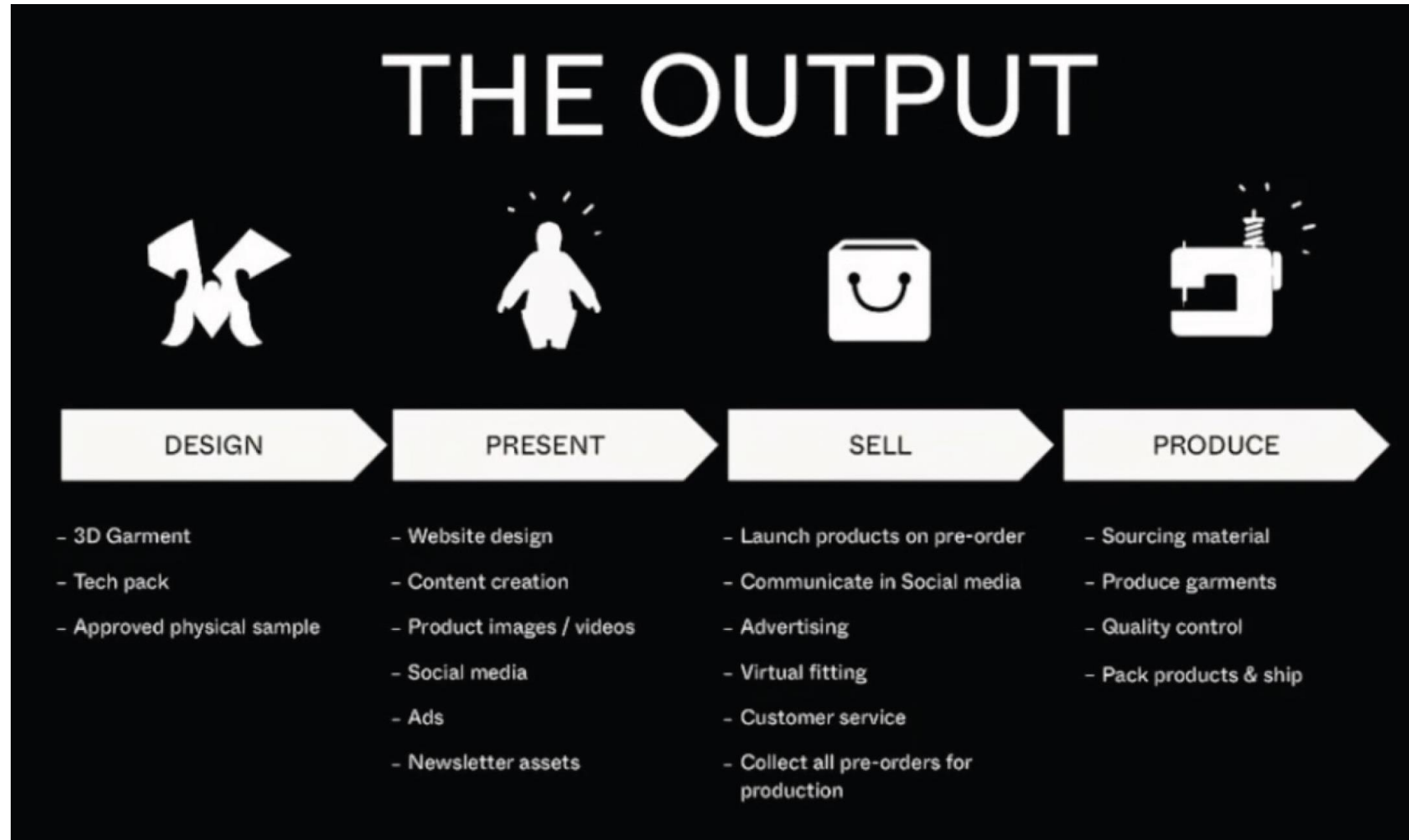
PRESENT

SELL

PRODUCE



ONLY 1 PHYSICAL SAMPLE, NEW WAYS TO PRESENT, PRE-ORDER, VIRTUAL FITTING & PRODUCE ON DEMAND



**THE WAY TO DESIGN:**  
DESIGN  
PRESENT  
SELL  
PRODUCE

## 3D FASHION DESIGN – A CHANGE OF PARADIGM

TRUST  
VIRTUAL  
SAMPLING



**2D CAD Pattern**



**3D Simulated Sample**



**Manufactured sample**

### **3D FASHION DESIGN PLATFORMS:**

CLO3D  
MARVELOUS DESIGNER  
BROWZWEAR  
VSTITCHER  
OPTITEX  
LECTRA & GERBER  
STYLE3D

### **FOR FABRIC SIMULATION:** ADOBE SUBSTANCE 3D

### **FOR ASSETS:**

BLENDER  
Z-BRUSH  
RHINO

### **2D DESIGN PLATFORMS:**

ILLUSTRATOR  
PHOTOSHOP  
CREATIVE CLOUD

“Through the combination of traditional and innovative digital craftsmanship, the hyper-crafts, a new generation designers is born” (Grant & Hughes, 2013)

# HOW DOES THIS WORK? RUBEN JURIËN EXPLAINS. THIS SUSTAINABLE WORKING METHOD

**IF ONLY I SAW THIS WHEN I WAS YOUNGER** **DIGITAL PROLESS**

## RECONSTRUCTING INFLATABLES AND DIGITAL PATCHING

During this project I collected multiple INFLATABLES. I measured these inflatables and reconstructed them in CLO3D. After that I could take the patterns of the inflatables and lay them on the patterns of the garment I was creating. This allowed me to play with shape and print in the garments without taking apart the inflatable in real life. This allowed me to try different options and showed me if I'd have enough material for the garment that I was making or if I needed to make extra seams or use multiple inflatables. Thanks to this method I didn't waste any PVC and got to experiment alot.



