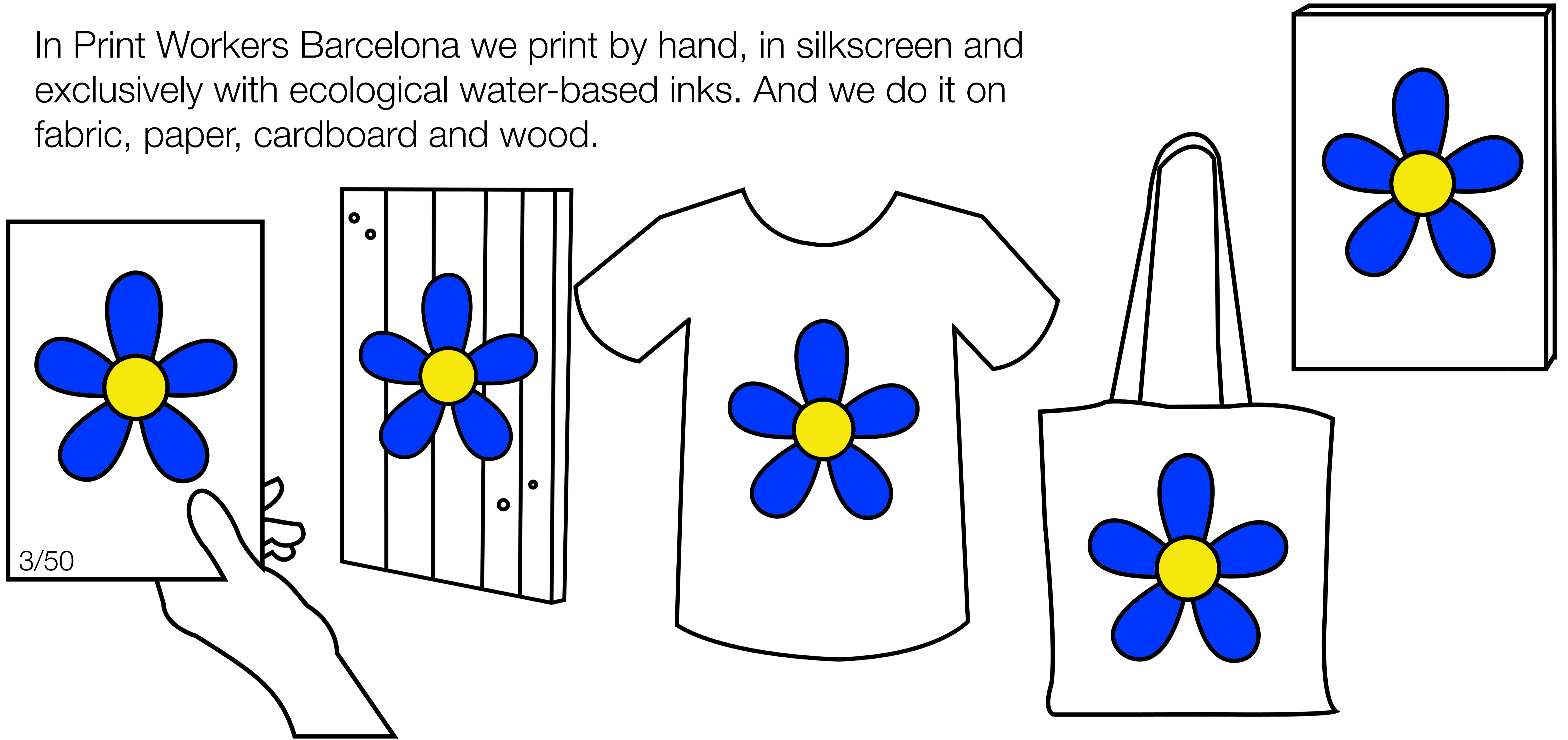


In Print Workers Barcelona we print by hand, in silkscreen and exclusively with ecological water-based inks. And we do it on fabric, paper, cardboard and wood.

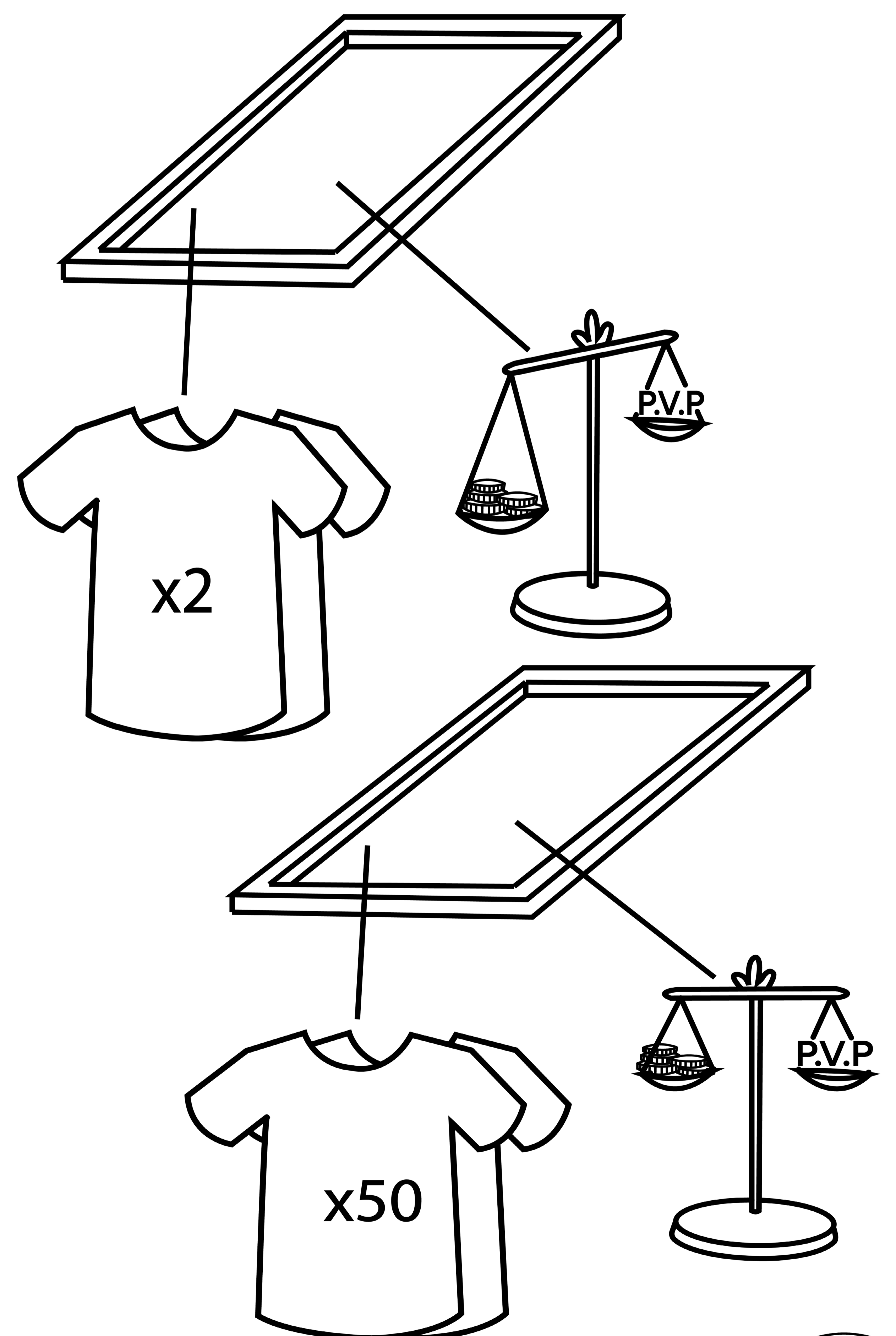


Why silkscreen printing?

- For the intensity of the colors of the inks and their durability.
- For the variety of supports on which we can print.
- For the added value of handmade stamping and limited edition.
- For its low cost that allows us to add a large margin of profit to the customer.
- For environmental responsibility.

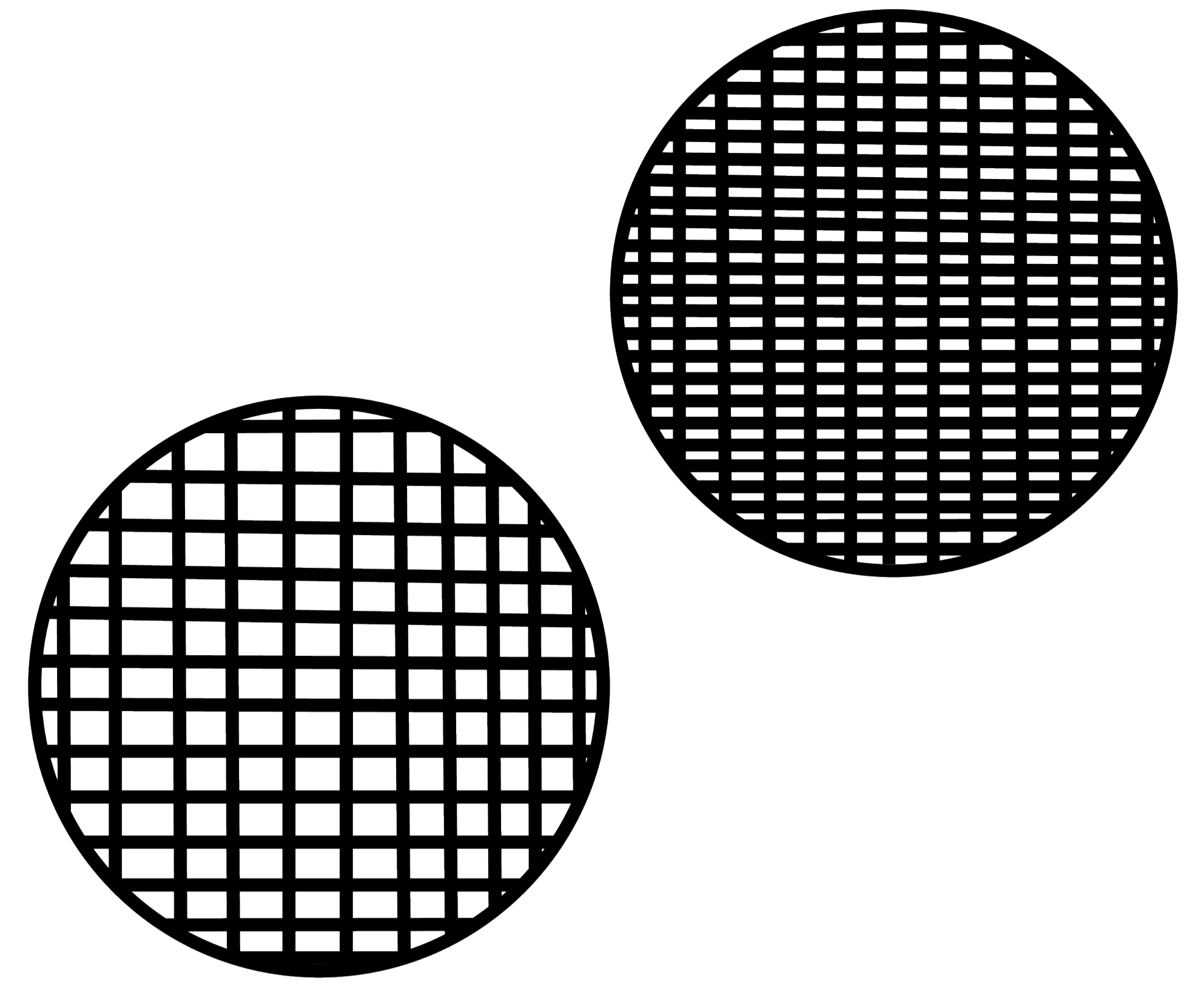
Silk-screen printing a method of editing :

To perform a silkscreen printing it is necessary to first prepare the screen and then proceed to stamping. Stamping can be very fast while preparing a screen can take a minimum of one hour of meticulous work. That is why the larger the edition, the more economical it is. As the fixed cost (screen preparation) is spread over more units.



Quality and definition of silkscreen printing

Screen printing screens are composed of a frame and a nylon/ polyester fabric through which the ink is filtered when pressed. Screen printing screens have different densities and thread counts: 43 62, 77, 90 or 120 threads per linear cm. Yarn is comparable to pixels. The higher the yarn count, the higher the resolution and the lower the ink discharge.



Thus for graphic work, paper. We will use for example 90 thread screens that allow designs with very fine lines and small text and fonts.

For textile printing we will use screens of few threads. For example, 43-thread screens for generous designs and medium-sized text and fonts.

Thus, if the support on which we print is very porous (textile) we will need low thread screens (large holes) that discharge a lot of ink.

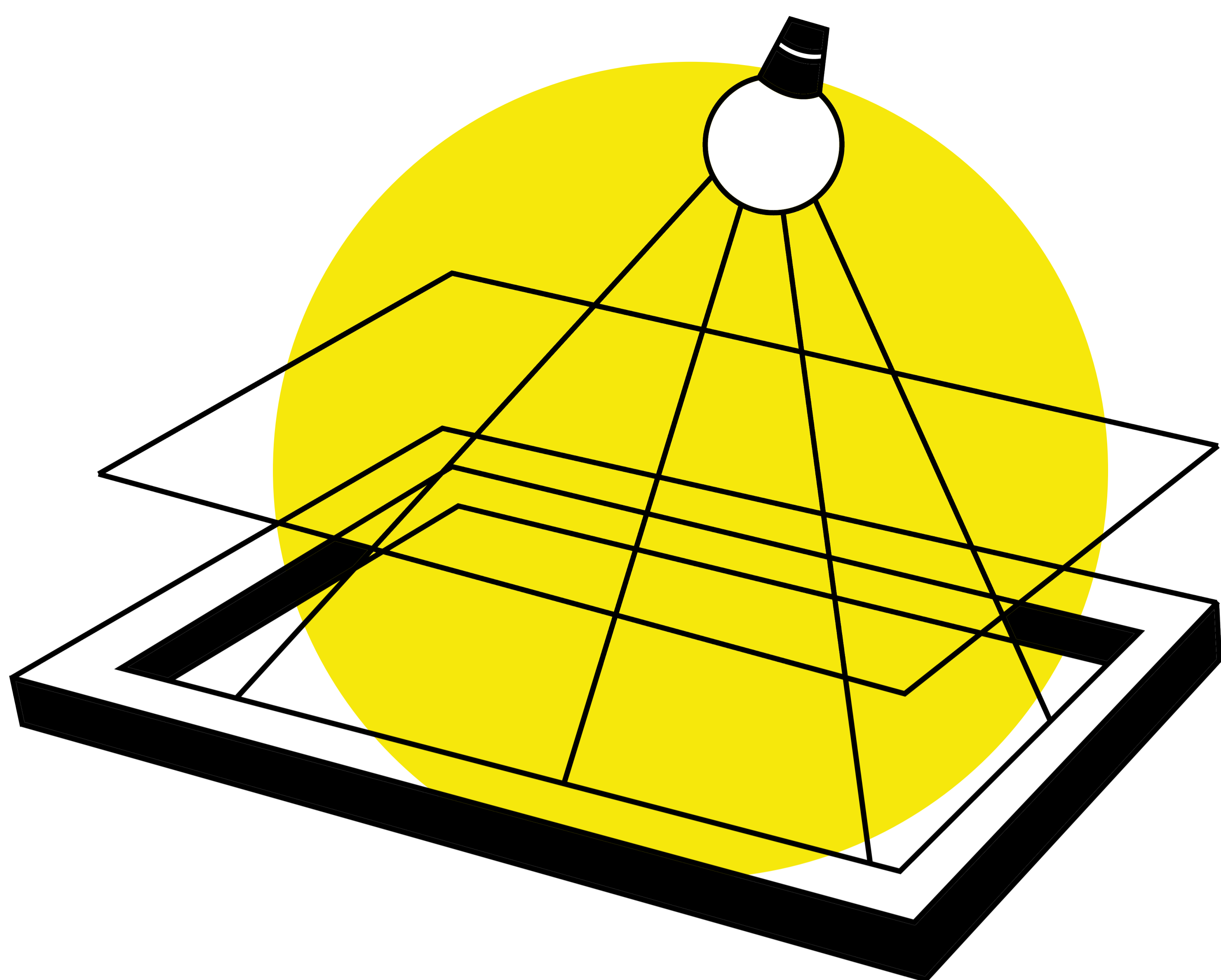
And for less porous substrates (paper, cardboard, wood) we will use high thread count screens that discharge less ink.

