SILKNOW

VIRTUAL LOOM

Graphical Manual for the evaluations

What is Virtual Loom

Developed in the scope of the SILKNOW project, the Virtual Loom is an application that deals with the 3D virtual representation of historical silk fabrics at the yarn level.

Virtual Loom Desktop Version

The desktop versions for Windows and MacOS are available at:

https://github.com/silknow/virtual-loom/releases

Installing the Mac version

Download the .dmg file

Click on VirtualLoom.dmg in your download folder
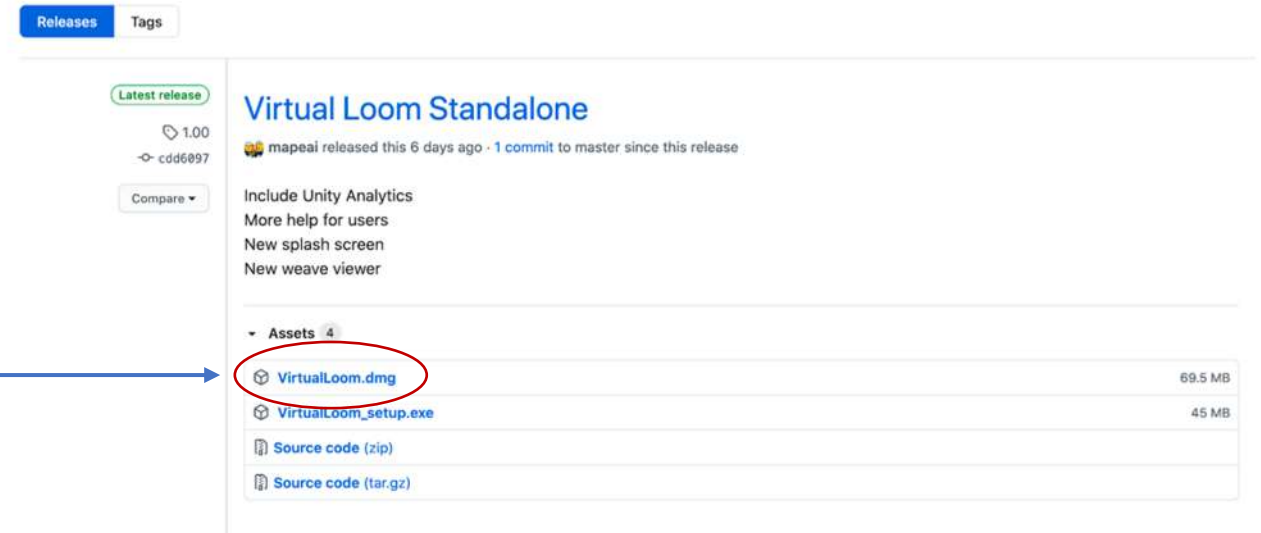
Drag and drop into the "Applications" folder and then click the app icon while holding down the Ctrl key, then choose Open from the shortcut menu.

Installing the Windows version:

1. Download the VirtualLoom.exe file

2. Click on VirtualLoom.exe in the Downloads folder

3. Follow the required procedure

Virtual Loom desktop version main window

You are in the Load Image section
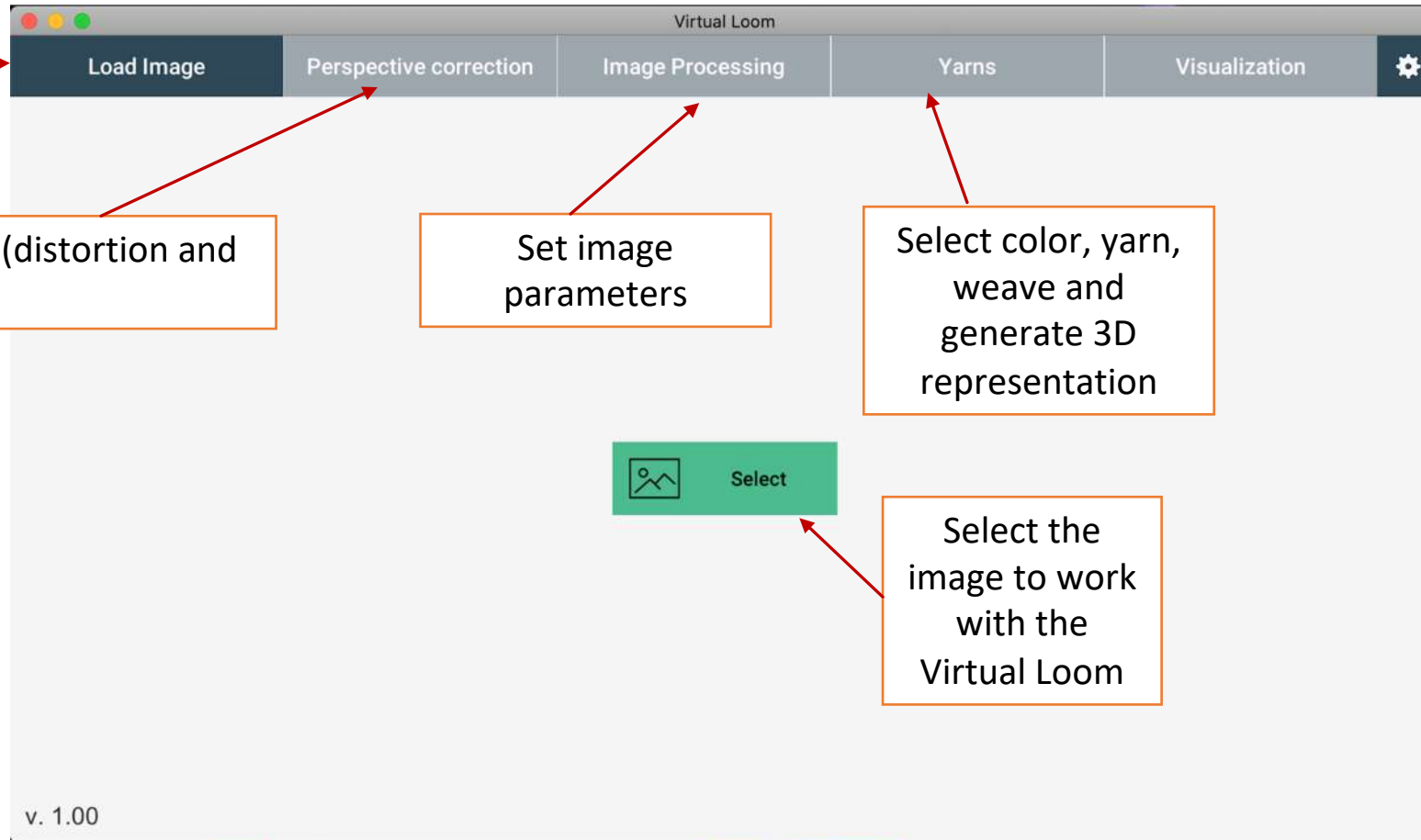
Load Image