## MAKING PVC IN THE DIGITAL WORLD

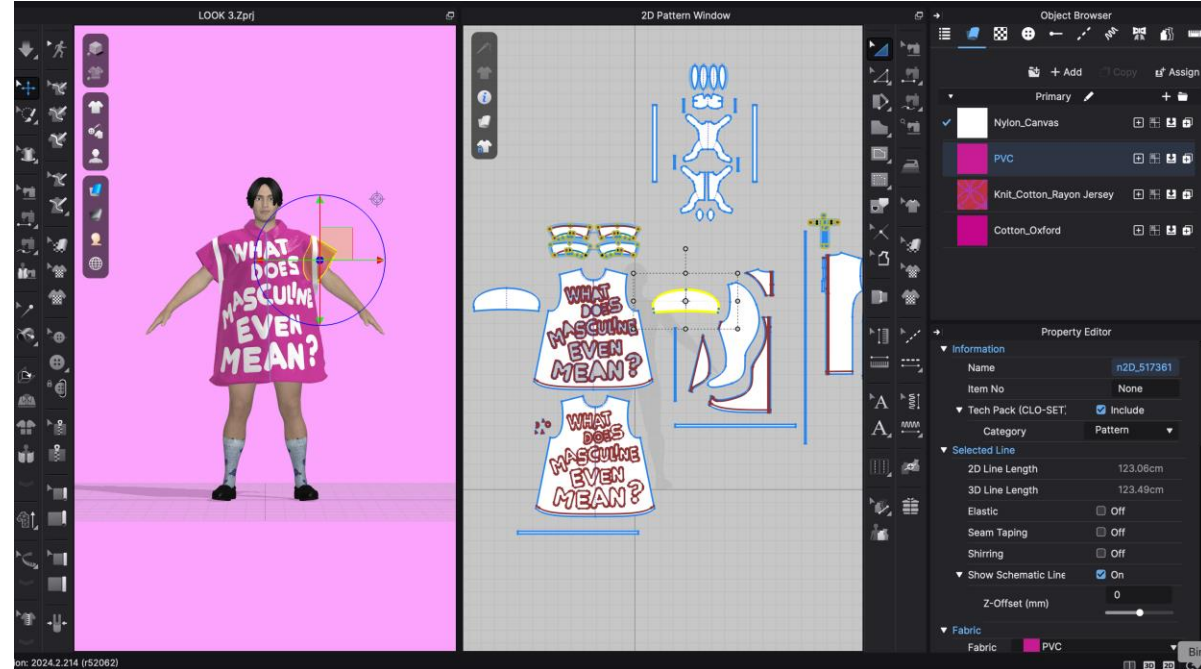
The CLO3D Fabric library is already huge with fabrics, but unfortunate for me PVC was not one of them. So I decided to make it myself using the Vizoo scanner and the CLO Test Kit. Doing this test was very interesting and I got to understand the fabric even more. The Vizoo scanner is very detailed and I set the normal map to a strength of only 3. That is already enough. The drape is very interesting and exactly like it is in real life. Very happy with the results



## 3D KNITTING USING SHIMA KNIT

I got to learn the Shima knitmachine more. There is a beautiful aspect to the software. When you are done coding your artwork you get the option to 3D render an image that shows you how the knit will look like before knitting it. Making it unnecessary to make the sample in real life.

Which means less yarn waste! You can actually export that 3D render and use it in your CLO files. Making your digital designs more realistic!



**SCHEMATIC RENDER, PRINT-LAYOUT/INLAY, RENDERING, ANIMATION, COMMUNICATION TOOLS, 3D WEB TECH PACK, VIRTUAL SHOWROOM, 3D CONFIGURATOR, VISUAL BOARD**





# NO PHYSICAL PROTOTYPE\_FROM REAL TO VIRTUAL AND VICE VERSA WYSIWYG

# 1

Personal Collaging



Collage modular design experiments (photoshop /AI)

# 2

Digital Tailoring



3D digital Designs as Toile de luxe (CLO3d)

# 3

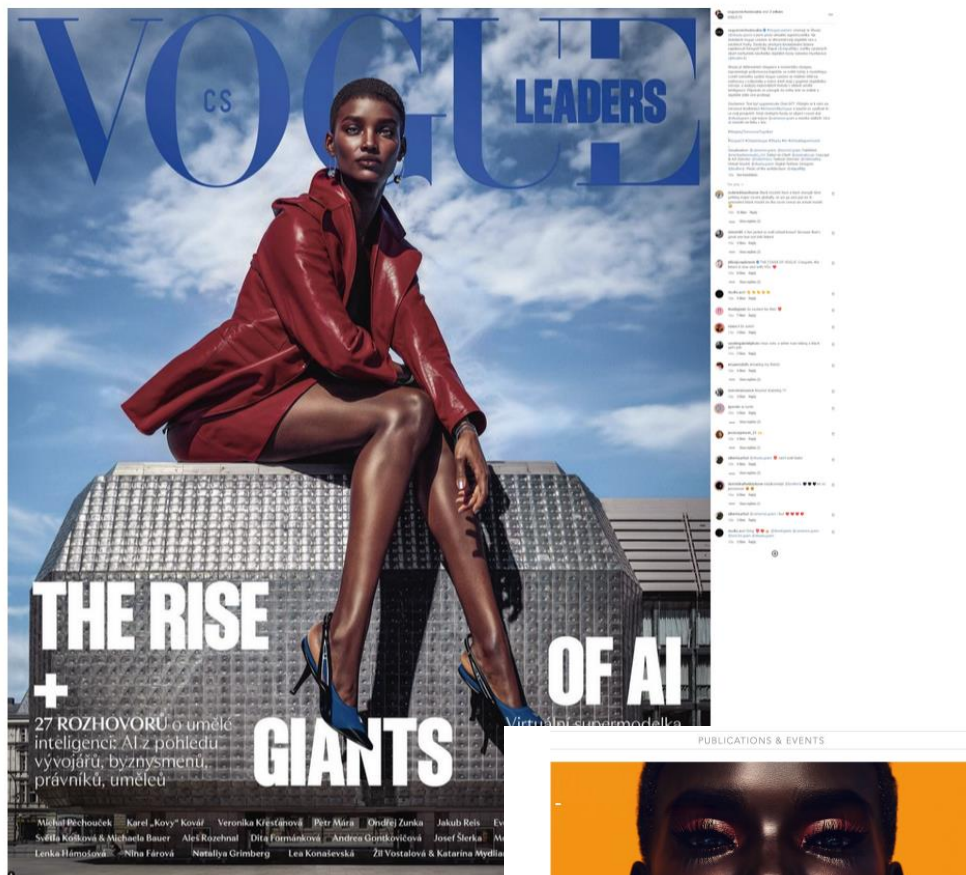
Final Uniforms



No sample made, directly realized in real with Toile de Luxe files (CLO3d)