THREAD SCREEN	SUPPORT	DESIGN	SIZE DESIGN
30, 43, 62, 77	TEXTIL	GENEROUS	MEDIUM, LARGE
62, 77, 90, 120	PAPER	WITH DETAIL	SMALL, MEDIUM AND LARGE

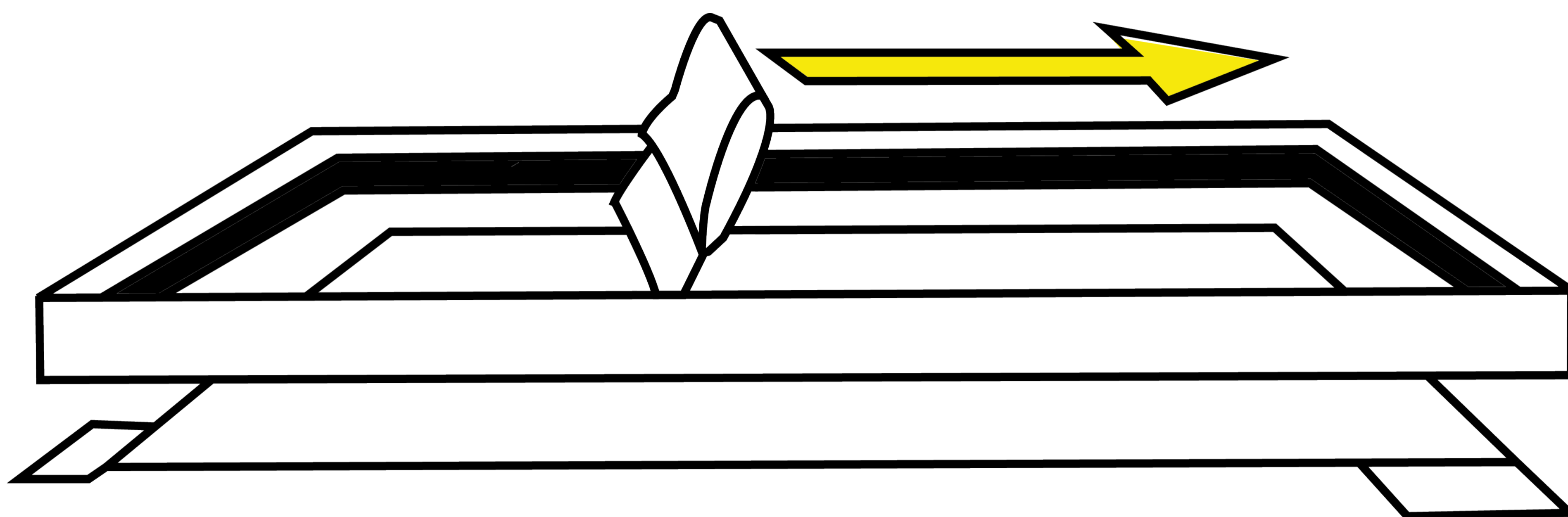
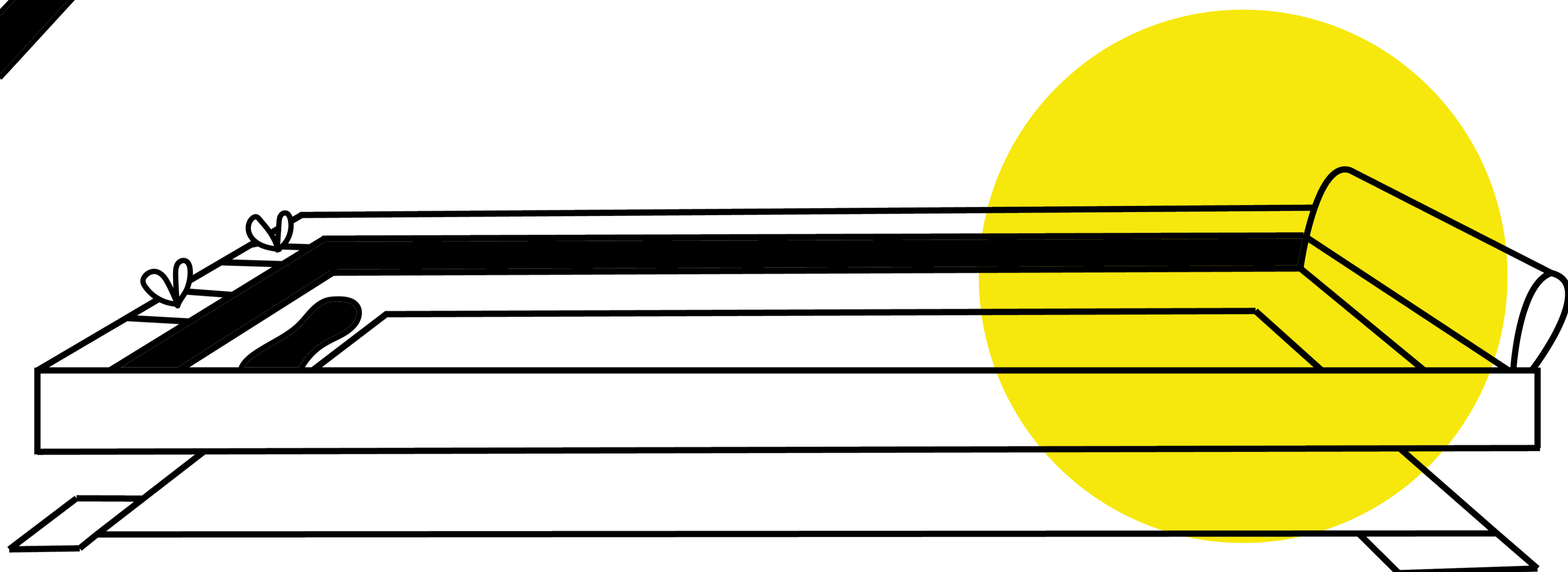


How does screen printing work?

Screen printing screens work like a stencil. With the proper pressure the ink passes through the screen and we print. The photographic screen printing allows us to pass all kinds of designs to the screen. And make extensive editions without the design losing quality. We transfer the design to the screen through a process similar to that of photographic development.



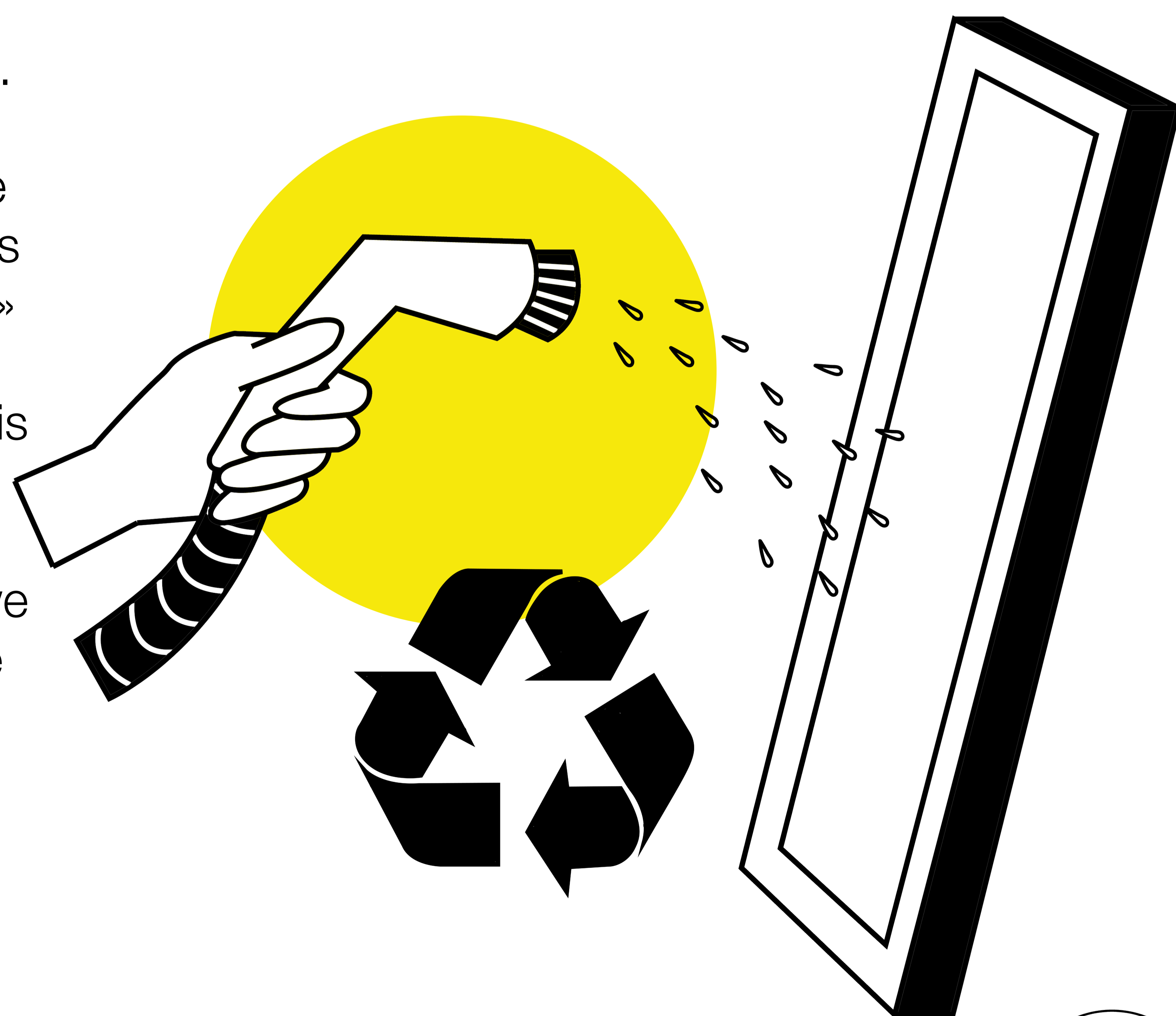
Once the screen has been developed with water, the design appears on a part of the screen with the mesh exposed. This is where the ink will pass through when pressed. While the rest of the screen remains impervious to ink.



To place the design correctly on the T-shirt, tote bag or foil, we must make a register. This will allow us to maintain the same positioning of the design throughout the edition.

In addition, screen printing works in layers. One color is stamped, it dries, the next color is stamped and so on... So the more colors, the more expensive and difficult it is to print because you also have to «square» (make the register) a color with another color to compose the final print. And all this is done manually.

And at the end of the stamping process we remove the design from the screen, so we reuse the screen for another design. We recycle the screens !