Perspective correction

Image Processing

Yarns

Visualization

Virtual Loom

Correct image (distortion and image ratio)
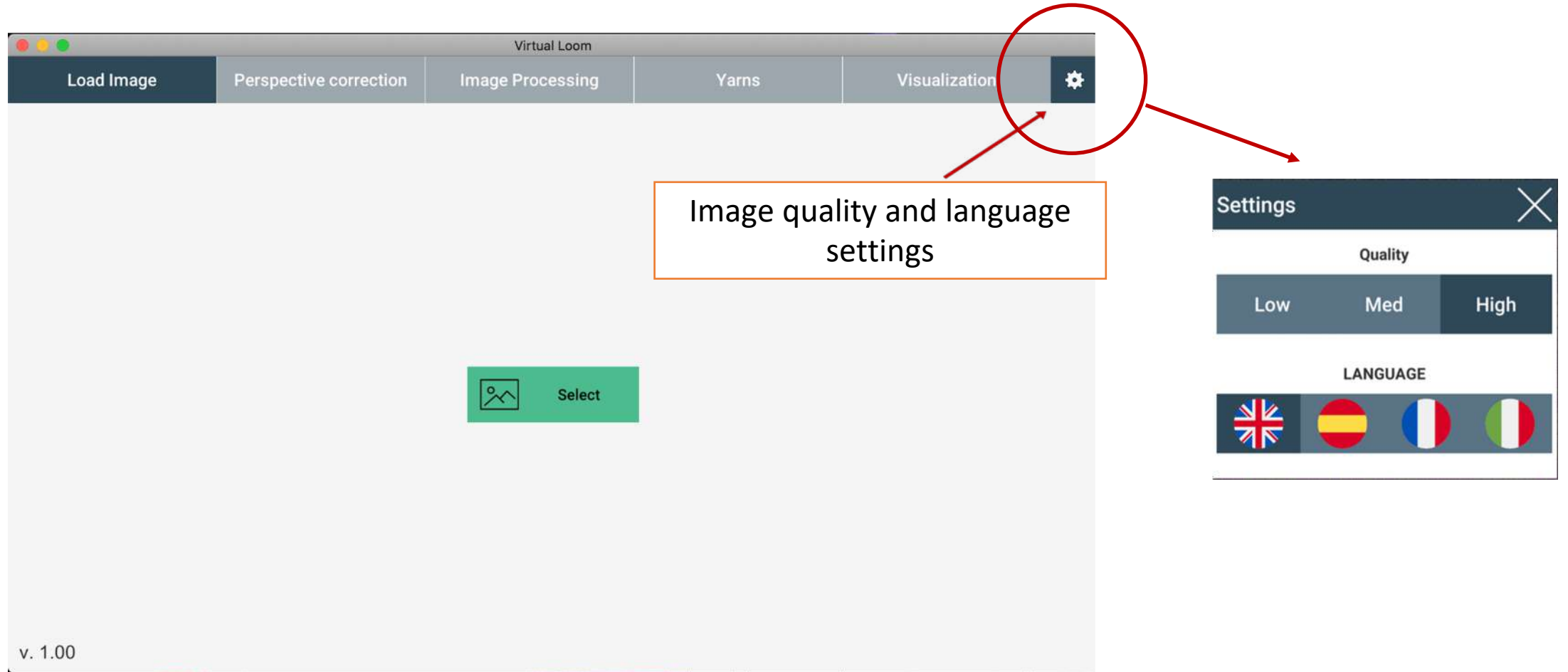
Set image parameters