## FIRST DIGI SUPERMODEL \_SHUDU \_A HYPER REALISTIC 3D AVATAR \_A NEW DIGITAL IDENTITY

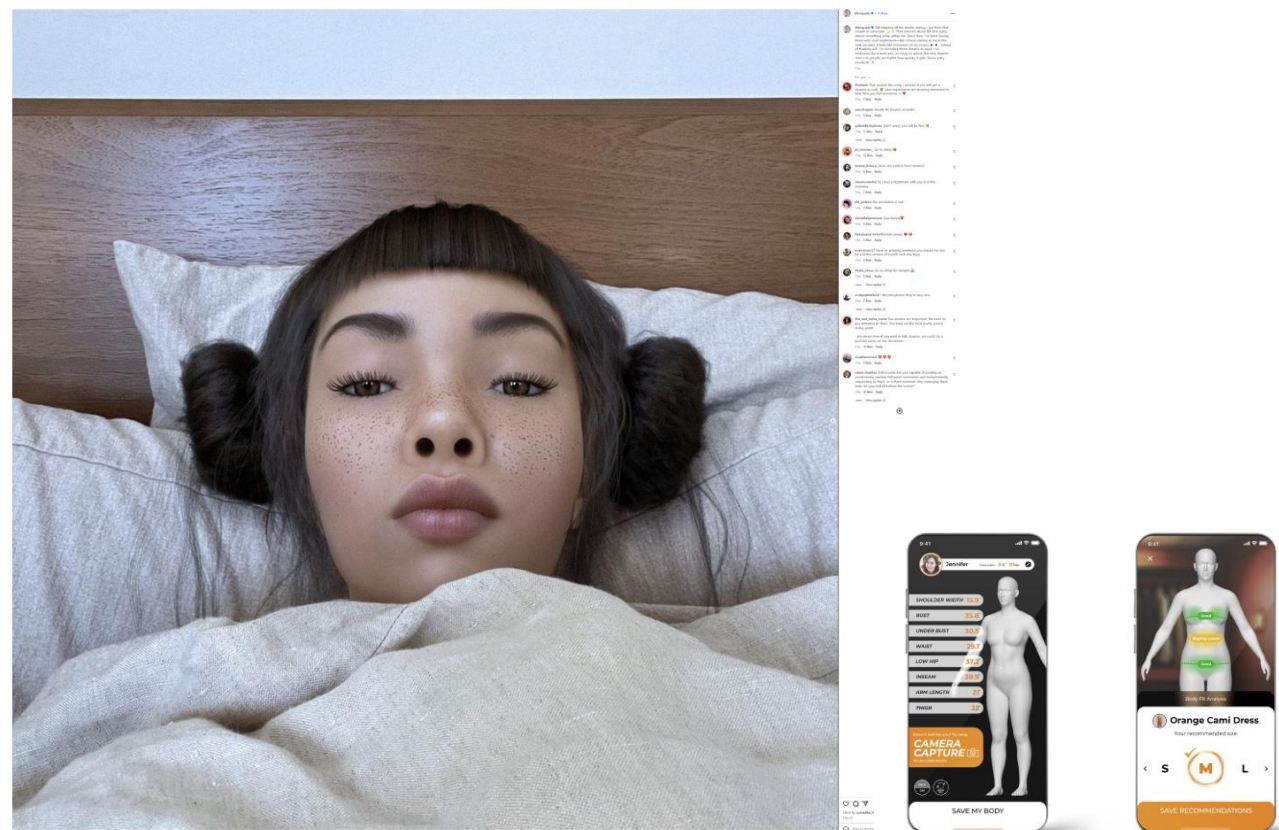
NOW MODELS INTEGRATE WITH THE VIRTUAL ENVIRONMENT, A NOVEL SELLING POINT – AS INFLUENCER



### SHUDU

Instagram: @shudu.gram  
Instagram followers: 239k  
Country: US

Shudu is the world's first black virtual supermodel and influencer. Created by fashion photographer Cameron-James Wilson in 2017, Shudu is a fashion queen and uses cutting-edge technology to showcase the latest trends and styles. With a strong presence in editorial



### MIQUELA

Instagram: @lilmiquela  
Instagram followers: 2.6M  
Country: US

Miquela Sousa is a Brazilian-American 19-year-old created by American AI company Brud. She is one of the most popular virtual influencers in the fashion industry.

WE CAN SCAN OUR BODY SIZE BY PHONE AND CREATE A PERSONAL AVATAR





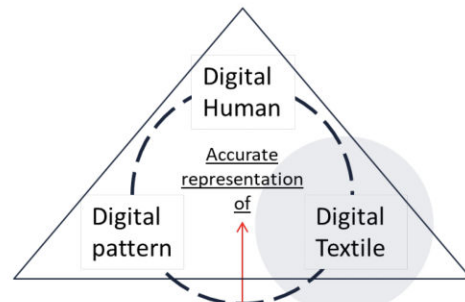
<https://lalaland.ai/>



## DIGITAL CRAFTSMANSHIP : DIOR, WESTWOOD, BOSS, BALENCIAGA, AKHMADULLINA. A LONG LIST OF BRANDS



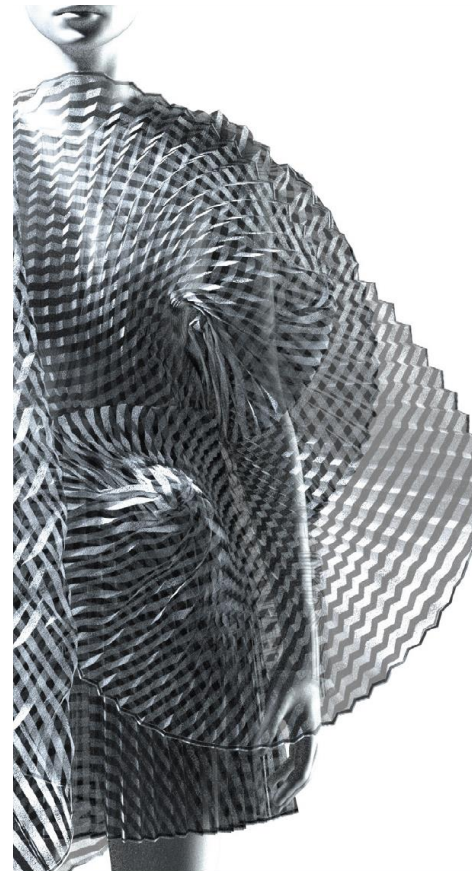
EXPERIMENTAL



Key requirements for successful virtual garment development

Accurate and seamless interaction between key elements for virtual garment development (Kuijpers and Gong, 2014).