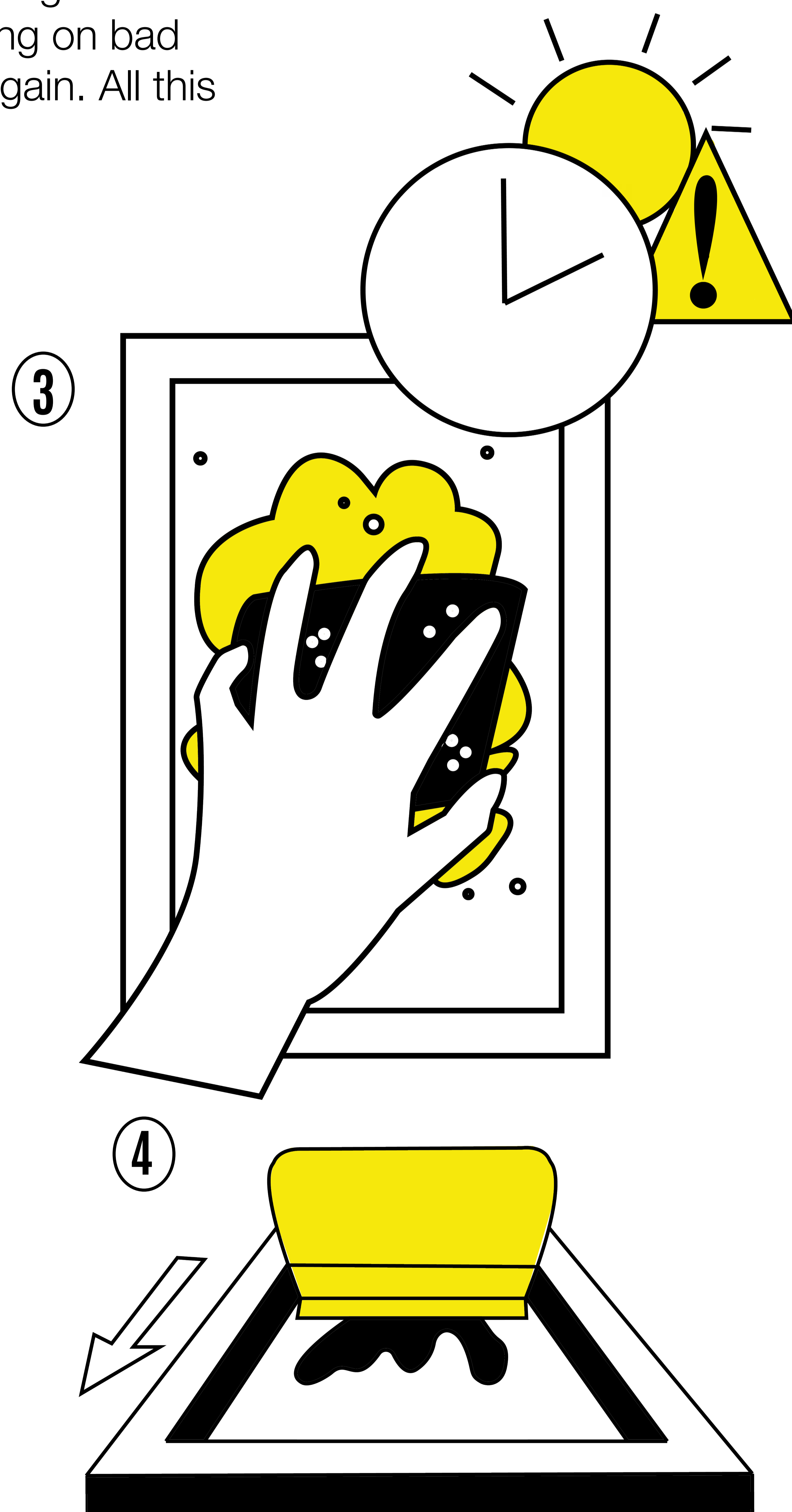
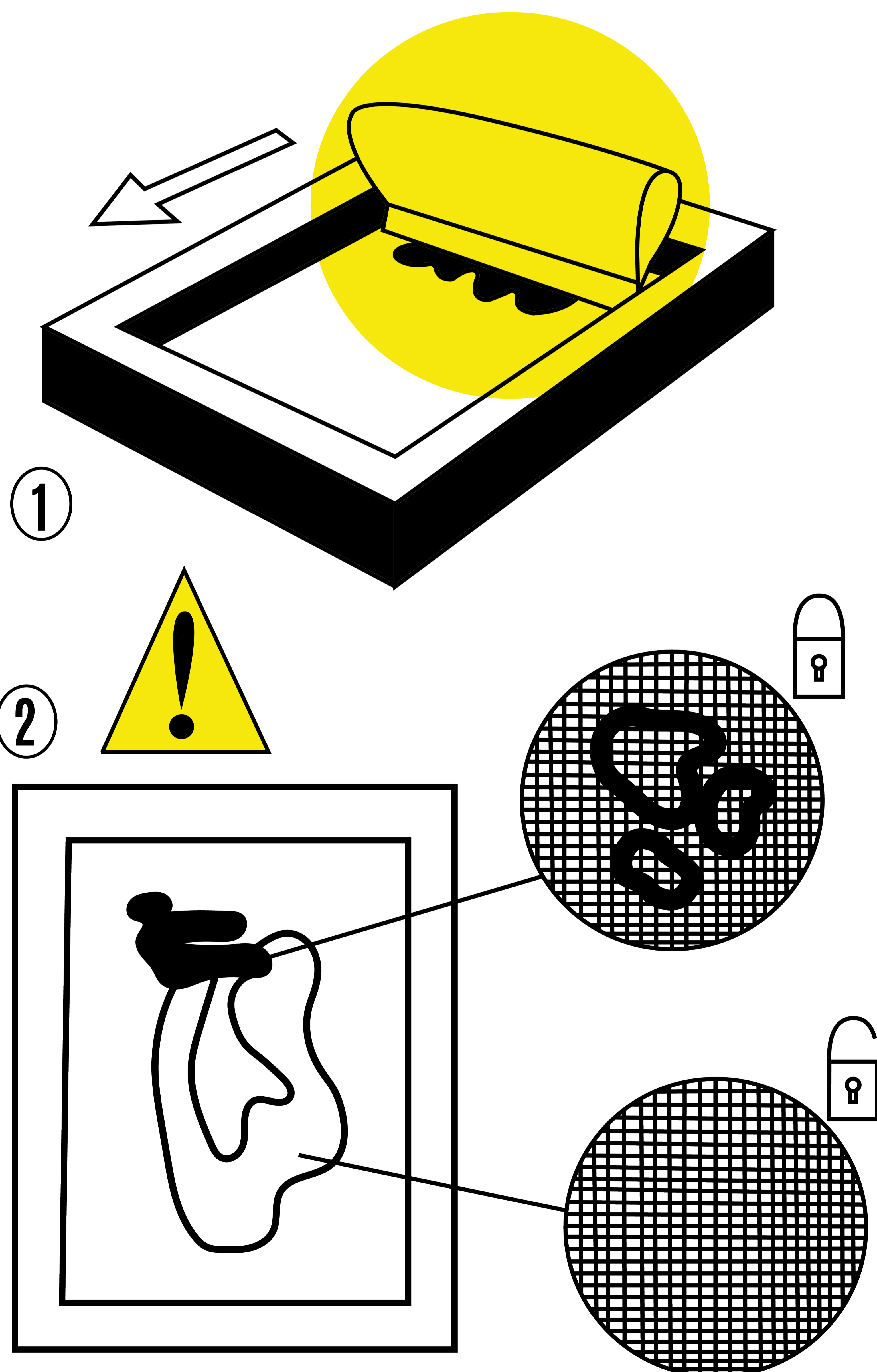
Working with environmentally friendly inks

At Print Workers Barcelona we perform all our printing services exclusively with ecological water-based inks and 100% manual printing.

Water-based inks dry in the air, which makes it very difficult to work with many inks. In contact with air, the water in the ink evaporates. And it increases its density until it blocks the holes in the mesh.

Because of this we always have to work very fast. But depending on the ambient temperature (in summer for example) and the type of design (very fine lines) the blocking of the screen is almost inevitable.

When this happens. We have to interrupt the stamping. Unblock the screen with water and dry it by stamping on bad paper (maculae). Until the screen is free of dry ink again. All this adds time and effort.



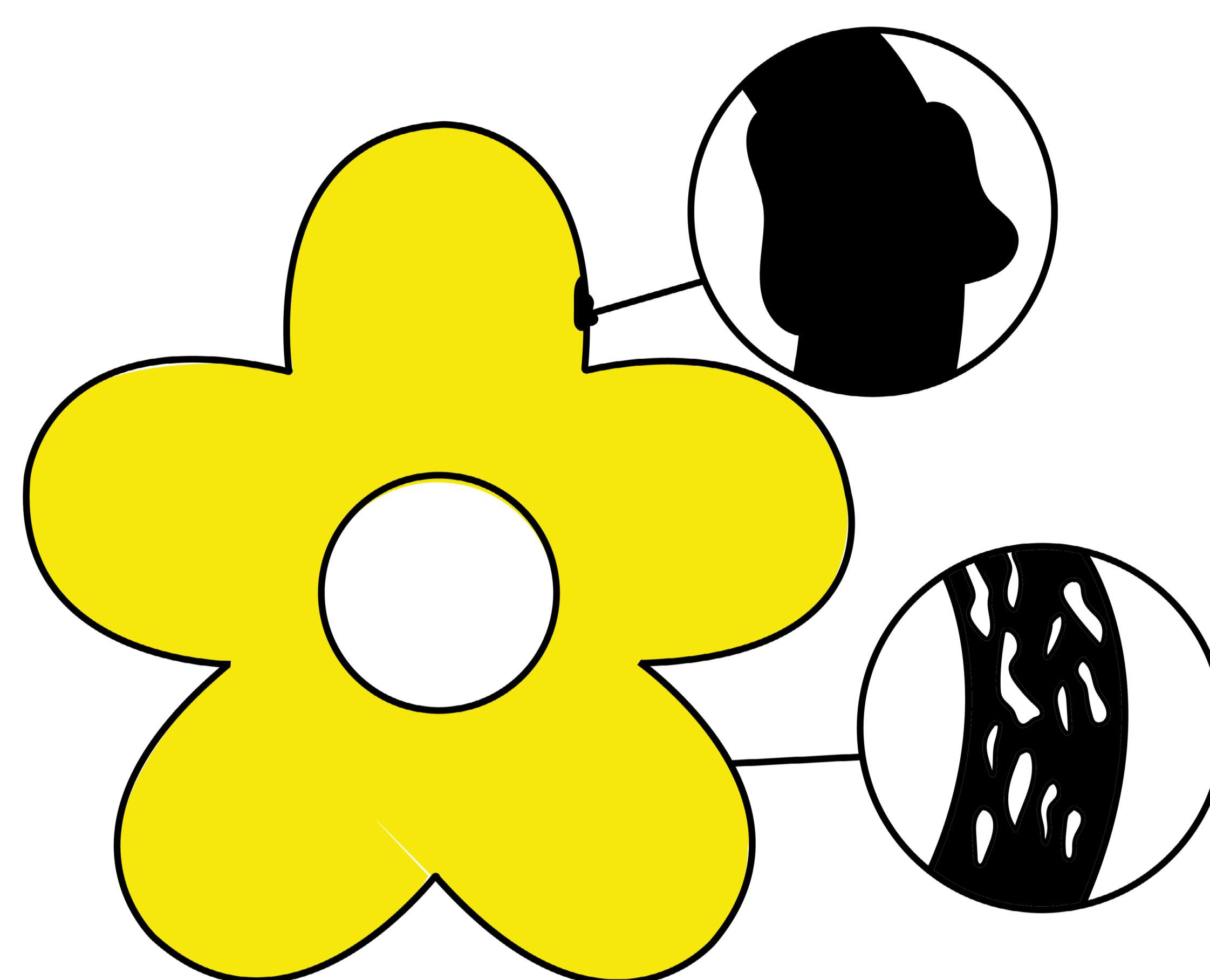
The charm of an original piece in a limited edition

In graphic works, on paper, the cost of this difficulty is assumed because the laws of the market and the art market may differ greatly. And it is the task of the artist / client to pass on the cost of printing in the price of a print that will always be appreciated and valued by the public as a limited edition piece.

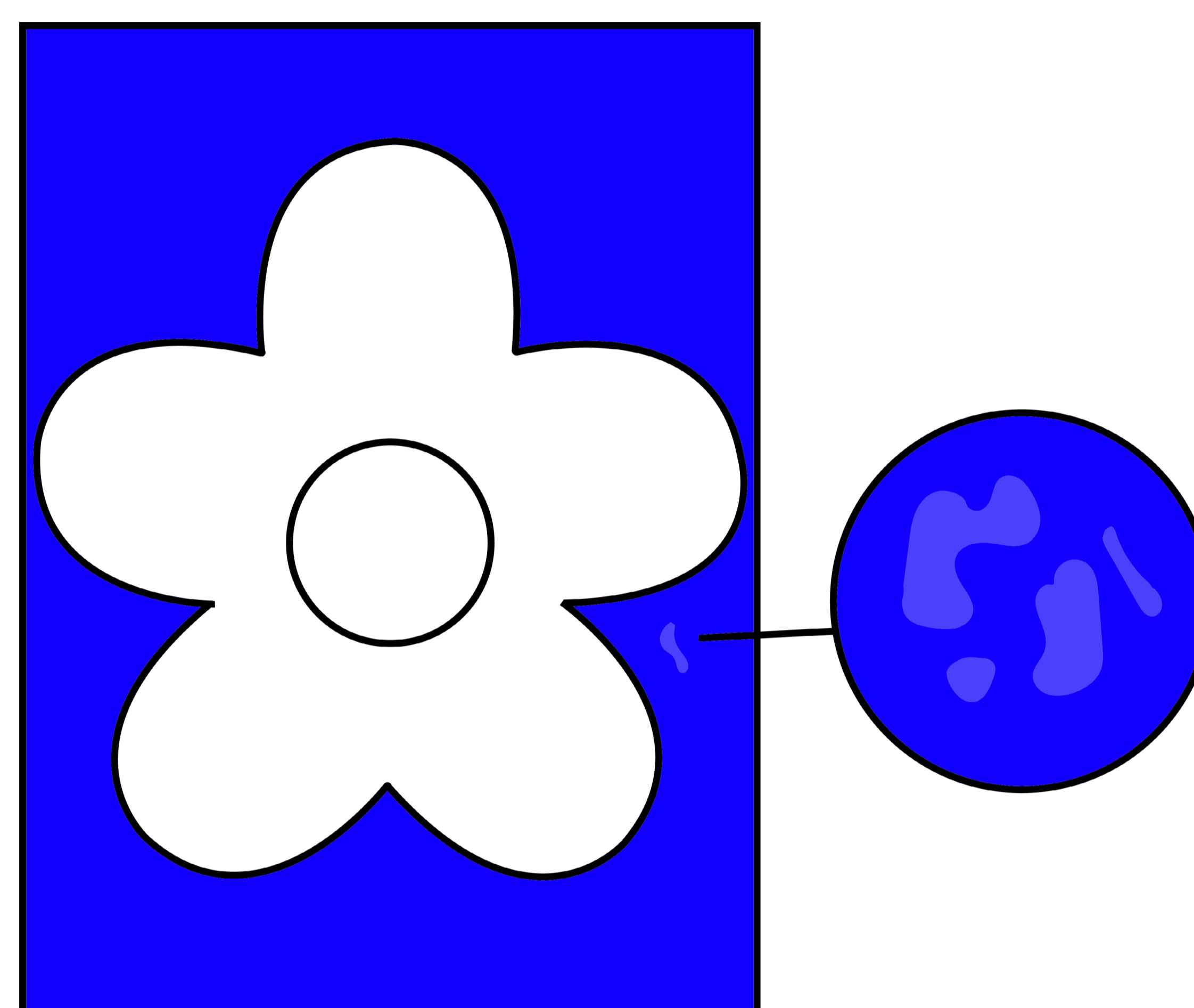
When working manually with water-based inks, you will easily notice the traces of stamping: higher ink intensity on one side; a lack or excess of ink, for example in the finest lines of a design; or different ink intensities in large, solid layers of ink.