Select color, yarn, weave and generate 3D representation
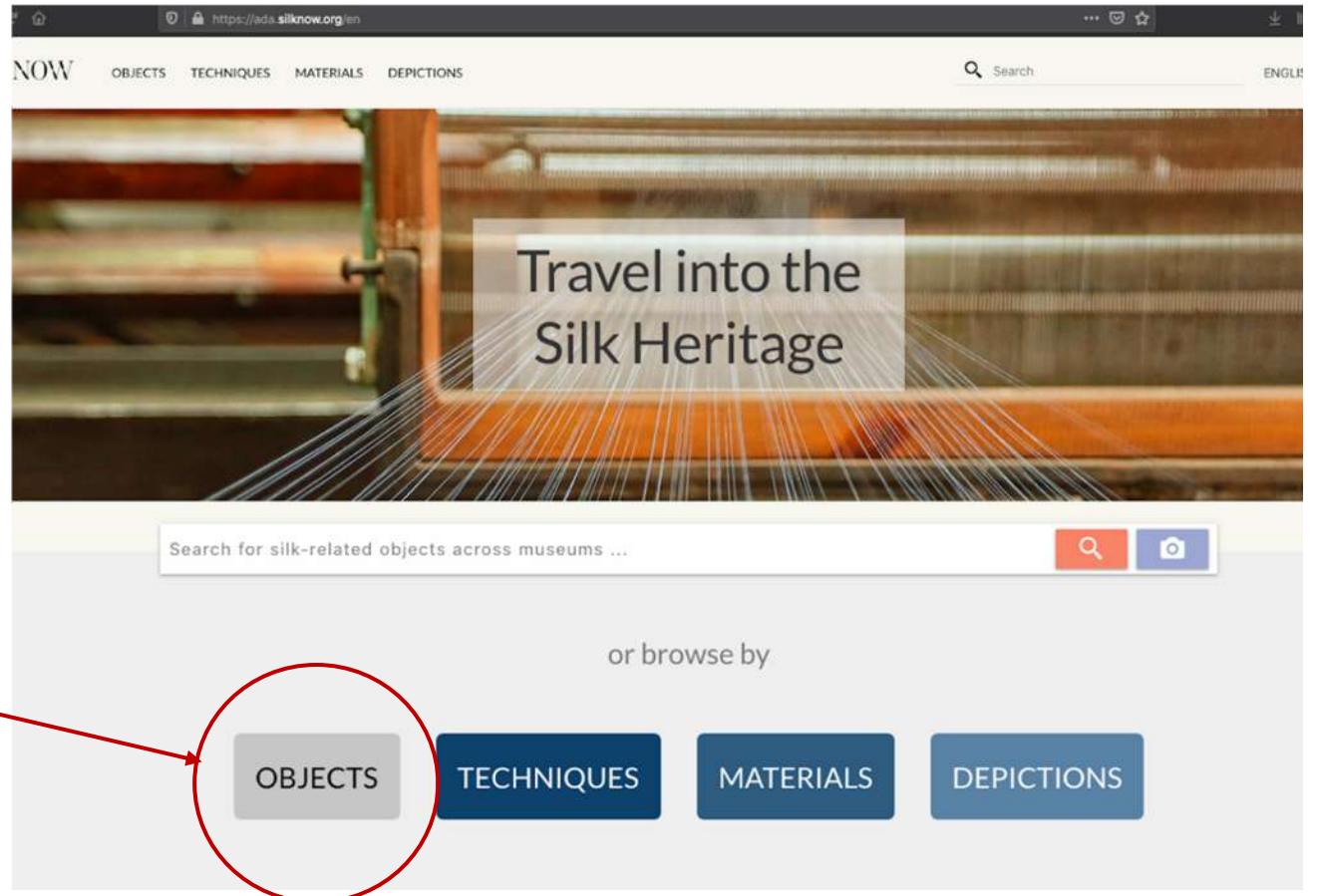
Select