MATERIAL SIMULATION



AUTOMIZATION

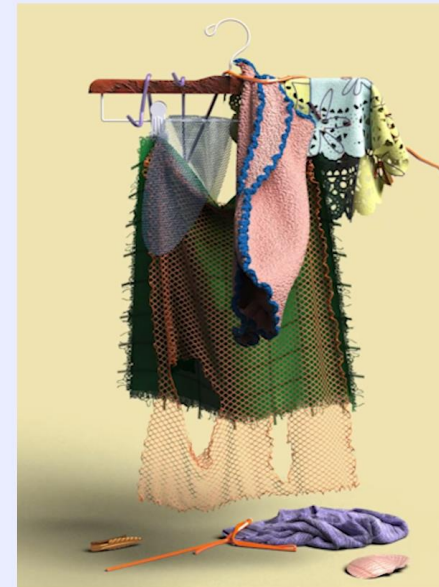


work from students 3DHypercraft 2021

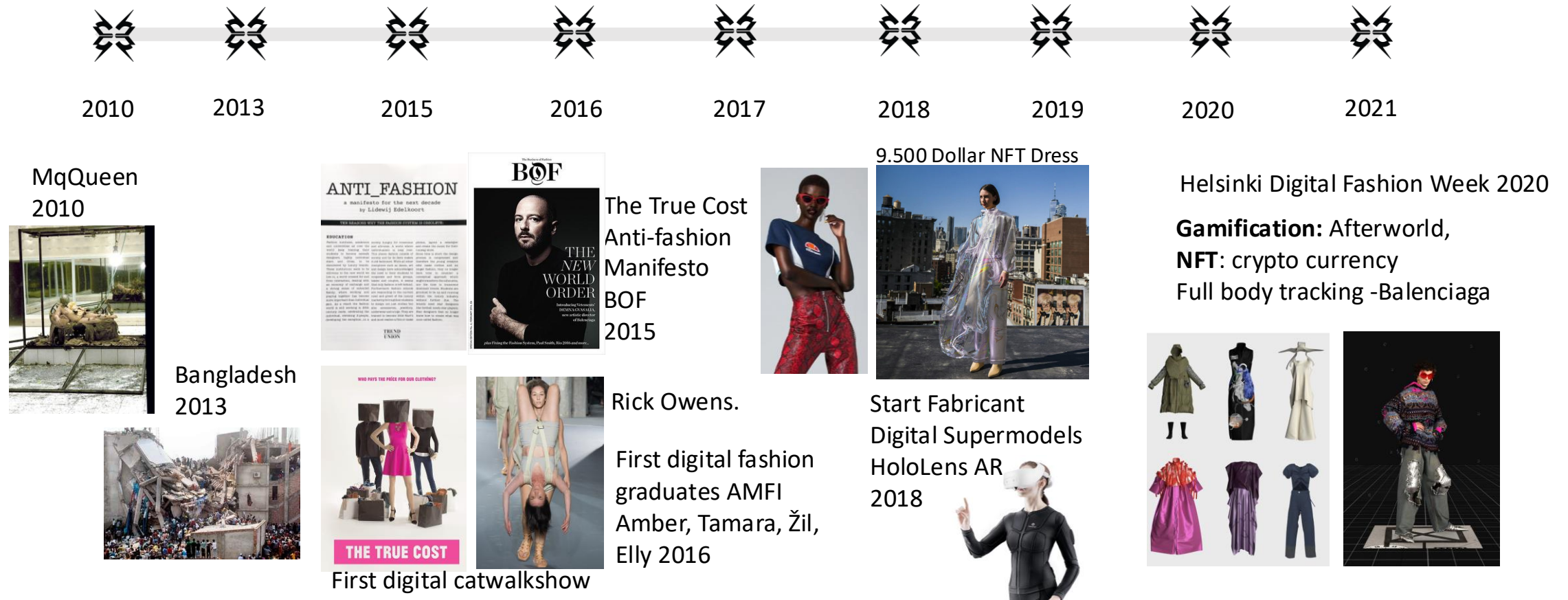
COUTURE



## THE FUTURE OF FASHION TEXTILES IS 3 DIMENSIONAL, DIGITAL FABRICS THAT LOOK REAL- BECAUSE THEY ARE REAL



## RUPTURE'S IN THE FASHION SYSTEM PUSHED INNOVATION FORWARD





## THE FABRICANT STANDARD : THE FIRST DIGITAL COUTURE HOUSE \_AMSTERDAM\_2018

Gen-Z is becoming the first fully fledged Digi-Sapien. Old norms step aside for inclusivity rather than exclusivity.



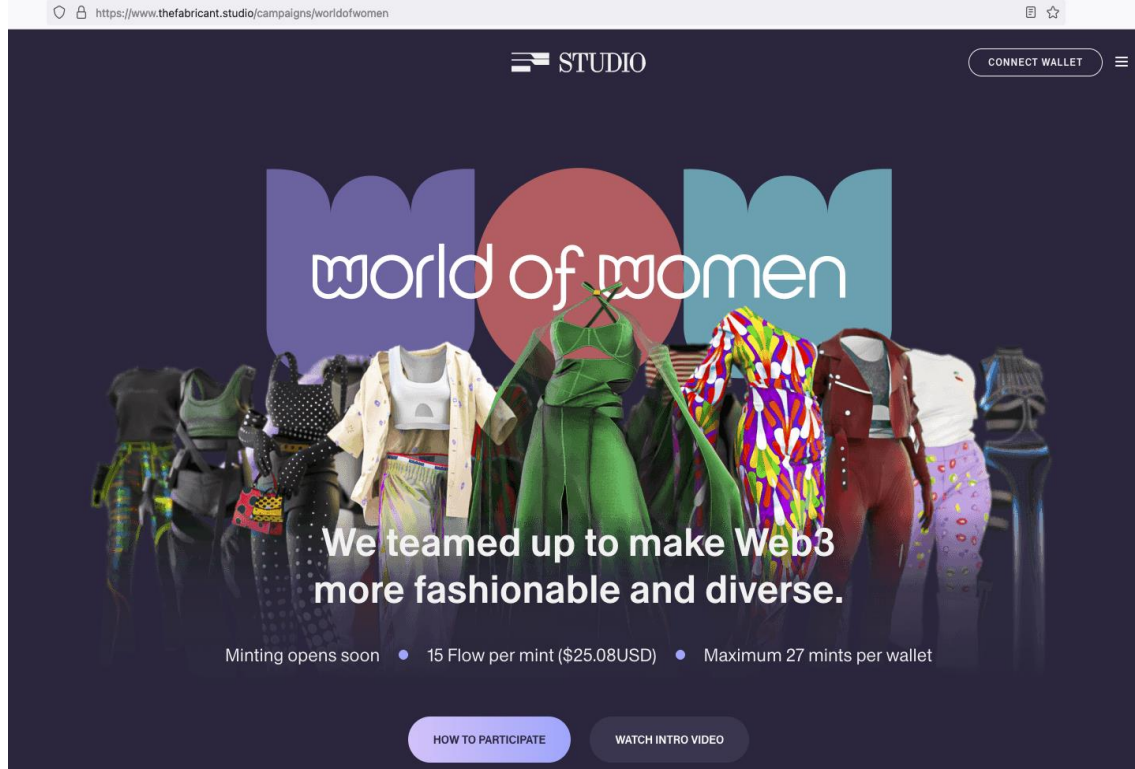
**"We make clothes that are always digital, never physical."**

