

# TLAPALLICALL

We are a social enterprise that creates durable, eco-friendly, recycled and ethical clothes with innovative designs by our crafters from the Huichol community in Mexico.

We have implemented 3D printing in our manufacturing process in order to be more conscious about water wastage and pollution.

We promote circular economy, as well as responsible consumption practices through our workshops and campaigns programs.

Our tops and dresses are made with recycled plastics and cotton and are hybrid manufactured since they are partly printed and partly handmade .



## OUR PURPOSE

Providing fashion customers a new brand that utilises recycled materials together with 3D printing technology, spreads awareness about sustainable consumption, and promotes mexican crafters work. As well as serving as an example for future clothing brands.

## SOCIAL IMPACT

We have come up with a new business model that involves customers and workers well-being.

We follow the Fair Trade Enterprises model; being a sustainable, ethical and transparent brand.

We provide our artisans with fair working conditions and remuneration, as well as social security.

Users would also benefit from our model, since they will receive beautiful high-quality and durable clothes, as well as the opportunity to create their own with our workshops program. This model along with our campaigns does not only promote smart consumption but also turns our customers into activists and active learners.



## MEET OUR CRAFTERS

The Huicholes are a Mexican indigenous community located in the midwest, in the states of Jalisco, Nayarit, Durango and Zacatecas. Their art is strongly rooted in divinity and spirituality. Their unique designs and colours are based on experiences related with the peyote (hallucinogen), which is a main element in religious rituals. The Huichol art can be considered a writing method since, through their creations, the Huicholes share their stories and myths, letting us into a piece of their lives.

Huicholes religious philosophy is strongly related to the universe. In their culture, the universe is divided into three entities: the deer, the corn, and the peyote. The art expressions have as a common element the use of yarn to portray diverse symbols with stunning tonalities. Additionally, the colours, the designs and the material carry a lot of importance, as they hold a religious value, for instance, the Brazil tree wood is linked with Tayau (father Sun), and the five petals flower is associated with the rain, good harvest, and health. However, the symbols with major weight in the Huichol culture are the deer and the corn for being the primary source of alimentation, and the peyote, for being the link to the cosmogonic dimension.

The Huichol community is one of the ethnic groups that have remained pure since the Spanish conquest. Their yarn pictures, clothes, purses, and objects have had a great acceptance within the national and international market. However, they are short of spaces where they can sell their products, and the intermediaries who resell them earn far more money than the producers themselves. Therefore in TlapalliCalli we recognise their work's worth, and pay fairly for it.



## ENVIRONMENTAL IMPACT

With the implementation of 3D technology we are giving a completely new use to waste such as plastic bottles and pre-existing fabrics. As well as reducing the water wastage and the pollution of water bodies

Along with our technological strategies to make a more sustainable business, we carry out different campaigns where the main focus is to detach the customer from the old consumption beliefs, creating a more sustainable way of living.



95% OF DISCARDED CLOTHING CAN BE  
RECYCLED OR UPCYCLED.



#ECOFASHION

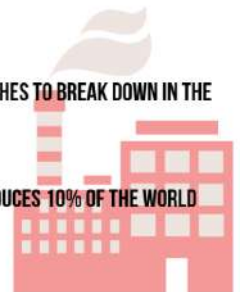


## Fast Fashion Facts

700 GALLONS OF WATER IS USED TO MAKE ONE COTTON SHIRT.

IT TAKES 80 YEARS FOR CLOTHES TO BREAK DOWN IN THE LANDFILLS

THE FASHION INDUSTRY PRODUCES 10% OF THE WORLD EMISSIONS.



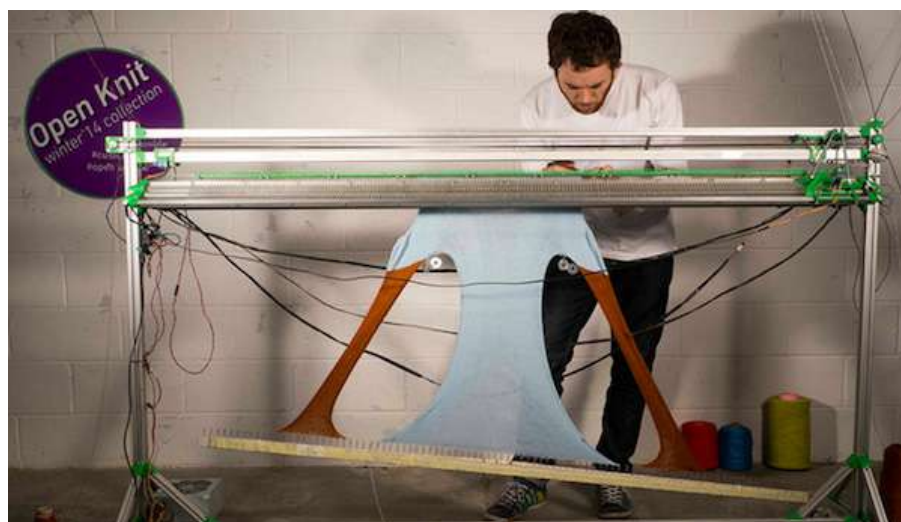
## WHY 3D TECHNOLOGY?