Registration errors

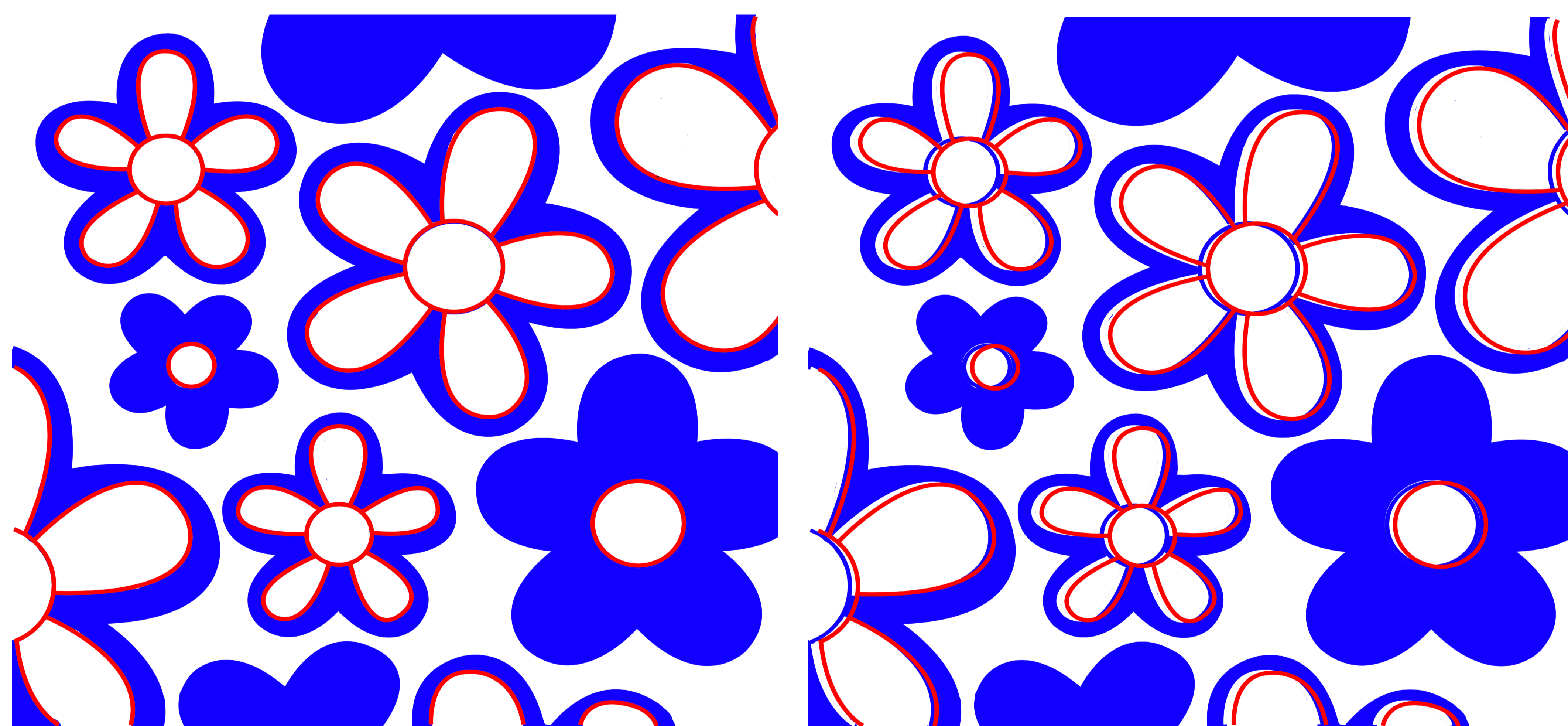
In addition to having to work very fast to prevent the ink from drying ... It is common to have small registration errors of 0.5mm to 1.5mm approx. All this makes that in the edition of handmade graphic work each piece is an original in itself within an edition.



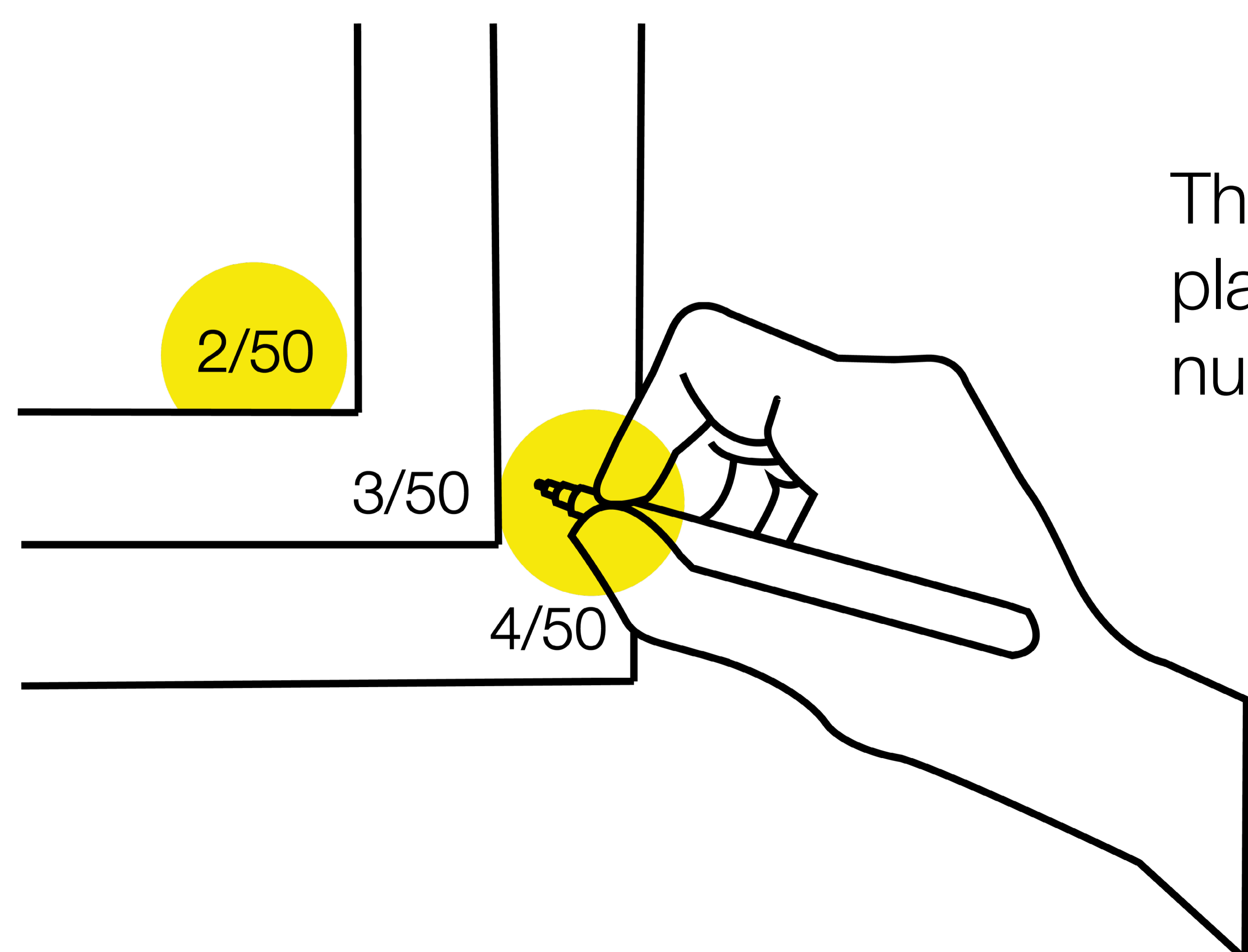
excess or lack of ink



solid layers of ink



registration errors

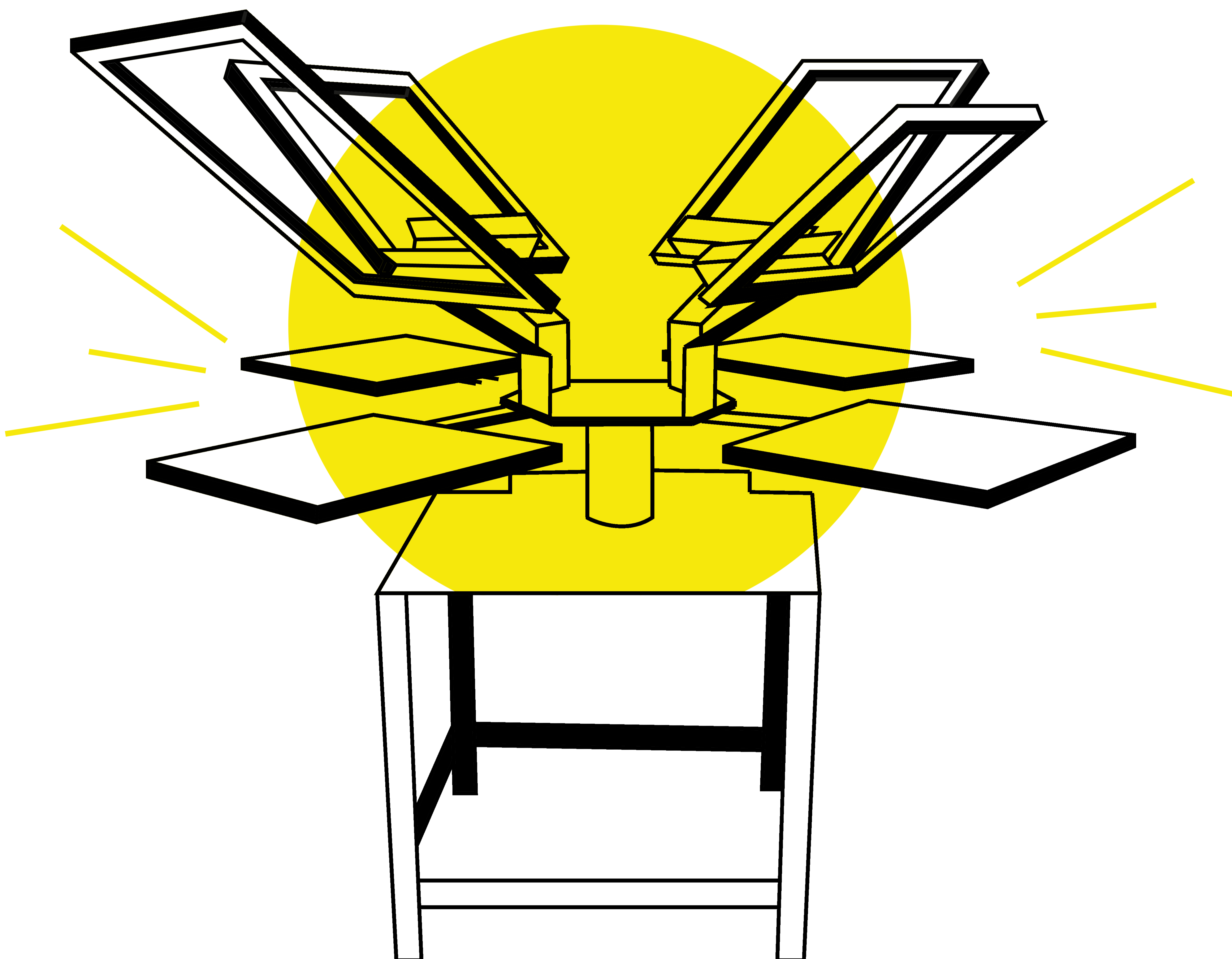
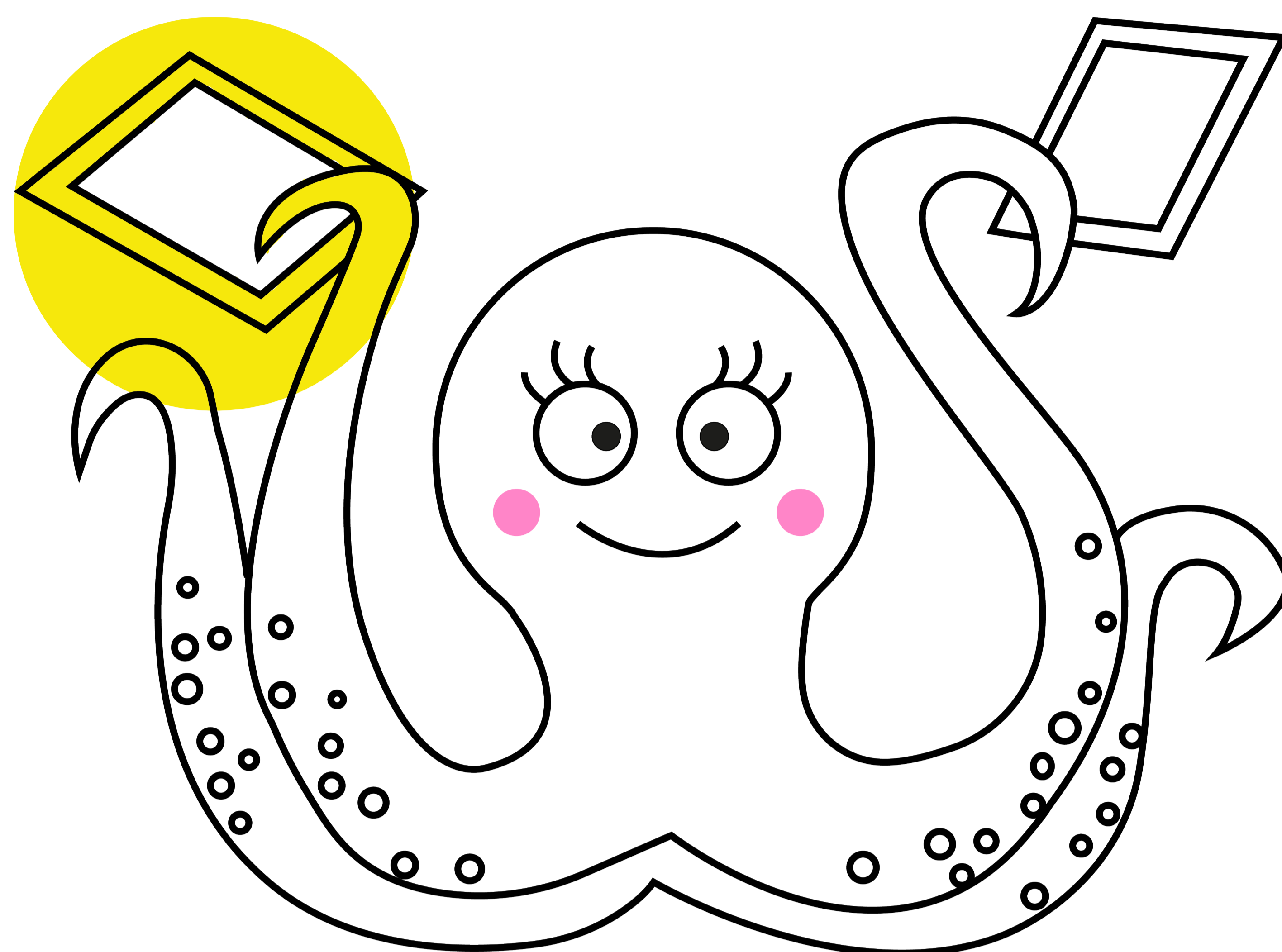


That is why the plates are signed and numbered.

Like fish in water

Working with non-ecological inks may be the solution for designs with 3 or more inks on textile. But this may clash with the environmental responsibility of the customer's project. And at the same time with our choice to work exclusively with water-based inks, 100% ecological.

In textile printing on T-shirts and bags where low market prices are the norm we will seek to use the octopus or carousel of several stations to speed up the work and reduce costs. But if we work with more than 2 inks it is inevitable that the price of our work will be high.