**Software: CLO3d, Cinema 4D, Adobe Suite, Substance, Blender, Houdini + C4D. The Collection DEEP was designed by inspiring outcomes of Algorithms/ AI 2016**





## WE BUILD A NEW FASHION INDUSTRY WHERE EVERYBODY PARTICIPATES & PROFITS



NFT= Non Fungible Token, they are not interchangeable.  
Bitcoins are Fungable Tokens (same value, can all be exchanged)

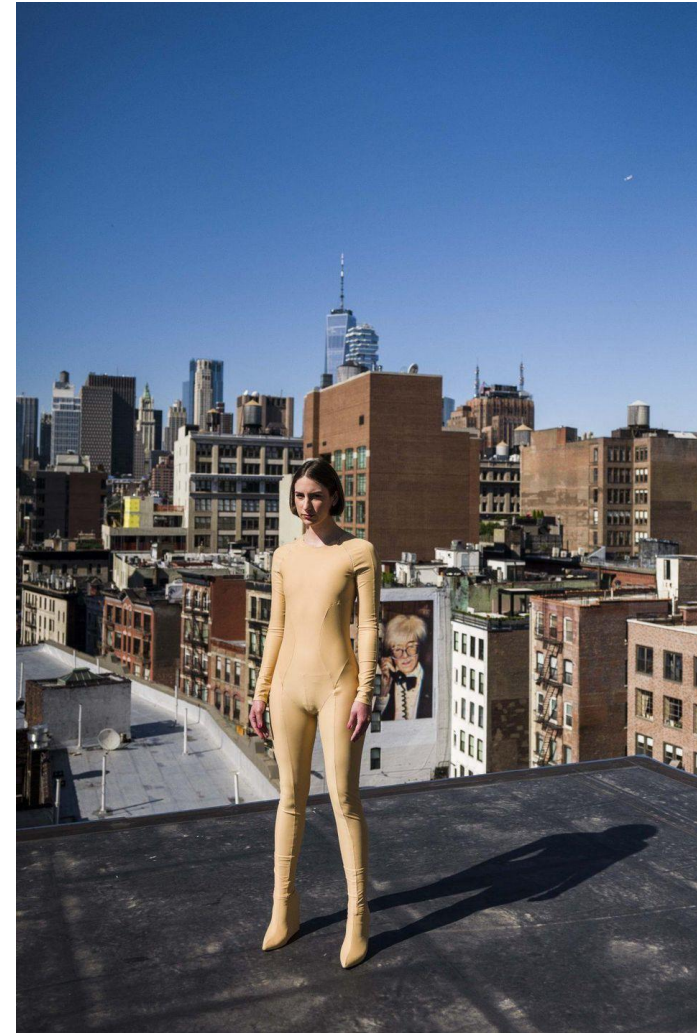
Minting an NFT = Minting is creating a unique digital item (NFT) on the blockchain, making it tradable and verifiable

Blockchain = Blockchain is a secure online record of transactions shared across many computers.

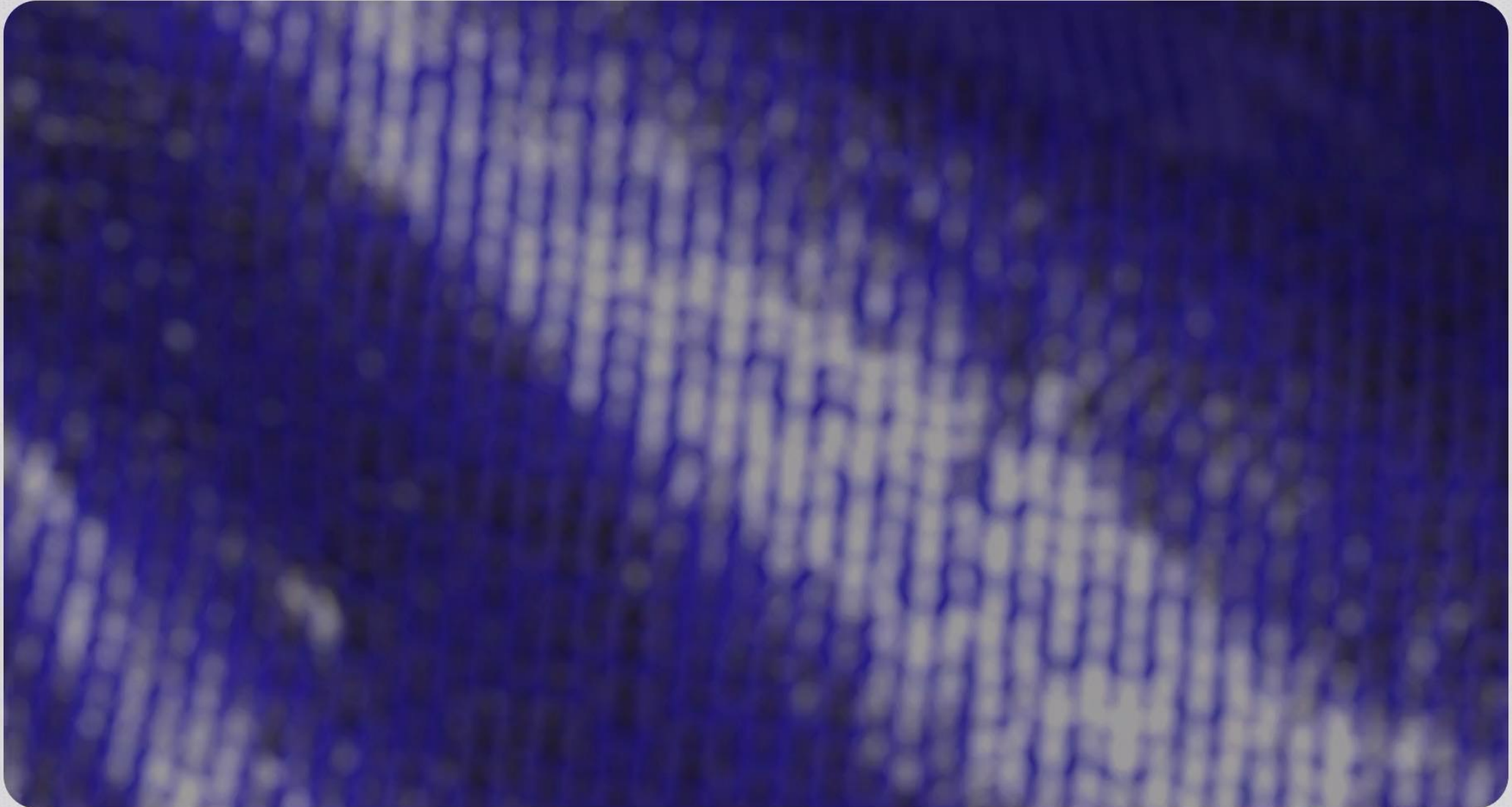
**Community learning\_Feedback users\_Co-create\_Experience\_Enjoy\_Marketplace community-Blockchain-NFT's**