3D printing has been gaining popularity over hundreds of realms. It has been described as nothing short of a new industrial revolution in design and manufacturing. Hence, we thought that its implementation on the fashion industry would have a large positive impact on the way we consume, as well as on our planet.

We are aware that the fashion industry is one of the biggest contributors of environmental pollution, generating enormous amounts of waste and toxic by-products in the treatment and transportation of fabrics. 3D printing however, generates hardly any waste. Rather than cutting shapes from larger pieces of material and discarding the rest, 3D printing uses only what is necessary.

### **3D KNITTING, ANOTHER ALTERNATIVE**

This technology essentially automatizes the knitting process, as it allows files to be automatically knitted, which helps reduce waste. Previously, these machines were expensive and primarily used by large companies. However, many new brands are currently utilising 3D knitting to help reduce waste, since it is more accessible than 3D printing at the moment.



## FABRICS

In July 2020, Polymaker and Covestro released 3D printed fabrics. They have jointly developed a new processing technology with the industry's top 3D printer manufacturers INTAMSYS and Raise3D to improve mass production and efficiency of 3D printed fabrics. The INTAMSYS FLEX 510 printer and Raise3D E2 printer are highly adapted for printing flexible materials which match the characteristics required



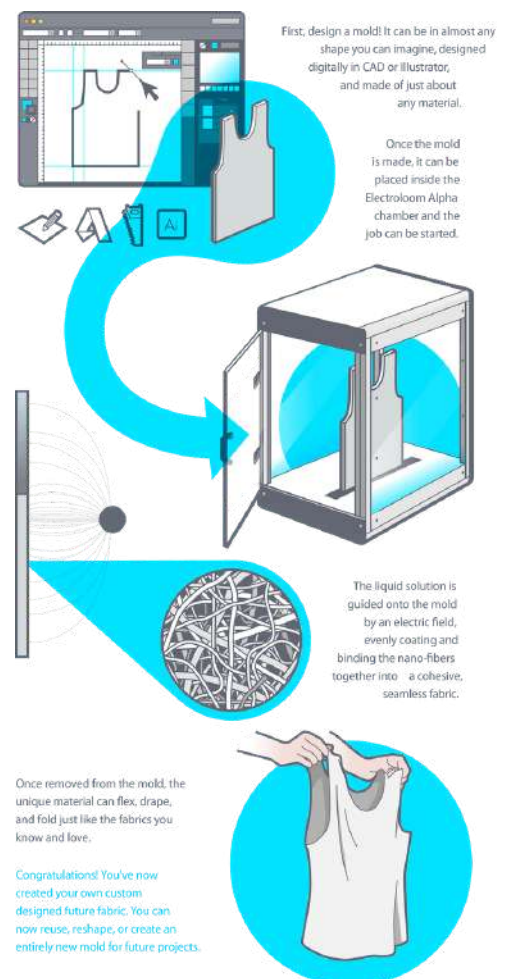
for 3D printed fabric. This technology offers the textile industry both mass production and mass customization. 3D printing fabric may not only provide a more environmentally friendly solution, but also offers a new manufacturing method.

The integrated design of 3D printing could reduce the waste in the production process, and even target zero waste. In addition, in the production process of 3D printing, no water is used, no water is wasted, and no water is polluted.



One of the challenges that remained unsolved until last year, was the incapability of 3D printed clothes to match up those made out of traditional fabrics. However, we have also found an initiative that aimed to make a 3D printer that would create clothes from scratch. The Electroloom Developer Kit is a tool for designing and manufacturing custom 3D fabrics. There is no need for thread, needles, or sewing. This technology reduces the traditional textile manufacturing process into a single step. Instead of sending raw material through factories where it undergoes numerous processing steps to create a traditional textile, it is able to directly convert raw material to finished goods.

Electroloom utilises a polyester/cotton mix, which would also make it easier to use recycled cotton and polyester fibers.