Select the image to work with the Virtual Loom

v. 1.00

Virtual Loom desktop version main window

Accessing Virtual Loom online

1. Click on
   https://ada.silknow.org/en for
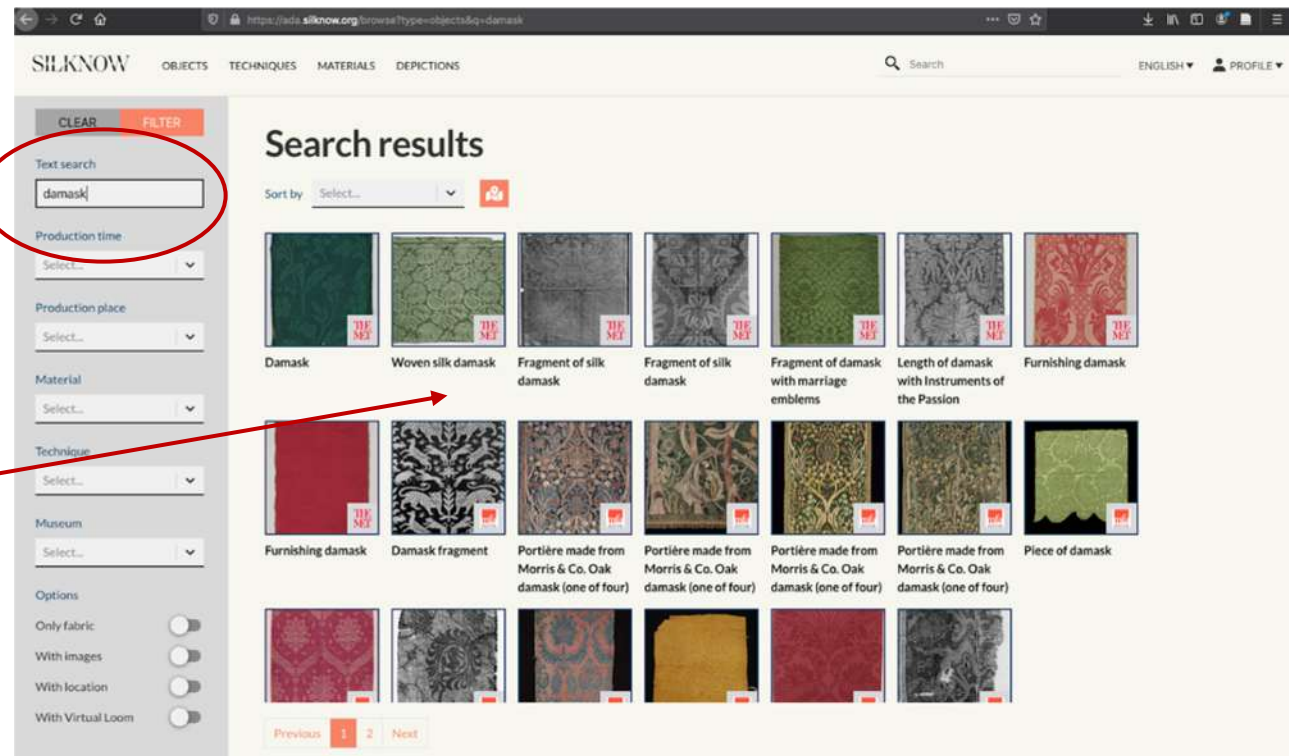   accessing ADASilk web
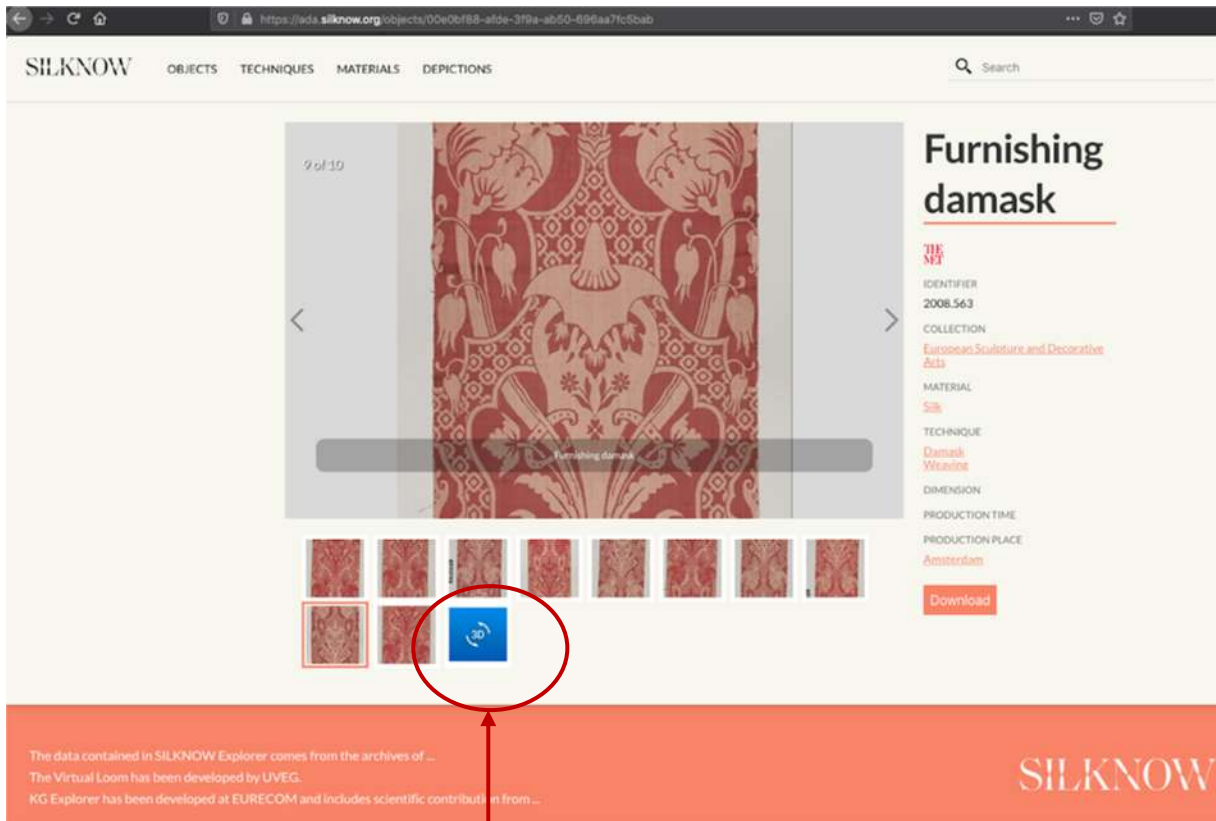   application