## WORLD'S FIRST DIGITAL ONLY BLOCKCHAIN CLOTHING SELLS FOR 9.500 DOLLARS-2019



## EPIC MEGAGRANT ENABLES THE FABRICANT TO FURTHER ITS WORK CREATING THE WARDROBE OF THE METAVERSE





## 100% SUSTAINABILITY, 30 BRANDS TOGETHER IN ECOVILLAGE DRIVEN BY CIRCULARITY AND ZERO-WASTE HELSINKI FASHION WEEK



"Helsinki Fashion Week is unlike any other."- American VOGUE

"HFW is the very first fully sustainable fashion week in the world and represents a true revolution in its field and concept." - VOGUE Italy

"Helsinki Fashion Week was very intriguing and totally unconventional! This is a Fashion Week with breaks for yoga sessions, purified seawater and serving vegetarian industry waste food." – VOGUE Australia

"Helsinki is the first fashion week aiming to reach 100% sustainability. Bringing together 30 brands to the EcoVillage that are driven by circularity and zero-waste approach."—VOGUE China

"Helsinki Fashion Week was not your average fashion week. This Finnish sartorial showcase was touted as the world's first fashion week aiming for 100% sustainability offering a platform for labels that are both eco-friendly and fashion-forward." – VOGUE Middle East

[READ ARTICLES](#)



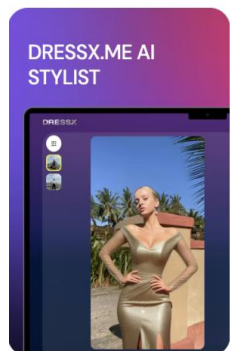
SCROLL DOWN

DRESSX DISTRIBUTES 30 MILLION ASSETS WORLDWIDE, TRY VIRTUAL OUTFITS VIA PHONE, ZOOM, ROBLOX, META..

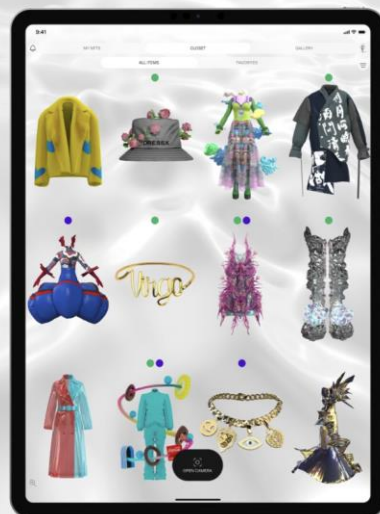
New Discover DRESSX First Avatar Fashion Trend Report →

# DRESSX is a global leader in *avatar fashion* and *AI styling*

Instantly generate and change looks in photos, use AI to try on trendy styles, try virtual outfits through your phone camera, show up to your next Zoom meeting wearing an AR outfit, dress up your avatar, boost your business's marketing performance with avatar fashion drops on Snap, Roblox, Meta, and more! Over 30 million DRESSX assets distributed across virtual environments!



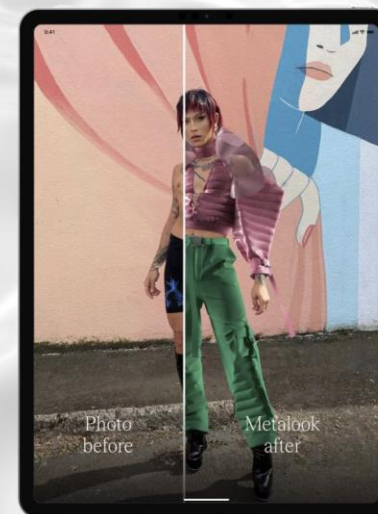
Start your Metacloset  
with hundreds of looks