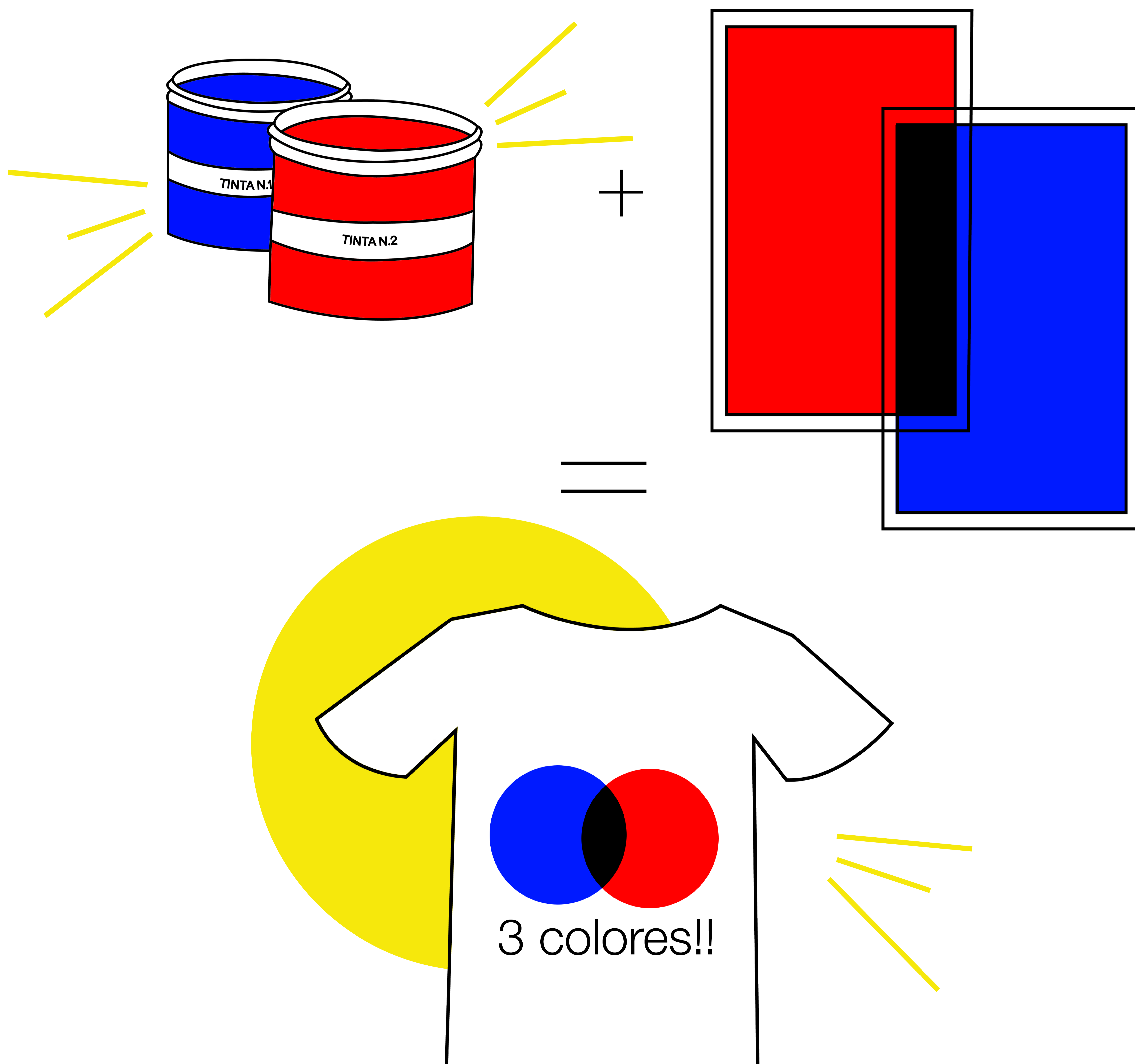
How can we achieve economical printing with ecological, water-based inks?

We will use graphic resources such as halftone or color multiplication to achieve more colors with fewer inks or richer designs with the optical effect of using halftone.

Multiplication of colors

If we use non-covering inks we will be able to create new colors from the partial overlapping of one ink with another. For example, if we print blue ink over yellow ink, green will appear.

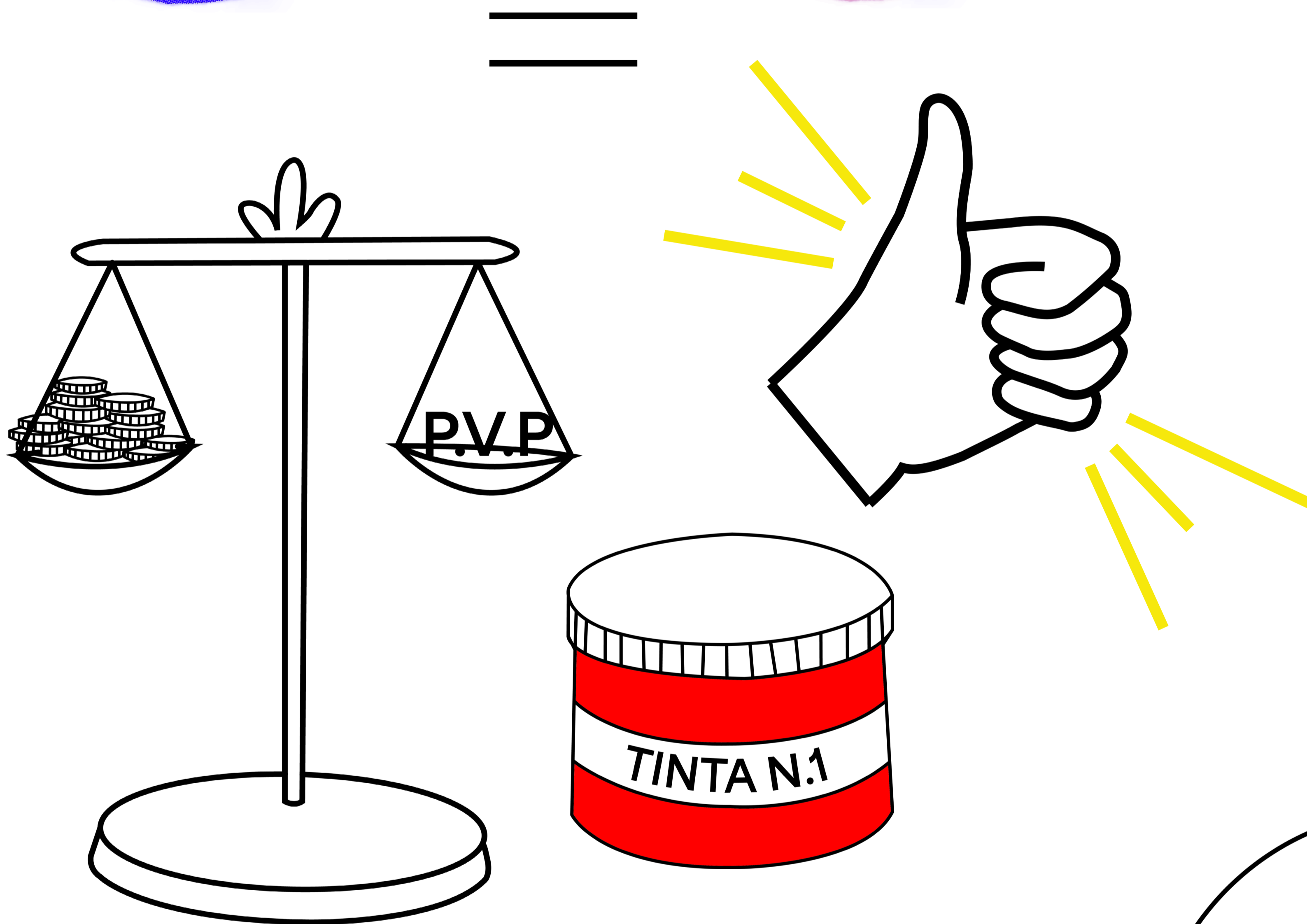
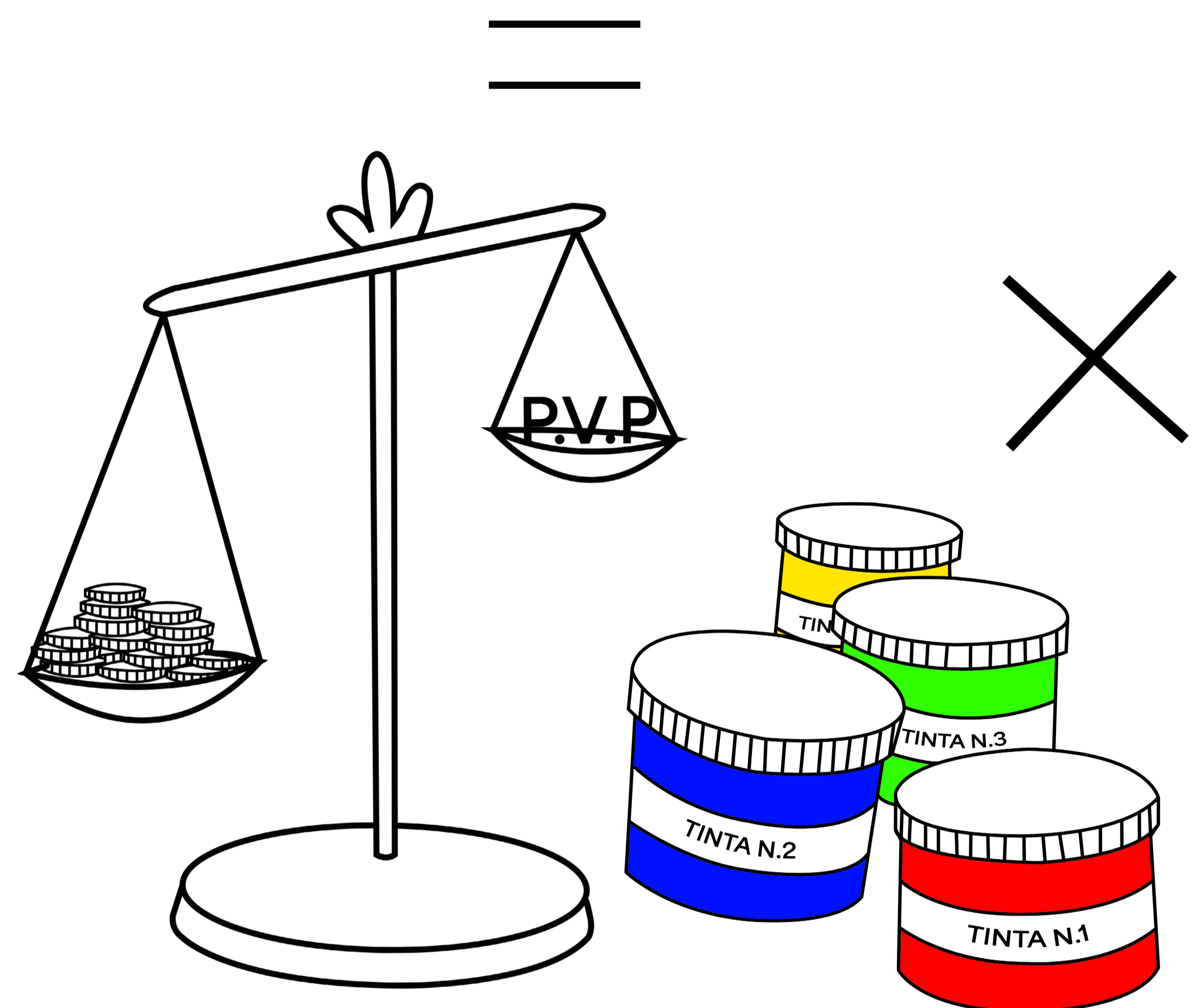
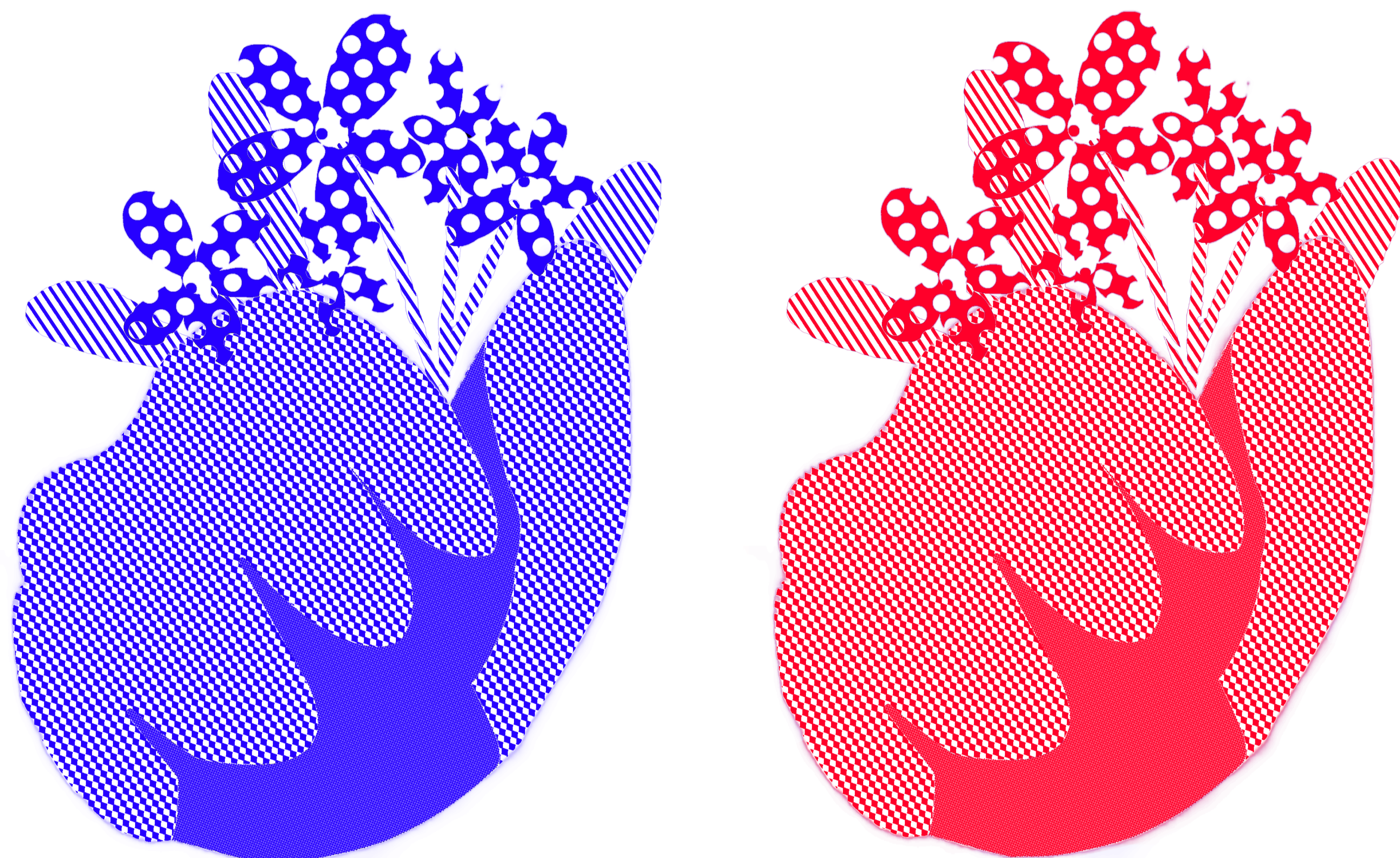
In this way a 3-color sheet can have up to 7 colors. And a 2-color t-shirt can have 3 colors. Or even more if we play with the color of the fabric or the film.