2. Click on OBJECTS

Accessing Virtual Loom online

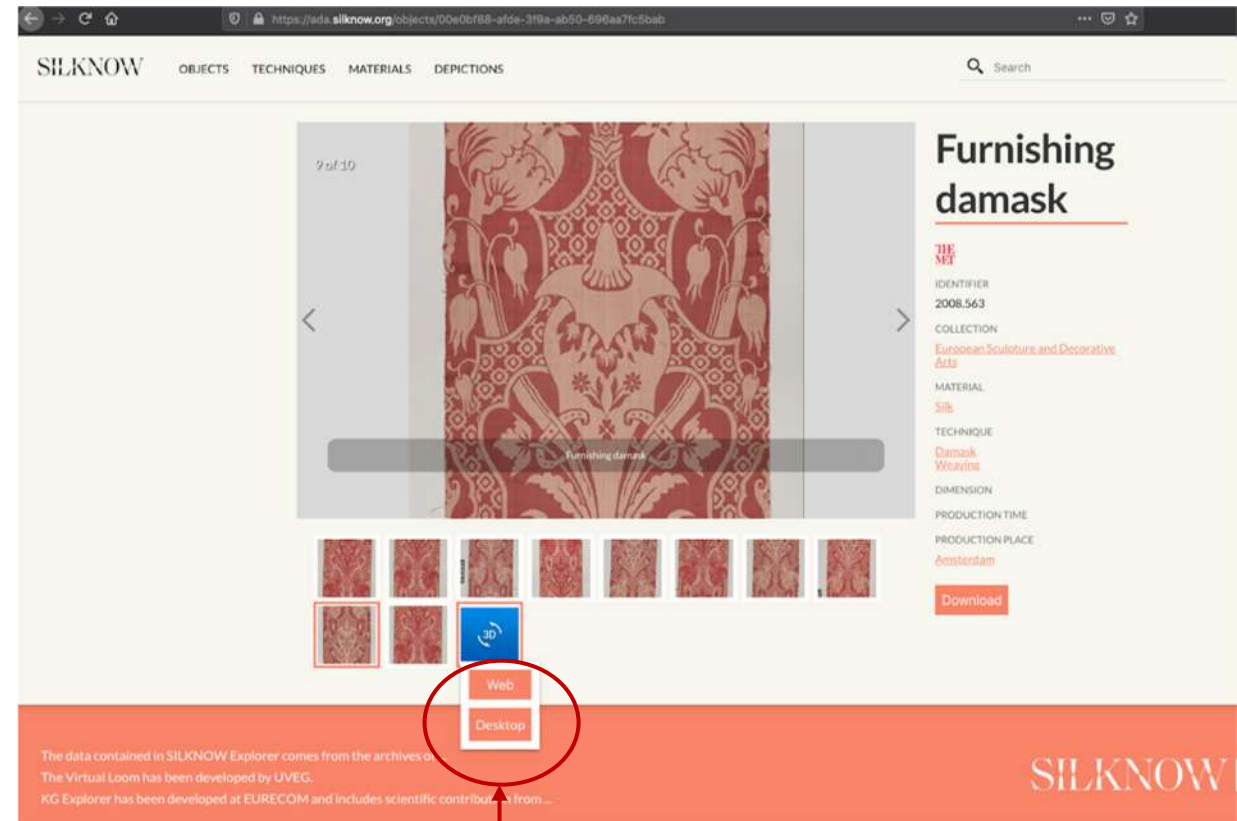1. Search the object you are interested in