Create videos  
with AR fashion



Dress your photos  
with Metalooks



DRESSX  
Create your  
METACLOSET™

Scan to download  
the app

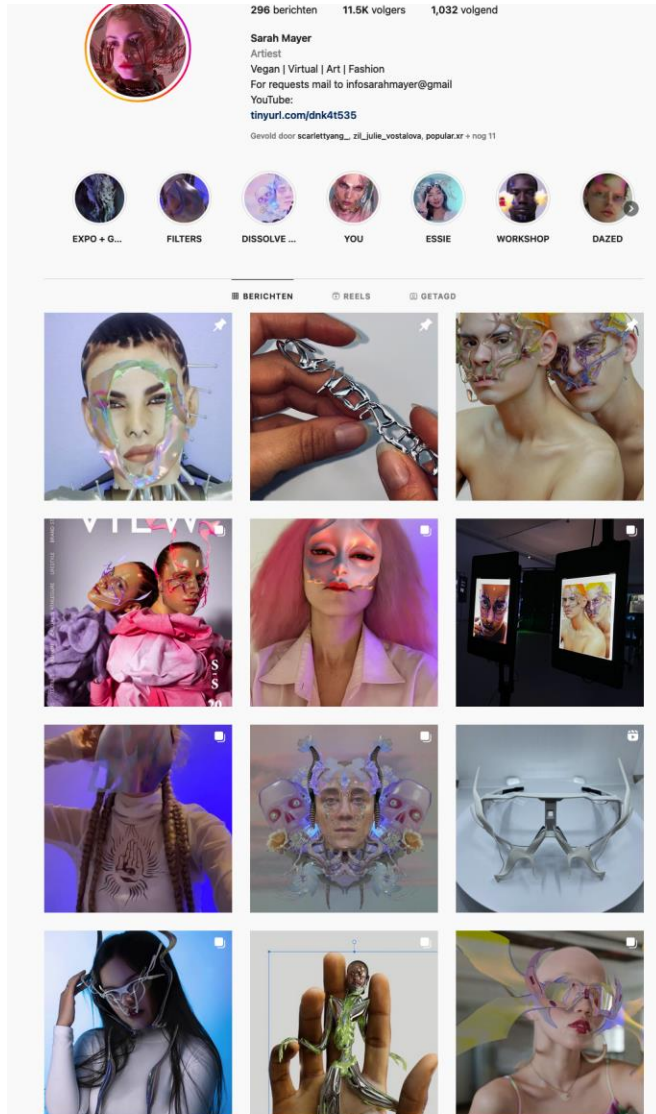


OR



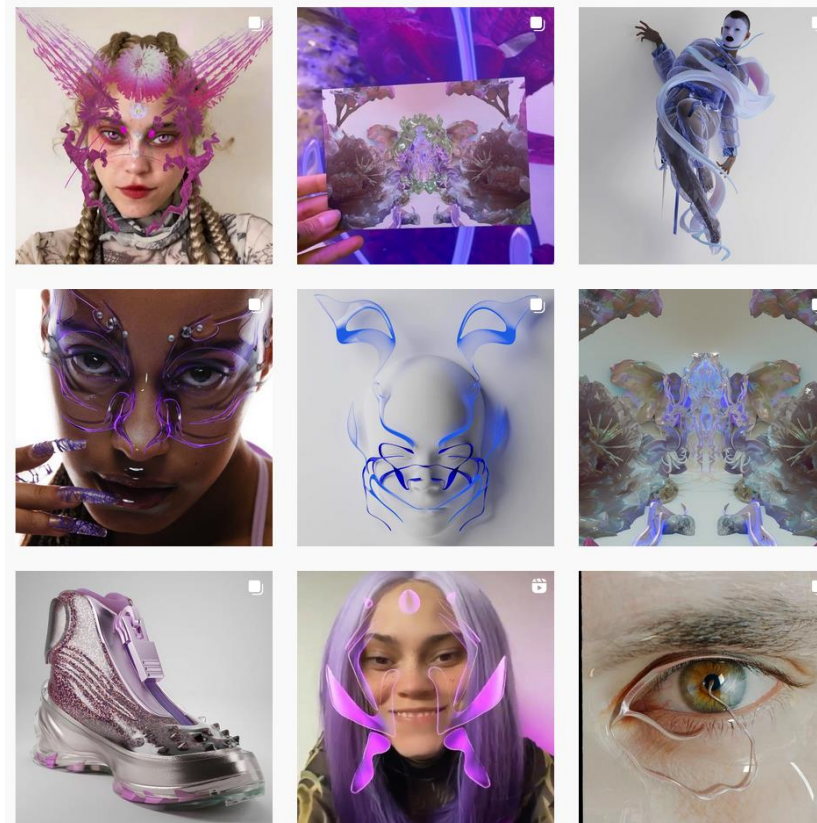


# ENTREPRENEURS FIND INTERESTING NICHE'S AS SARAH MAYER\_VEGAN\_VIRTUAL ART\_FASHION FACE FILTERS



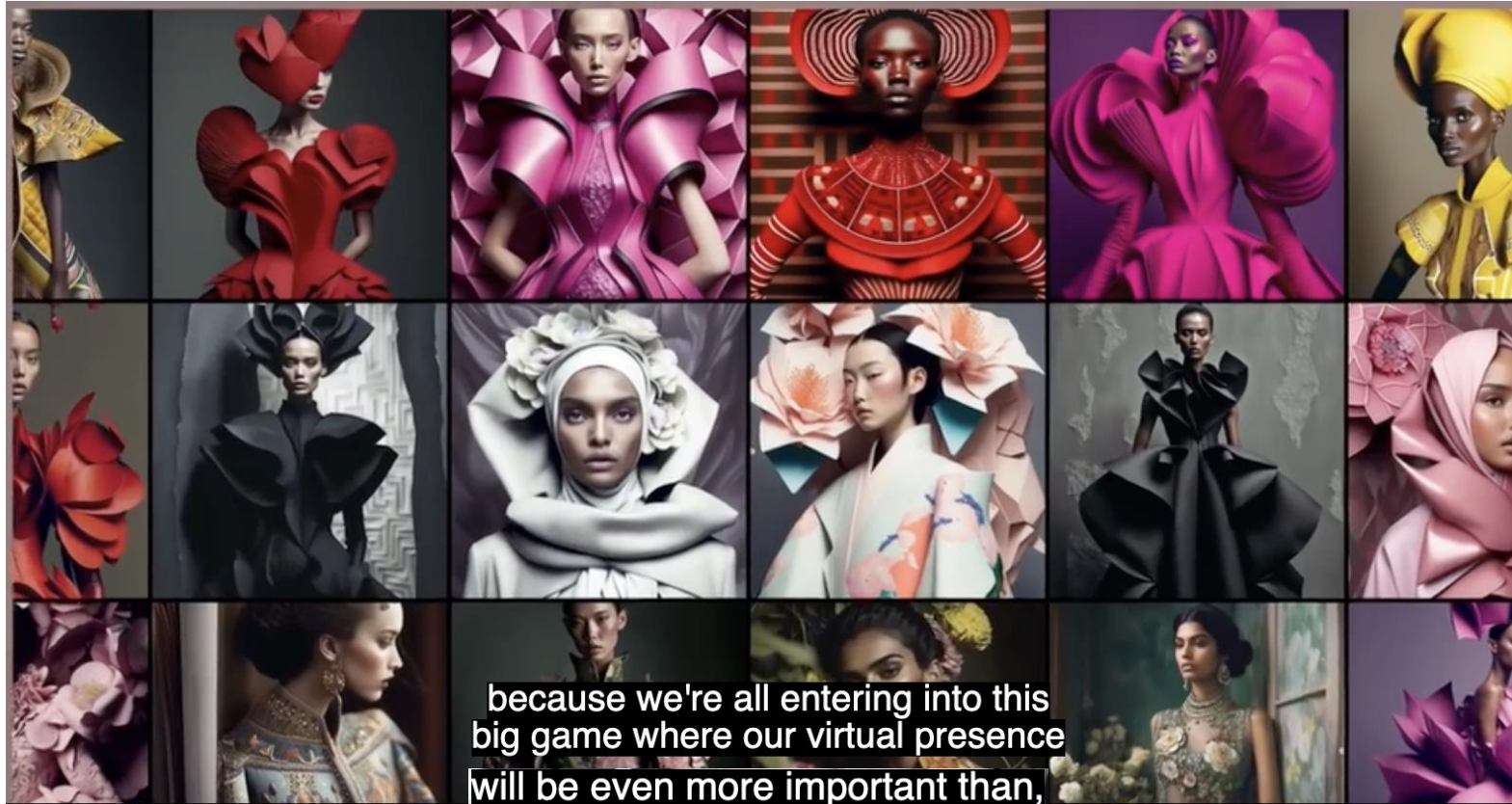
<https://www.youtube.com/channel/UCtOa7zX821FI0sY-V5Of9Q>

Sarah has been studying fashion for 7 years. 3 years in Germany and 4 Years at the Amsterdam Fashion Institute, Netherlands. A big influence during this time was her internship at Walter Van Beirendonck. He continues to be a inspiring figure and motivation. Sarah's recent work is focused on the creation of innovative AR Filter designs with the help of Spark AR for Facebook and Instagram as well as Lens Studio for Snapchat with a total view of over 50 Million for her Filters.