Halftone

By means of the optical effect of the halftone or dot pattern we will be able to enrich our designs using very few inks. We can use different types of patterns: circles, stripes, ellipses... And we will also choose different sizes for each type of pattern.

Looking for each color of the original design to be a different pattern, we will achieve a rich and attractive design with a maximum of 1 or 2 inks.



With these resources we will be able to make a really economical edition and at the same time respect the environment.



What types of water-based inks will we choose?

Within the water-based inks we have several families: acrylic ink, lacquer ink and paper ink.

Acramine ink is the most environmentally friendly ink on the market and has so much water that it dyes the fabric when it penetrates it. This means that there is always a minimum of color change in the ink as the ink pigment mixes with the pigment of the fabric on which it is printed.

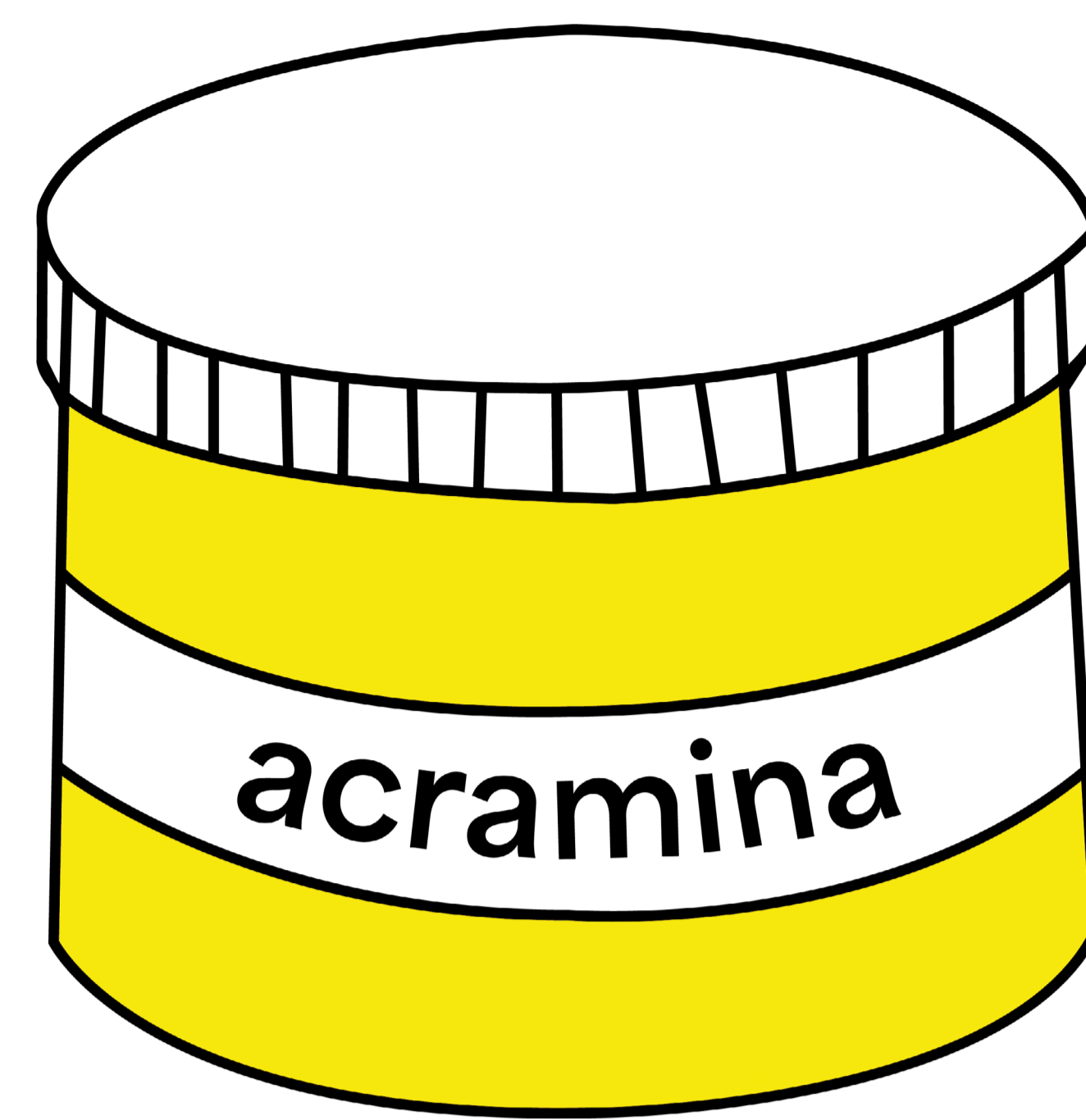
An added advantage of acrylamine ink is the automatic color multiplication possibility it has. E.g.: if a blue is printed on top of a yellow, a green will appear.

Lacquer ink has less water than acrylamine, so it has more covering capacity and a more intense color because it stays on the surface of the fabric. This partially cancels the natural feel of the fabric and is noticeable to the touch. Of course without reaching the level of a vinyl. It is much more subtle. By not mixing with the fabric the color is more intense.

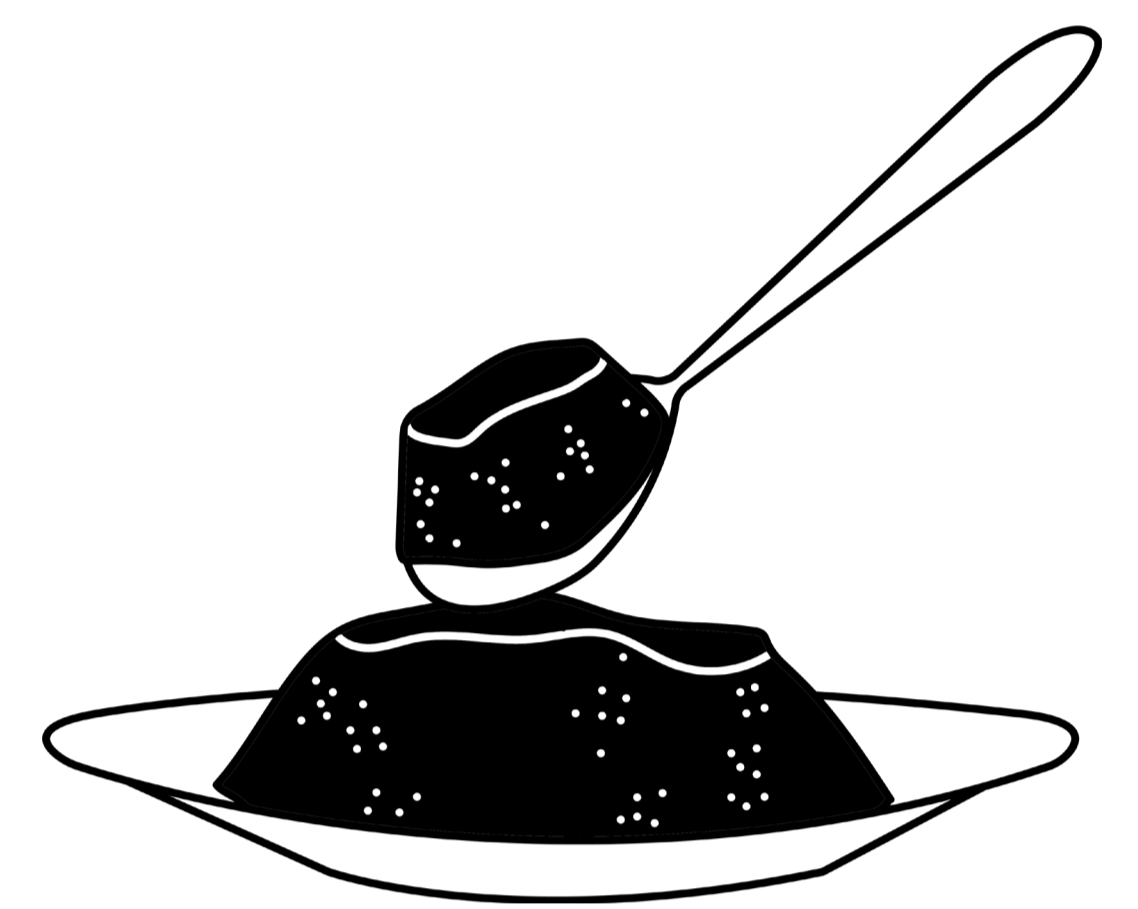
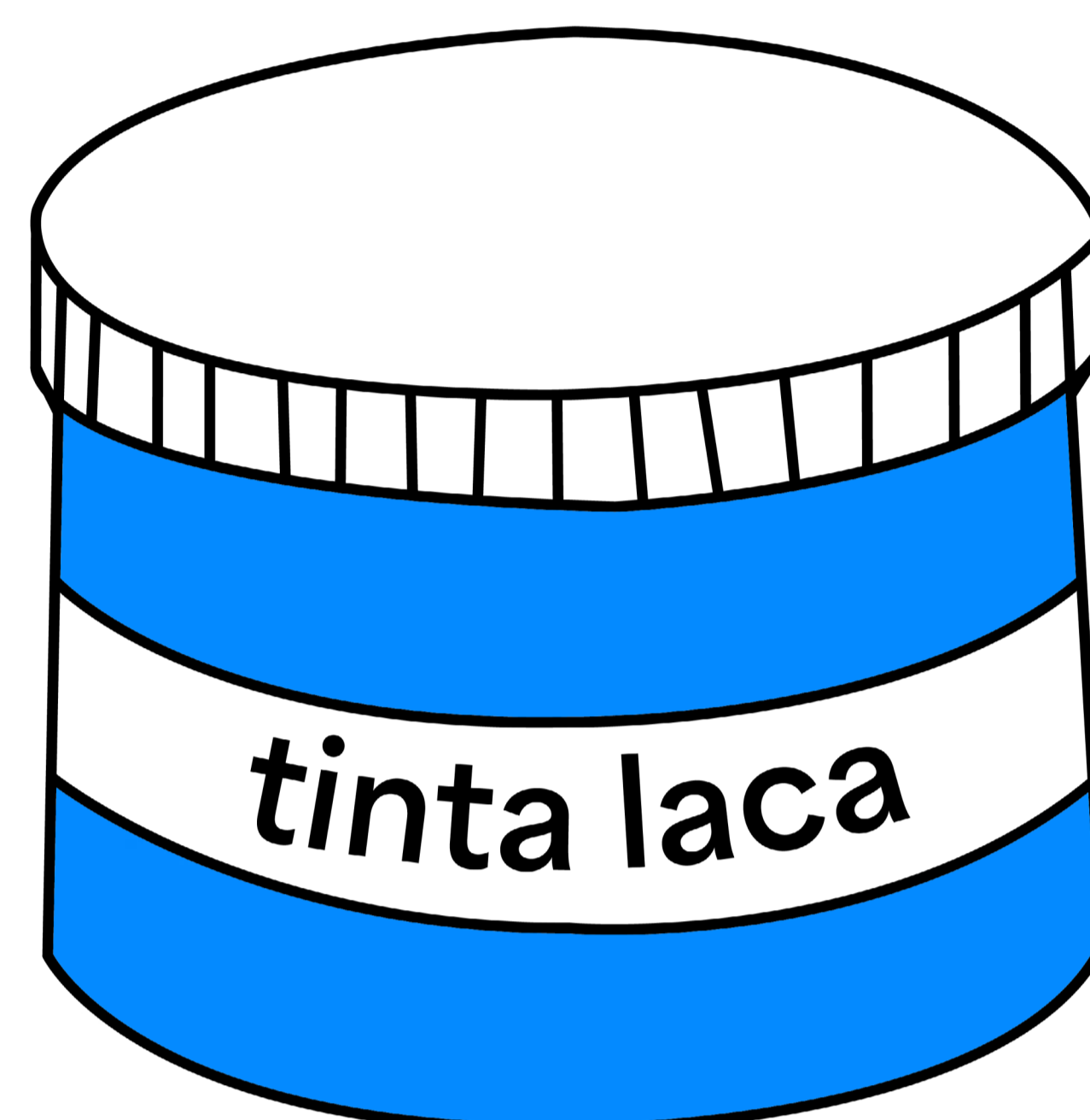
This ink does not have automatic multiplication as it does not have transparency like acramine. To achieve multiplication, the base binder is added.

The shellac ink does not cure (fixation) in the air like acramine, so it needs to receive heat to withstand washing.