## WORKSHOPS PROGRAM

Over the last couple of decades fast-fashion has taken so much popularity worldwide. Clothes are being sold at very low prices, trend cycles have sped up and shopping has become a monthly event. Fast-fashion has had a tremendous impact on our planet, and its non-stop growth does not seem to stop since the giant brands that practice this business model have taken control of the fashion market.

That is why we have come up with a new business model where we promote slow-fashion and raise awareness through practice. Hence, our workshops program is one of the main pillars of our company. It consists of giving the customer the opportunity to make their own clothes. We will provide them with all the necessary to create garments of their own. Not only will they get the knowledge on how to make t-shirts, skirts, and pants from scratch, but, since we are aware that hardly anyone owns a sewing machine, they will also have the opportunity to go to our sewing machines centre and directly make their clothes there. In this centre they will be able to choose between a variety of materials eco-manufactured by us with our 3D technology. This way, their clothes won't only hold an extra value but also it would save our customers the labour tax, getting rid of excuses on why not to buy green clothing because of its high worth.

We believe that with this new business model we will be able to change the whole problem from core, which is our consumption speed levels. We would be making people aware of what it takes to make a single piece of garment and promote smart consumption.



## WHAT MAKES US DIFFERENT

- Our unique designs elaborated by artisans from the Huichol community
- Green manufacturing with 3D technology
- New business model (workshops program and campaigns)



## SDGs WE ARE TACKLING

- Clean water and sanitation
- Decent work and economic growth
- Responsible consumption and production
- Industry, Innovation and Infrastructure

## HOW WILL IT LOOK LIKE IN THE FUTURE

In our business first stage, we will manage our company through e-commerce, meaning that we will primarily open an online shop available for everyone around the world, in order to save money on space rent and eventually start scaling up until being financially stable to open physical stores.

Likewise, as we start gaining more popularity, we are planning to implement in our workshops program a course on how to design your own clothes through 3D printing.

Additionally, we would invest in the development of new technologies to make our company more sustainable as well as affordable.

And finally, we also aim to be part of the Fair Trade Enterprises of World Fair Trade Organization.

## ***Dress up without messing the world up***

### SOURCES:

- Battered Women Supports Services. (August 27, 2019). *The Problem with Fast Fashion*. <https://www.bwss.org/fastfashion/>
- World Fair Trade Organization. <https://wfto.com/>
- Sustain Your Style. *Our Fiber Eco-Review*. [https://www.sustainyourstyle.org/en/fiber-ecoreview?gclid=CjwKCAjwtdcFBhBAEiwAKOIy58A\\_sRBIIMGrJMEF7hAP1hkrLv9OvDkiejaBoY9LWDDbfhD8VcwQNhoCC14QAvD\\_BwE](https://www.sustainyourstyle.org/en/fiber-ecoreview?gclid=CjwKCAjwtdcFBhBAEiwAKOIy58A_sRBIIMGrJMEF7hAP1hkrLv9OvDkiejaBoY9LWDDbfhD8VcwQNhoCC14QAvD_BwE)
- Kickstarter. *Electroloom: The World's First 3D Fabric Printer*. <https://www.kickstarter.com/projects/electroloom/electroloom-the-worlds-first-3d-fabric-printer?lang=es>
- Polymaker (July 8, 2020). *Polymaker and Covestro jointly release 3D printed fabric developing new areas of 3D printing applications*. <https://polymaker.com/polymaker-and-covestro-jointly-release-3d-printed-fabric-developing-new-areas-of-3d-printing-applications/>
- Wardini, L. (June 13, 2020). *What Are the Benefits of Using 3D Printing in Fashion*. <https://www.the-sustainable-fashion-collective.com/2020/06/13/what-are-the-benefits-of-using-3d-printing-in-fashion>
- Imprimalia 3D. (February 28, 2014). *La impresora 3D con la que puedes imprimirte tu propia ropa*. <http://imprimalia3d.com/noticias/2014/02/20/001343/impresora-3d-que-puede-s-imprimirte-tu-propia-ropa>
- Wires Glasses. (November 23, 2018). *Is the future of fashion 3D printed?*. <https://medium.com/@wiresglasses/is-the-future-of-fashion-3d-printed-732b6e587f4>
- Trejo, C. (April 29, 2020). *Arte Huichol: conoce el significado ancestral de sus elementos*. <https://picnic.media/arte-huichol-conoce-el-significado-de-sus-simbolos/>
- Artesanía de México. (September 24, 2020). *¿Qué es el arte Huichol?*. <https://artesianiademexico.com/es/blog-artesantias-mexico/que-es-el-arte-huichol>