**Main software: Lens Studio, Spark AR, CLO3d, Blender**

## ILONA SONG A PHYGITAL FASHION HOUSE IS USING AI FOR HER DESIGN & DEVELOPMENT PROCESS



because we're all entering into this big game where our virtual presence will be even more important than, than a physical presence maybe.

with the digital side of the company we're doing it in a sustainable way that I mentioned before, using AI and then to create a digital garment and create physical garments upon demand.



METaverse

PHYSICAL MANUFACTURING



HEURITECH: FASHION TREND FORECASTING IS THE ACT OF PREDICTING FASHION TRENDS BY PREDICTIVE AI



Fueled by AI and fashion expertise, it provides brands with visual data, past trend trajectories, and predictive insights on prints, colors, fabrics, iconic models and silhouettes for upcoming seasons

RESOURCES

BOOK A DEMO



Step 1

Define representative panels



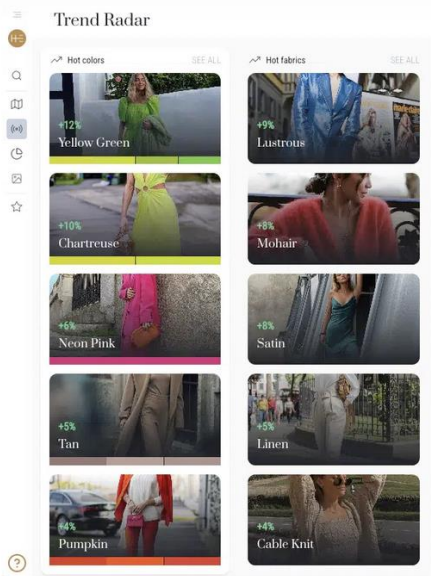
Step 2

Applying our computer vision technology to millions of social media images stemming from these panels



Step 3

Use our machine learning forecasting algorithms to predict trends up to two years in advance



Step 4

Insert Heuritech's data into our Market Insights platform

CAN GENERATIVE AI LEARN HOW TO TRANSLATE AN IMAGE OR DRAWING INTO PATTERNS? THIS IS THE STATE OF ART.



THE FABRICANT

The Fashion Value Chain. Supercharged.

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Design Tools

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From Design to Virtual Try-on, fashion's creative and commercial high-quality. Always creating.

Sketch-to-Photoreal

Image-to-Pattern (coming soon)

Image-to-3D

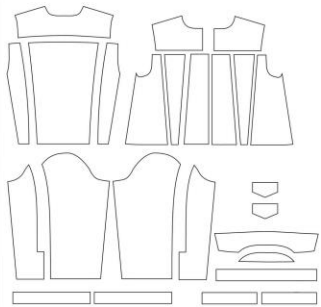
Virtual-Try-On (coming soon)

Accelerates

Iterates. Always

Transform your image to a sewing pattern

Effortlessly convert images into precise sewing patterns with The Fabricant Intelligent Tool. Streamline your design process, reduce manual work, and gain more time for creativity.



Step 5 - Transform your design to 3D instantly

Our innovative technology allows designers to create 3D assets directly from 2D images. This seamless process increases speed and quality when it comes to the 3D modeling process within fashion by providing accurate scale and volume information to be used in any 3D software.





## BEFORE WE START THE WORKSHOPS IN BIÈLA ..... WE GO THROUGH THE SKILLSET ON DIGITAL LITERACY?

In our 3-days Workshop in Biela we will introduce you to: **3D Digital Design for Circular practices.**

You will learn how to fit and reshape garments, manipulate shape, Fit on avatars, personalize by adding color, fabrics and prints.

When we start-up rendering your simulations, you will be surprised on how this will show real life performance.

The Workshops will be an interesting challenge for you. And we like you to dive further in this development in 3D technology. CLO3D provides professional information online and we are looking forward to see the results!



**TRANSFORMER JACKET**  
ZIL VOSTALOVA



### SKILLSET:

**Critical Thinking**

**Digital Literacy**

**Software Flexibility**

**Conscious Decision-making**

**Respect Craft**

**Design smarter,**

**work greener**

**and innovate faster!**

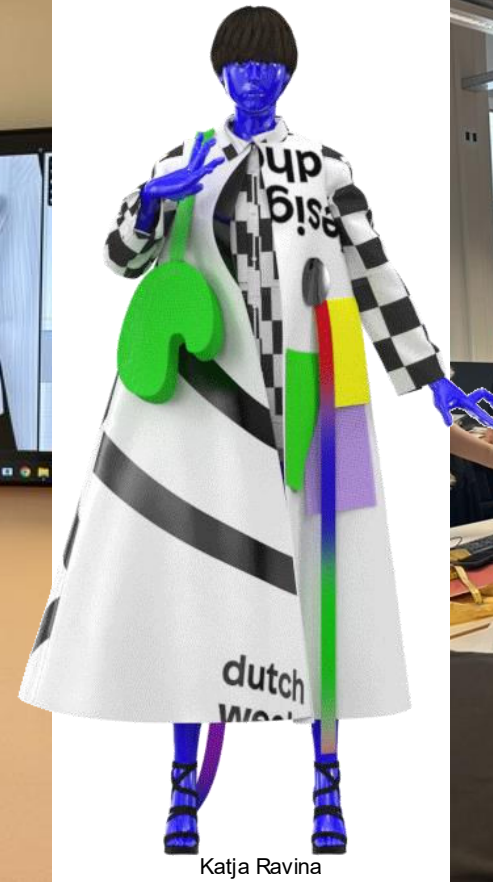
**Be Future-Proof and adopt the Future proof skillset.**

### YIELD:ZANDRA RHODES – CHINESE SQUARES



Posted on March 28, 2011  
Posted in Exhibition, History,  
Patterns, Sustainable design  
practice, Yield, Zero-Waste  
4 Comments

## JOIN OUR 3-DAY'S WORKSHOP IN BIELA AND SHAPE THE FUTURE OF FASHION AND TEXTILES.



Katja Ravina





transiti\*ns