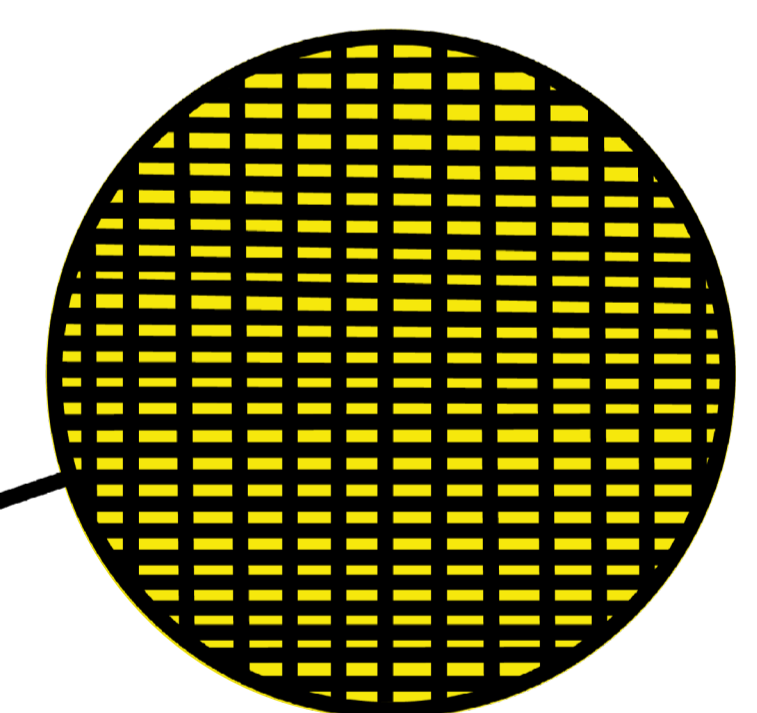
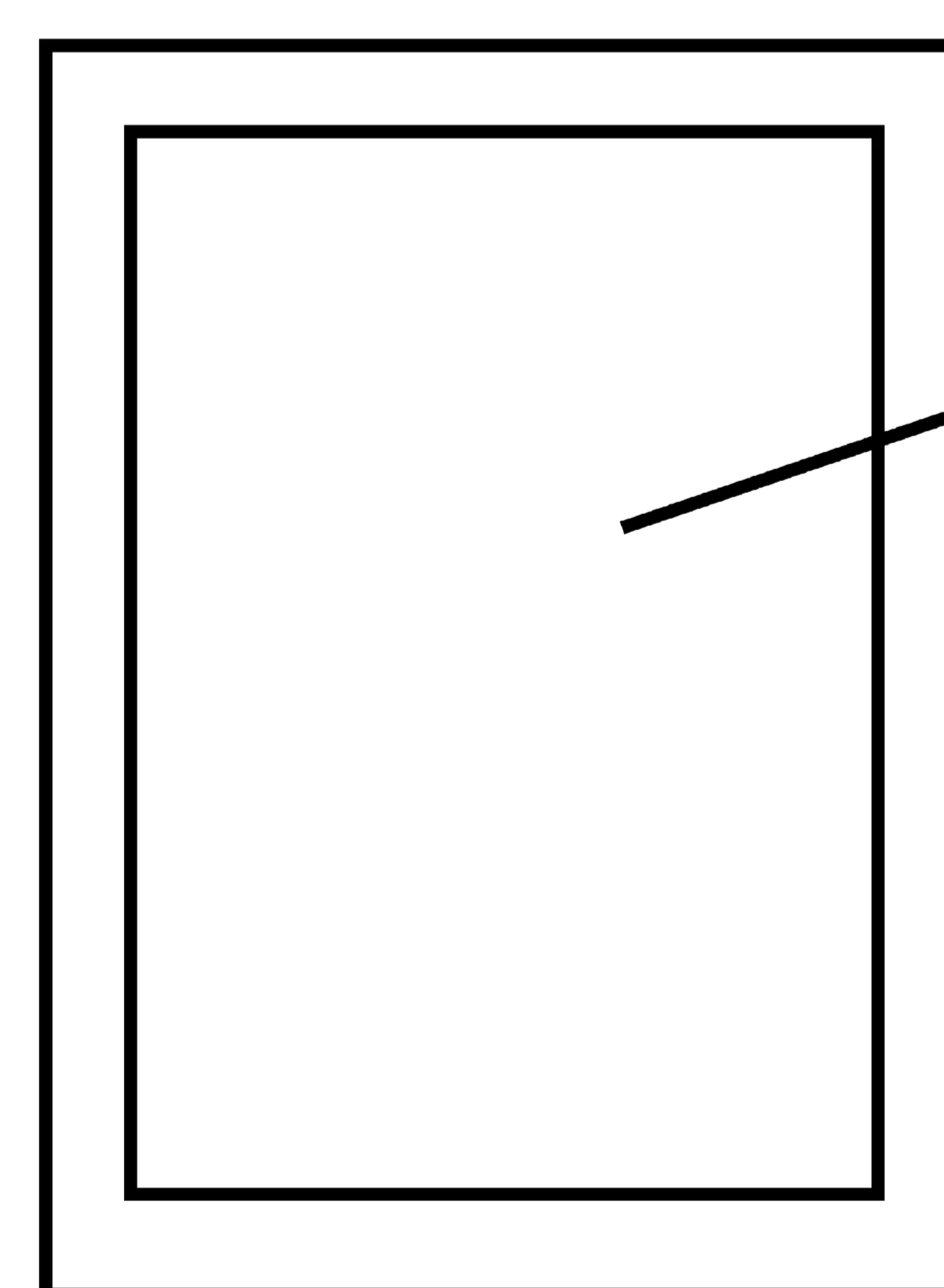
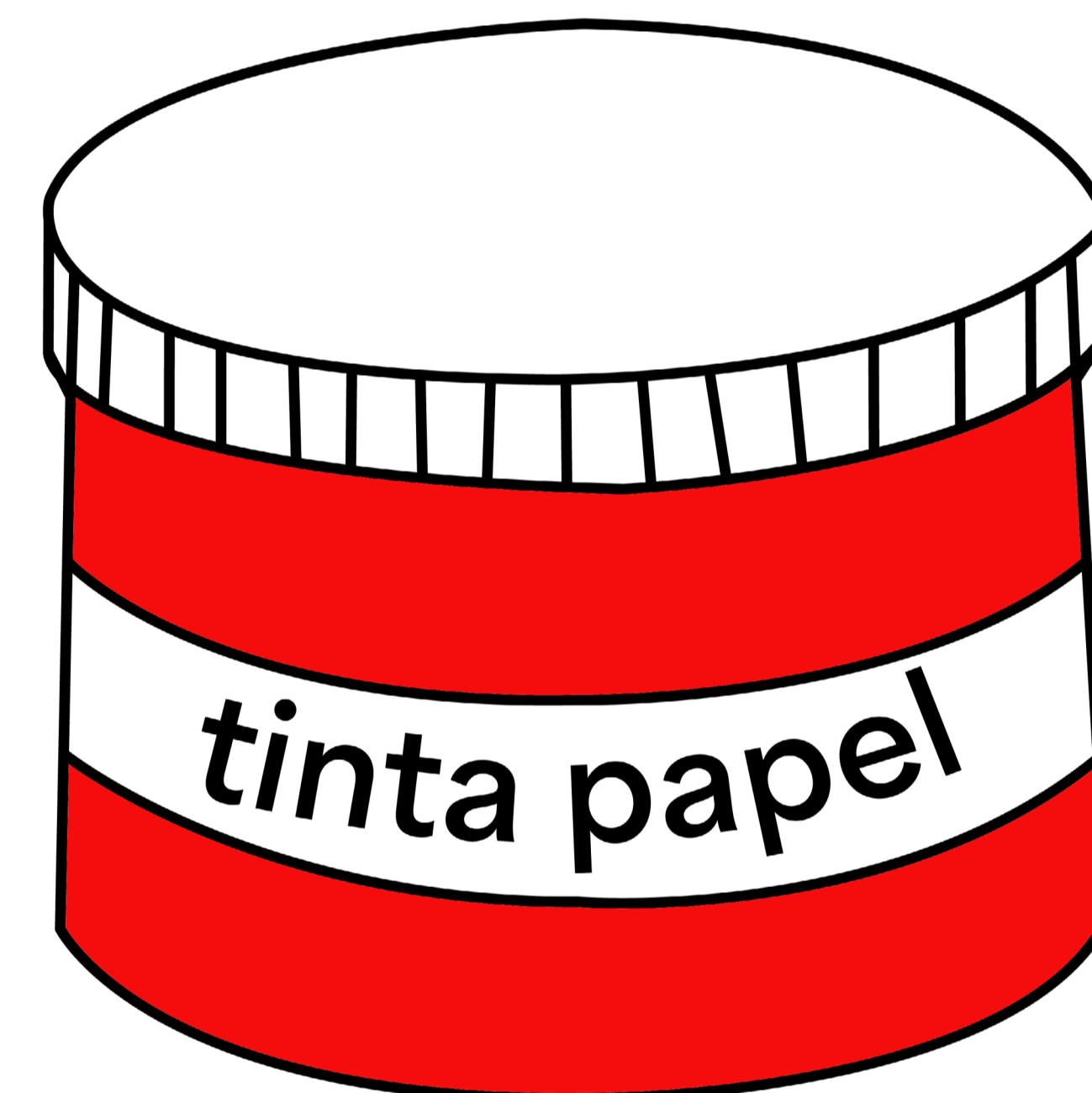
If we choose a resist ink it is necessary to use stencils with a maximum of 43 threads. In other words, screens with large holes so that the ink can pass through the holes in the mesh without any problems. This implies that the size of the fonts and the thickness of the lines of the design must be generous.



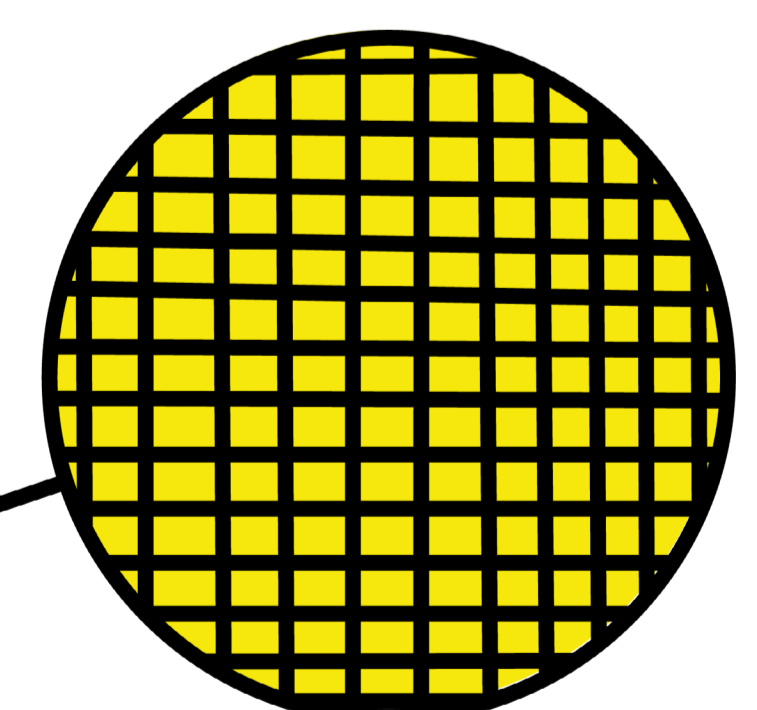
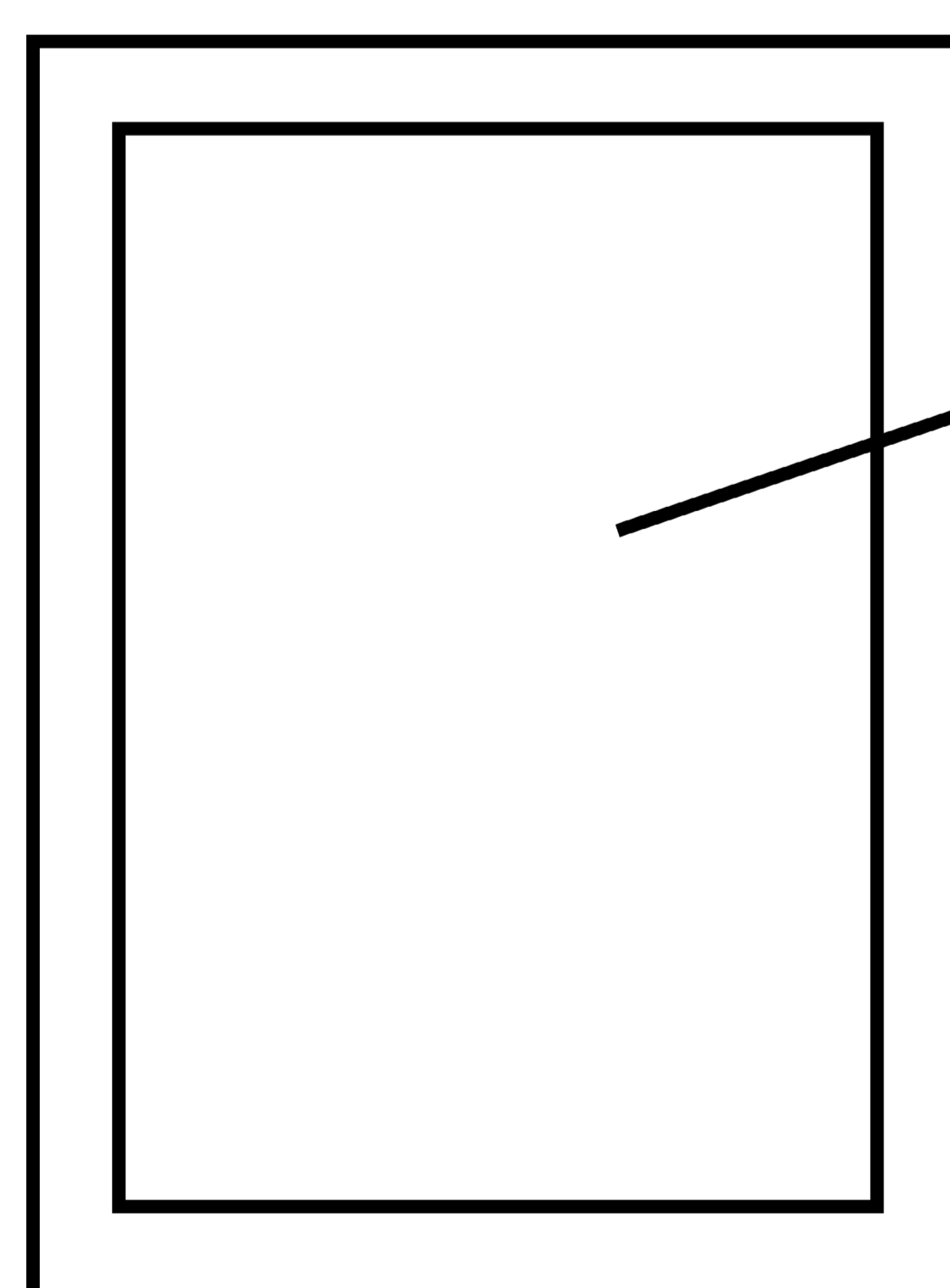
yogurt texture