2. Select the image for which you want to produce the 3D representation

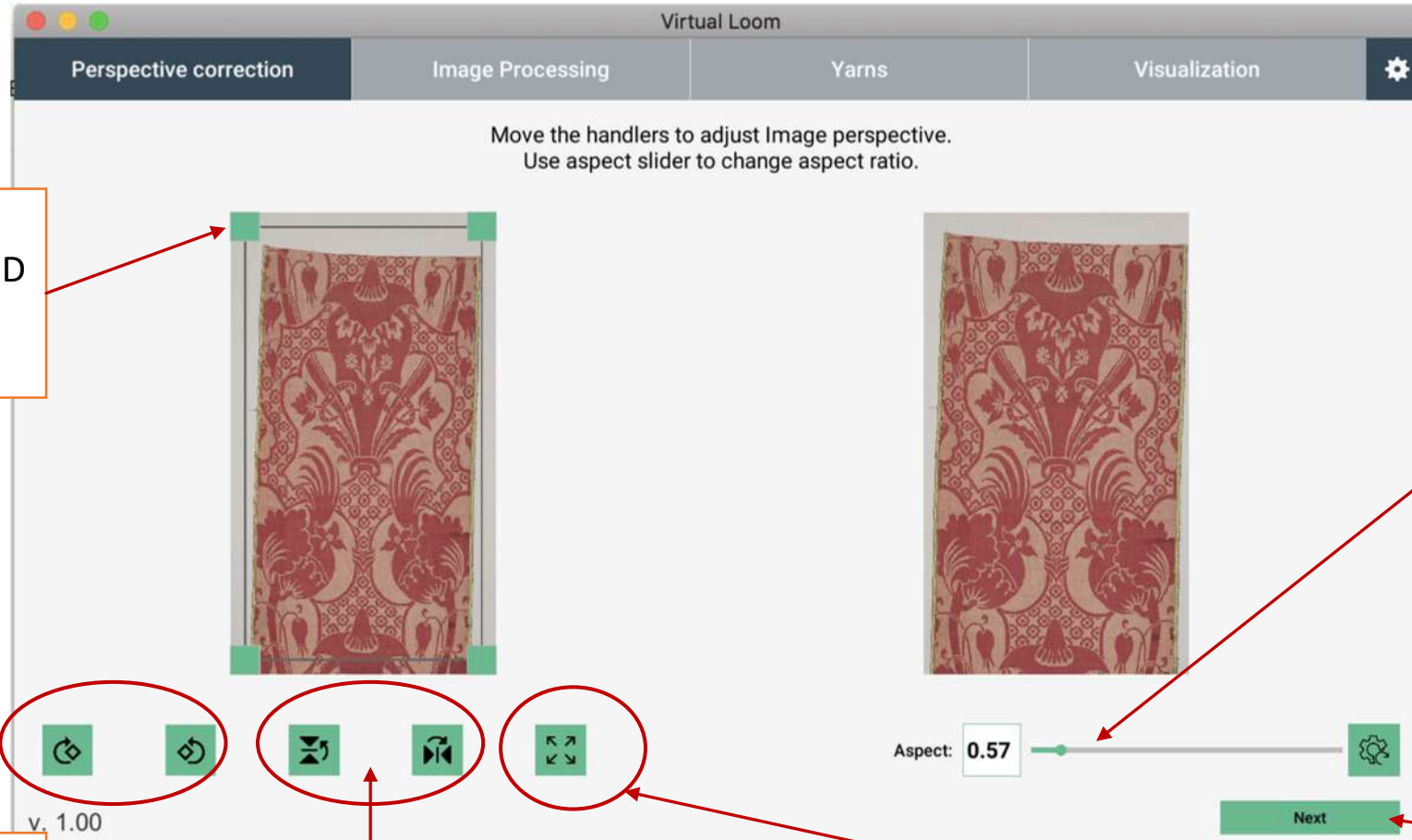# Accessing Virtual Loom online

Press the "3D" button

Select the version you want to launch

Changing image aspect

Select the area you want to reproduce in 3D by moving the green squares

Change the aspect ratio

Apply rotation

Apply horizontal or vertical axis