texture of
mousse

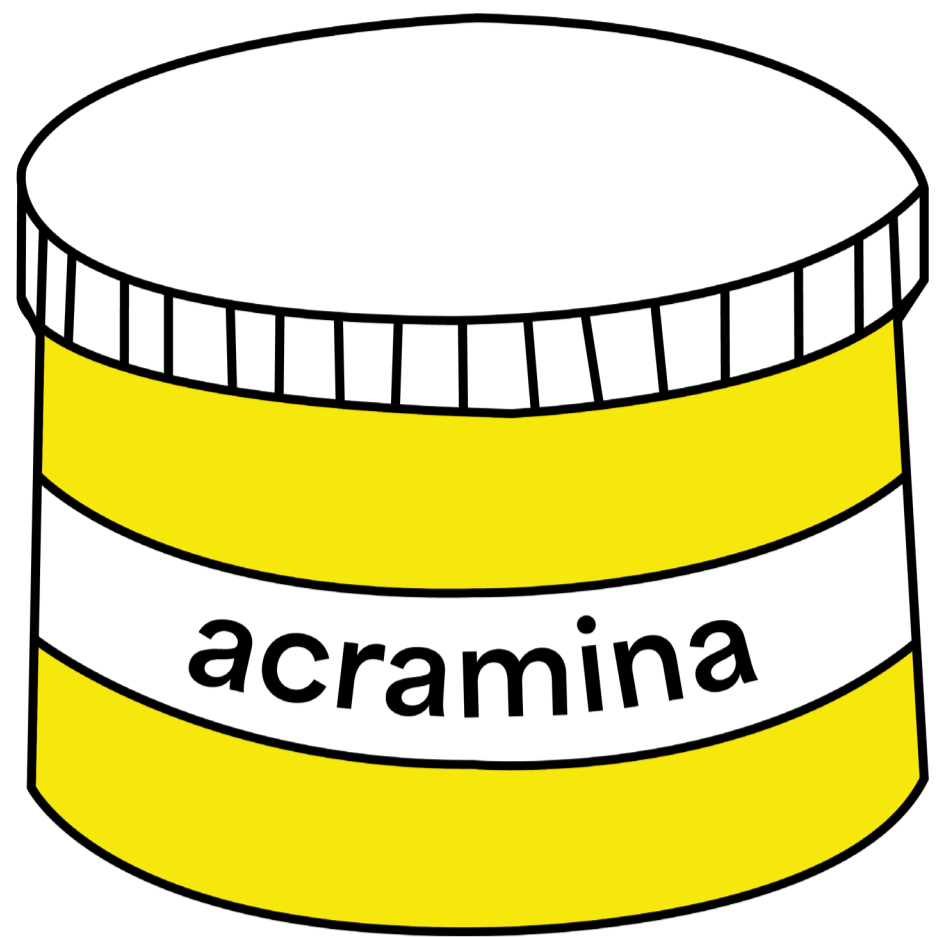



90 yarns



43 yarns

Acramine Ink vs. Lacquer Ink

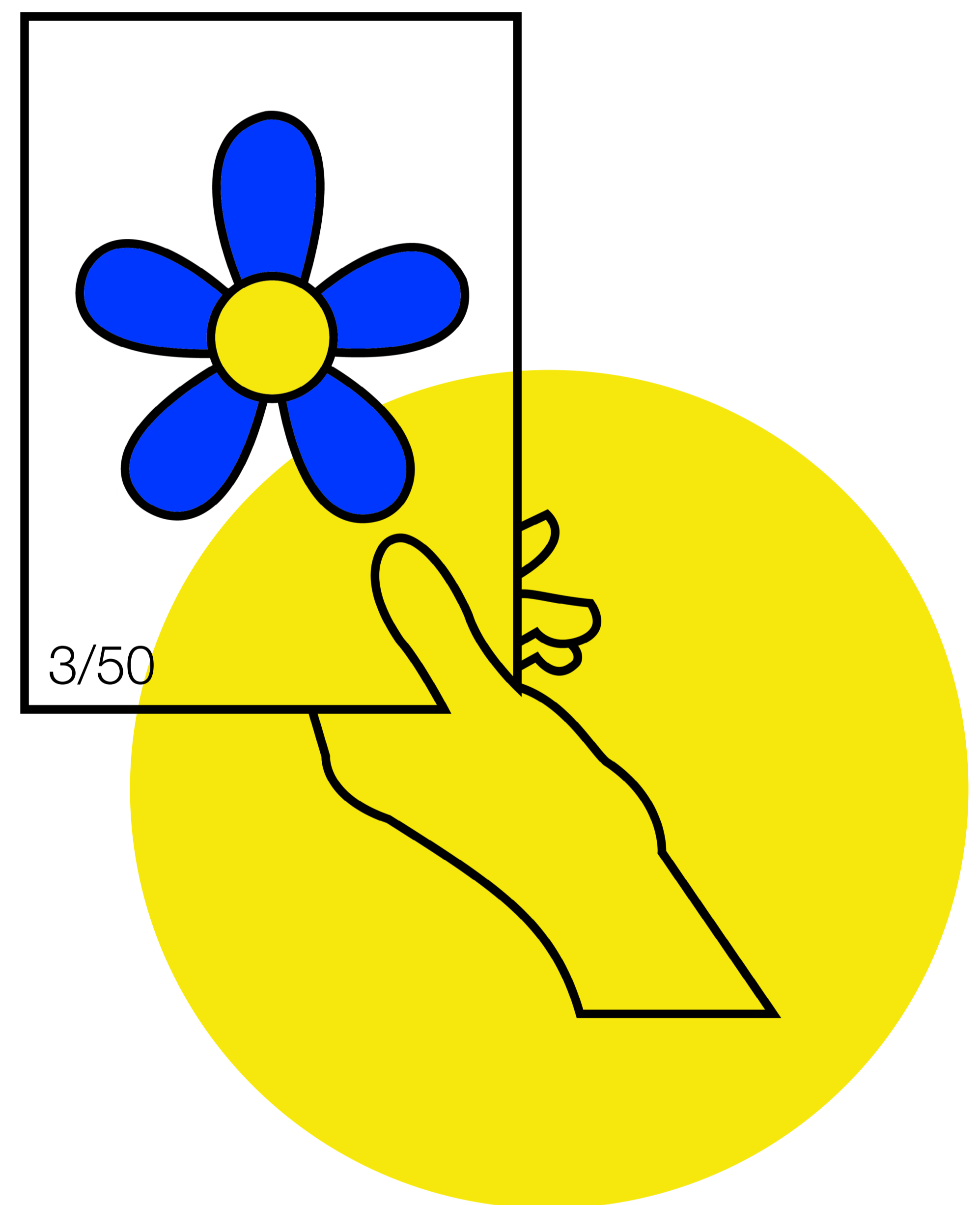
	Advantages	Inconvenients
<p>Acramine Ink</p> 	<p>Natural finish while maintaining the feel of the fabric Ideal for customers working with organic cotton and children's clothing Automatic color multiplication Natural cure in 8 days The most economical ink Suitable for paper as well.</p>	<p>Does not have 100% coverage except with some colors such as black. Not suitable for dark fabrics The color loses intensity with washing</p>
<p>Lacquer Ink</p> 	<p>High intensity of the chosen color due to its higher covering capacity. Gives much presence to the design making it ideal for logos. Allows to print on dark and light fabrics With the help of the base, we can also multiply colors.</p>	<p>Not suitable for very fine line designs. It is more expensive as it needs to be cured and is more difficult to use, especially in summer. Cracks when washed</p>

Paper Ink

The ink for paper combines the greater presence and coverage of the coating ink with the possibility of using it with very fine stroke designs of the acrylamine ink. So we can use it in high thread count screens (90 and 120 threads).

And although it is more difficult to use than the acrylic ink with the help of a retardant we can use it in summer. And using the base we can give transparency to multiply colors.

Its durability, color intensity and fine finish give an added value to our plates that no other type of printing can offer.



A classic: black T-shirts with white printing - why is it more expensive?

To achieve a true white on dark fabrics, a minimum of 2 passes must be printed with an intermediate pre-drying. This makes printing more expensive and adds to the difficulty of the process. Due to the risk of a registration error of approx. 0.5mm to 1.5mm.

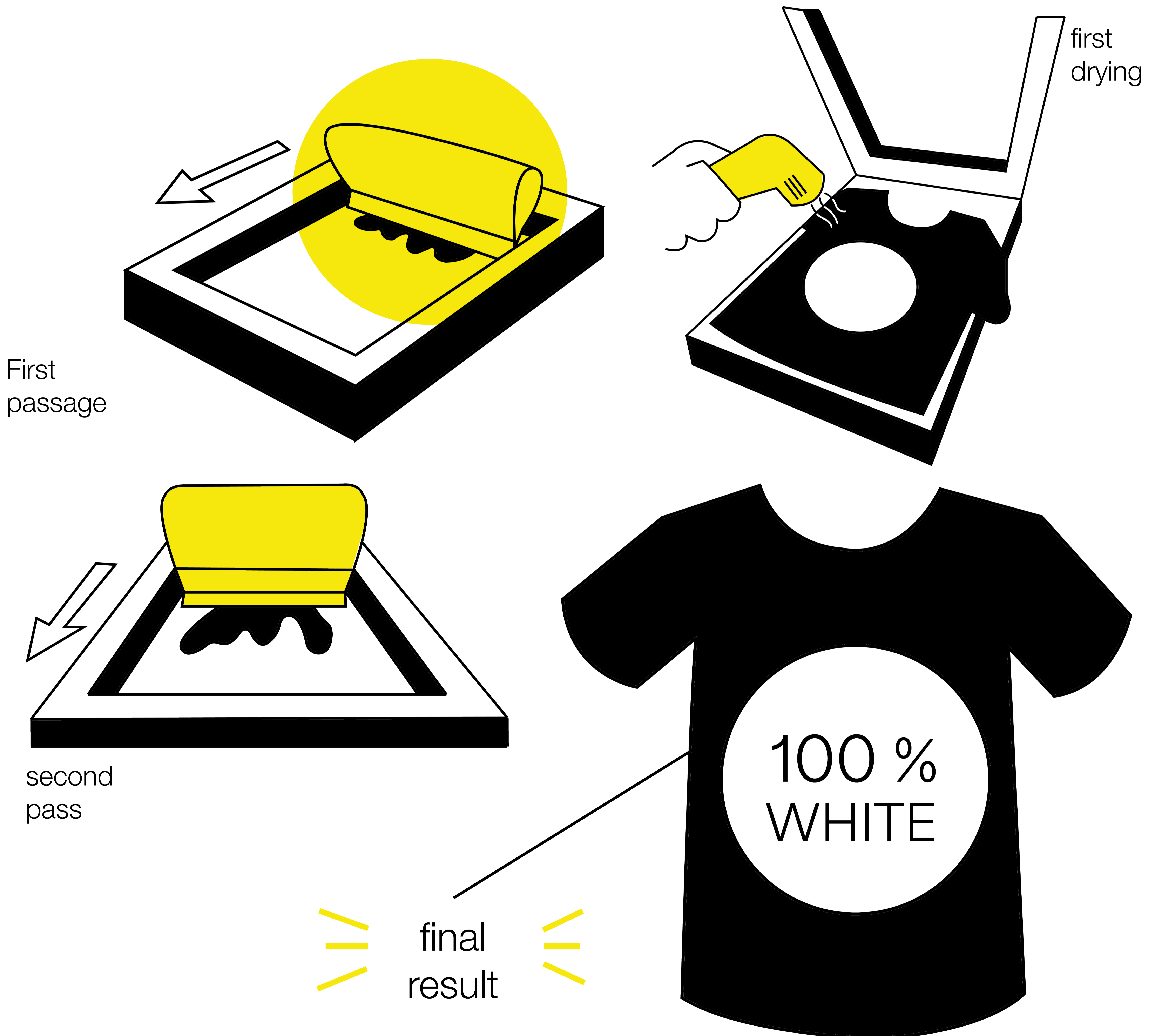
Therefore, it is always advisable to prepare generous designs for white on black stamping that allow a possible registration error of the two layers of white ink to go unnoticed.

In addition, it is necessary to use stencils with a maximum of 43 threads. In other words, stencils with large holes so that the ink can pass through the holes in the mesh without any problems. This again implies that the font size and line thickness of the design must be generous.



DISEÑO GENEROSO

DISEÑO
LÍNEAS
MUY
FINAS ✗



Shall we print for you?

If all this information has been useful to you, please use the form available on [our website](#) to request a free quote.

We always make minimum editions of 50 copies and it takes us a couple of days to prepare the budget.

Our quotations are totally personalized. We do not work with a price list. Depending on the design to be printed: the size, the number of inks and the type of register between the inks, the cost can vary a lot.

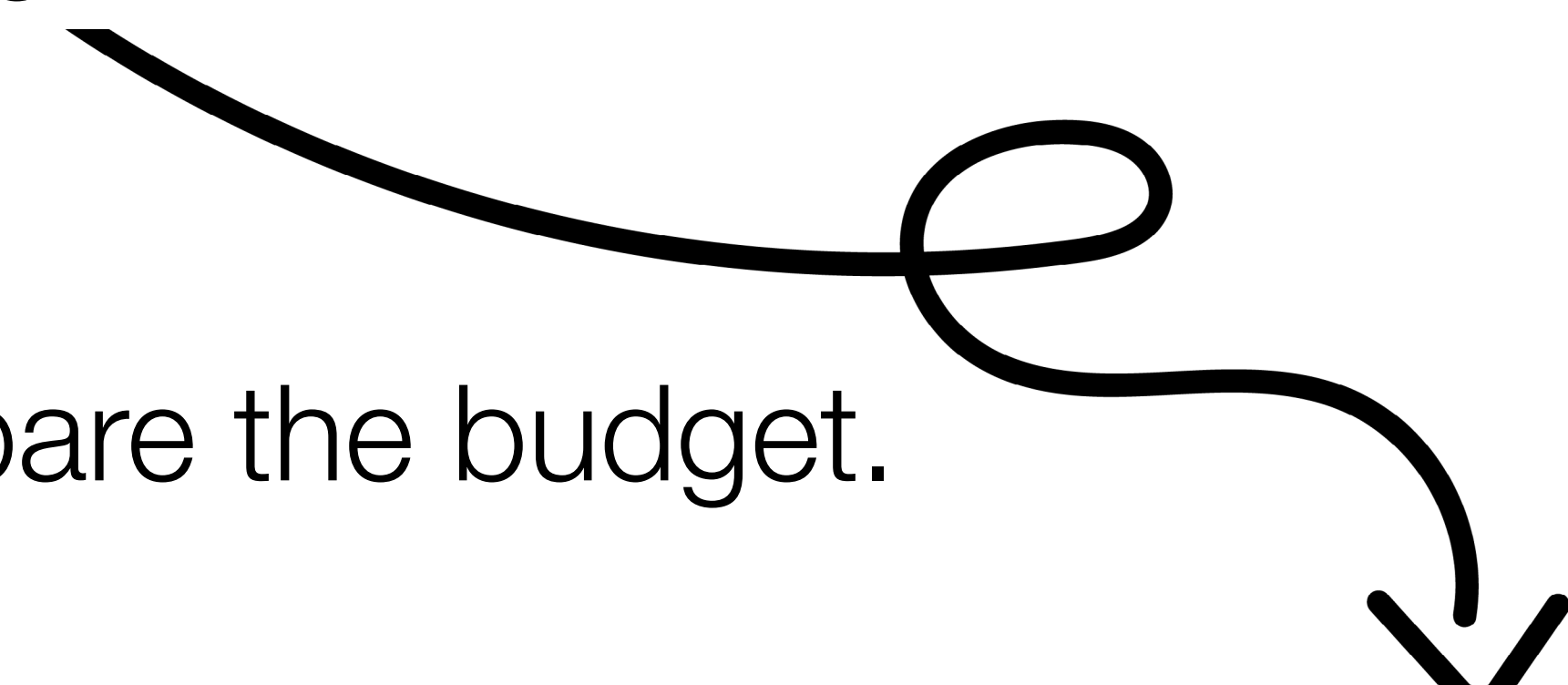
The support on which we will work (sheets, t-shirts, tote bags...) and finally the date of delivery also determines the cost of your printing.

As it is a handmade work, we have a planned calendar of printings. So there is usually a minimum period of 2 weeks between the acceptance of the budget and the delivery.

And if you are interested in an edition of less than 50 copies and very few inks... We encourage you to use our [Studio](#) service. From Monday to Thursday we put at your disposal our workshop so that you can be the one to print your project with our help and assistance.

Thank you for reading our stamping guide.

We look forward to hearing from you !



nombre :	apellido :
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