Return to the original aspect

Go to Image Processing

Producing a 3D file of the image

List of techniques to reproduce

General information in weaving techniques

Number of clusters

Apply parameters for image processing

Go to the next step

Selecting the background zone
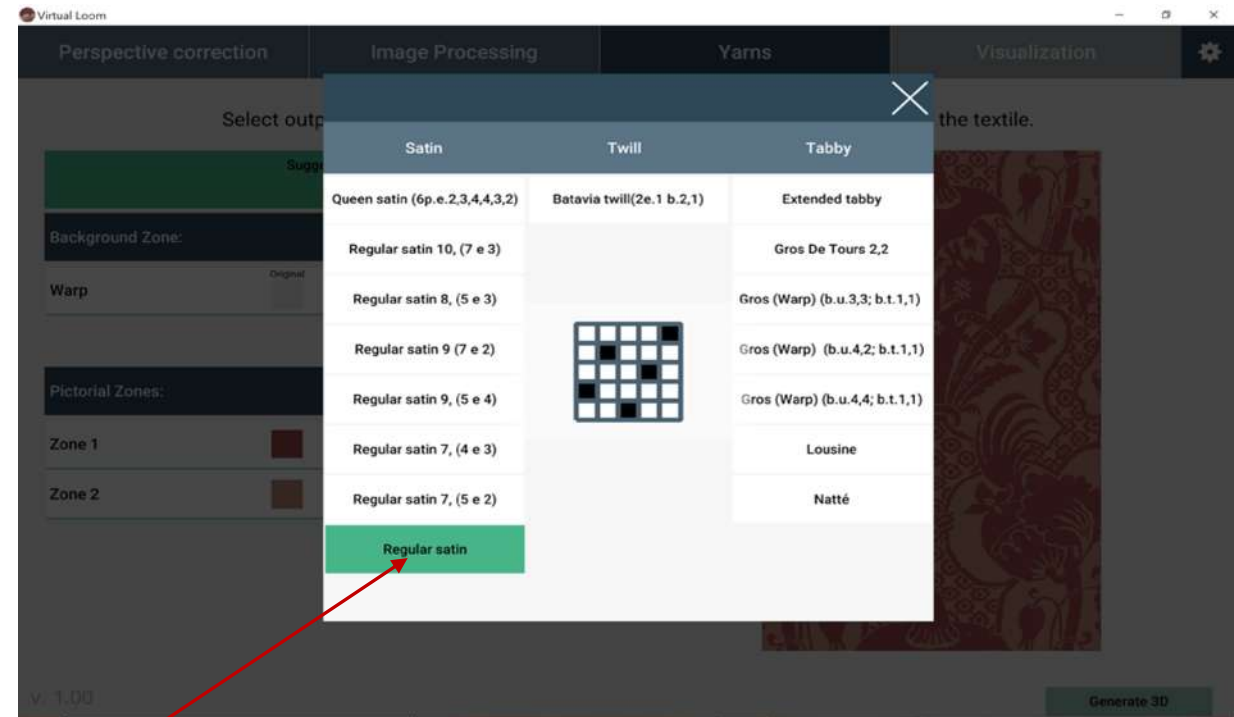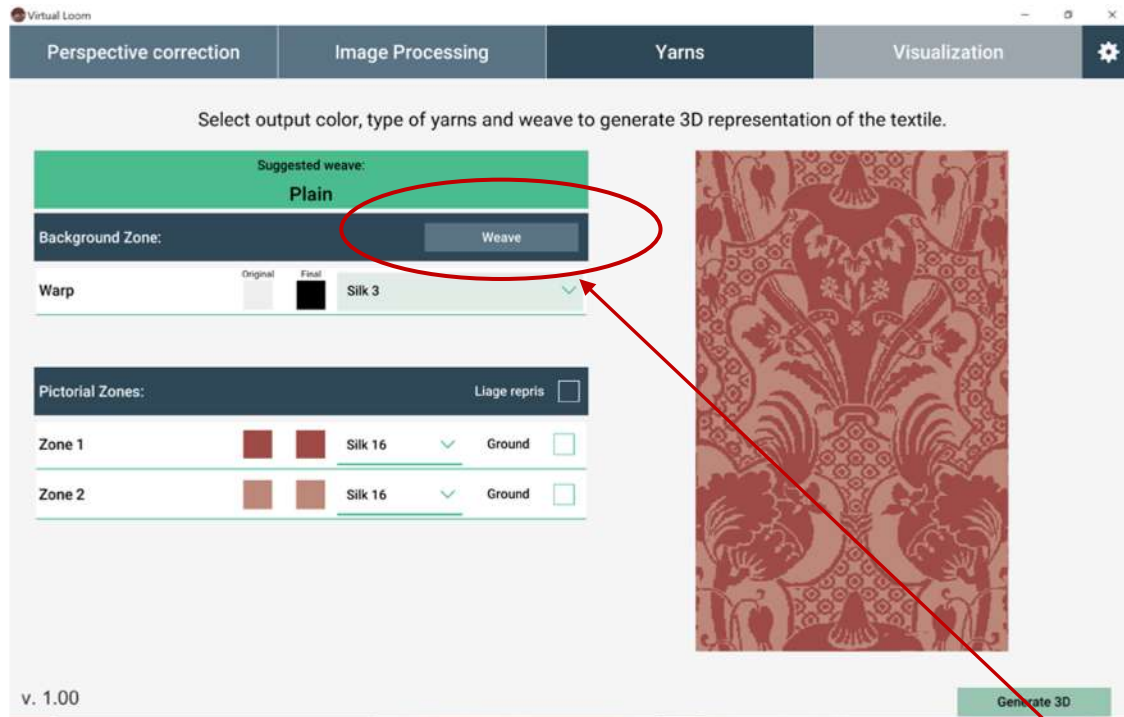
Select the Background zone

Choosing the background zone

Navigating the 3D model

Hide visualization menu

Rotate

Generate the STL file

Take snapshot
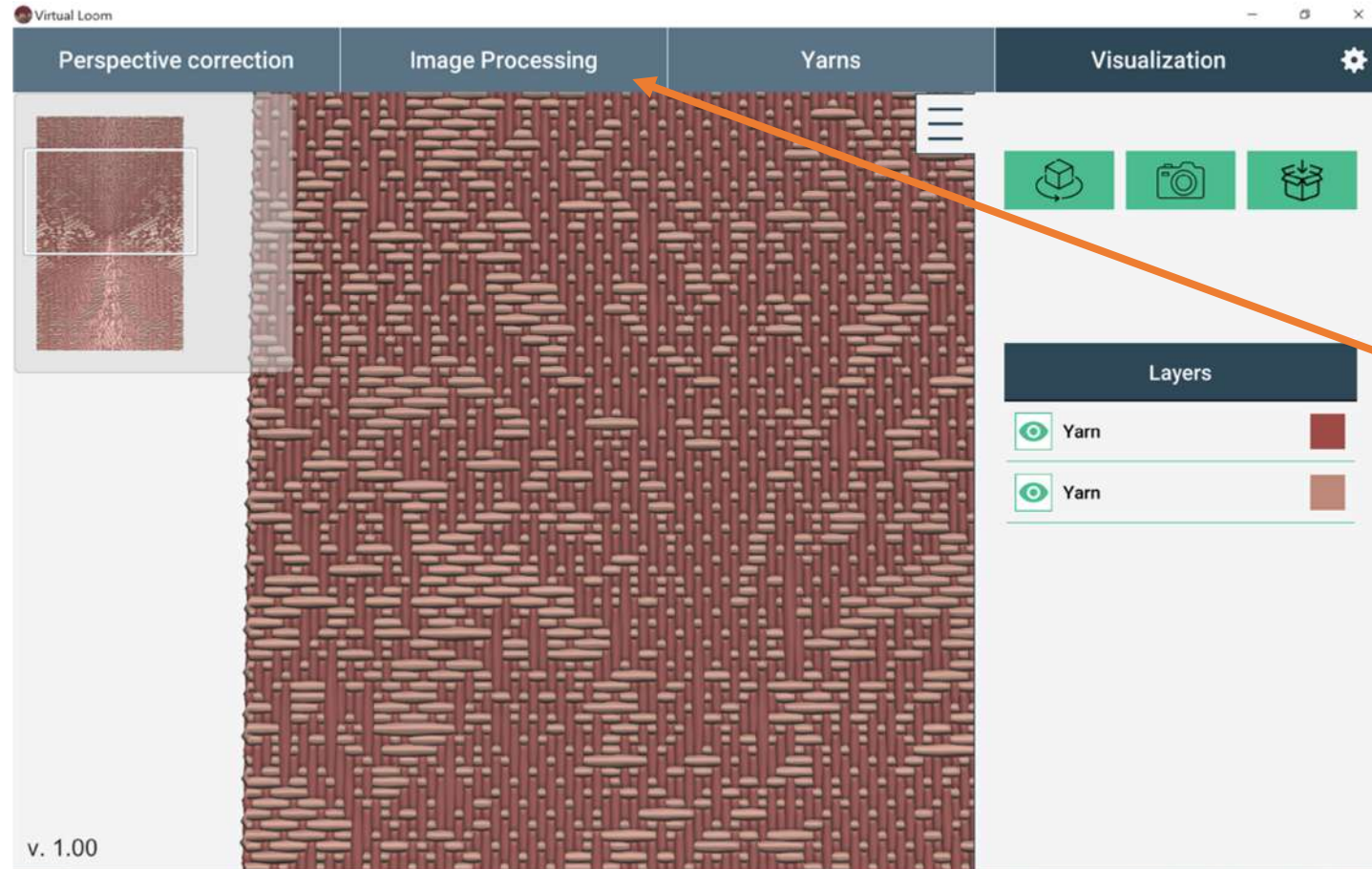
Change area in the image
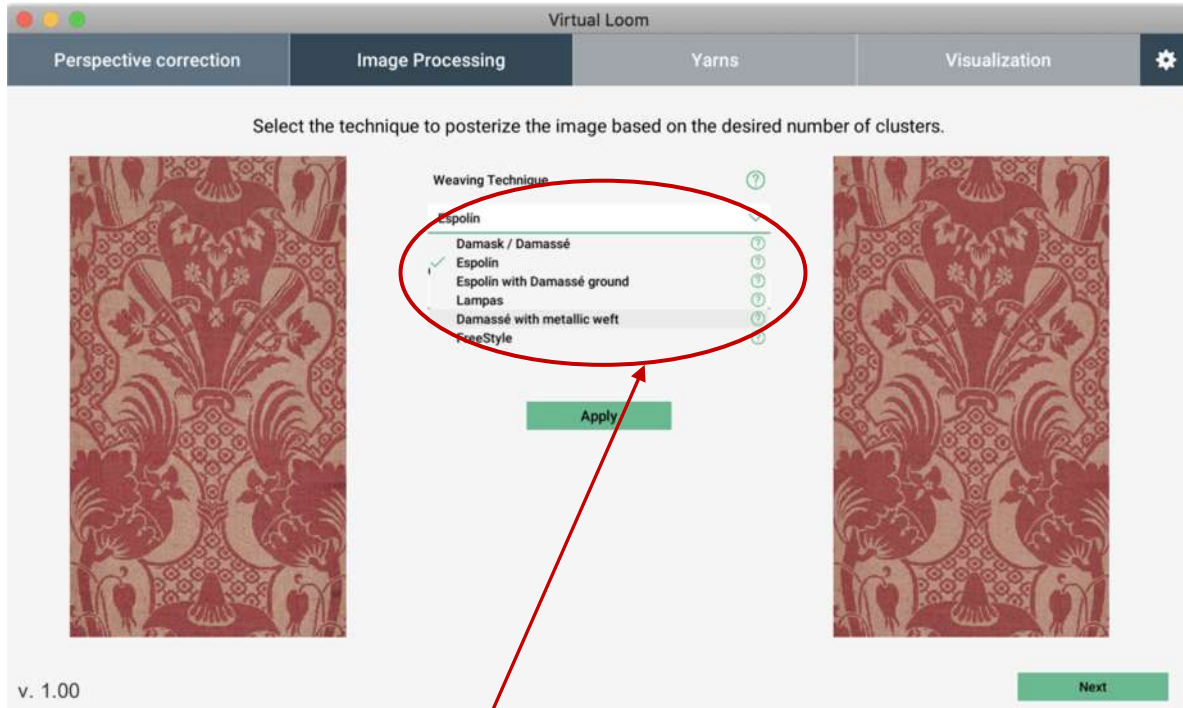
Layers

Yarn

Yarn

Hide yarns

v. 1.00
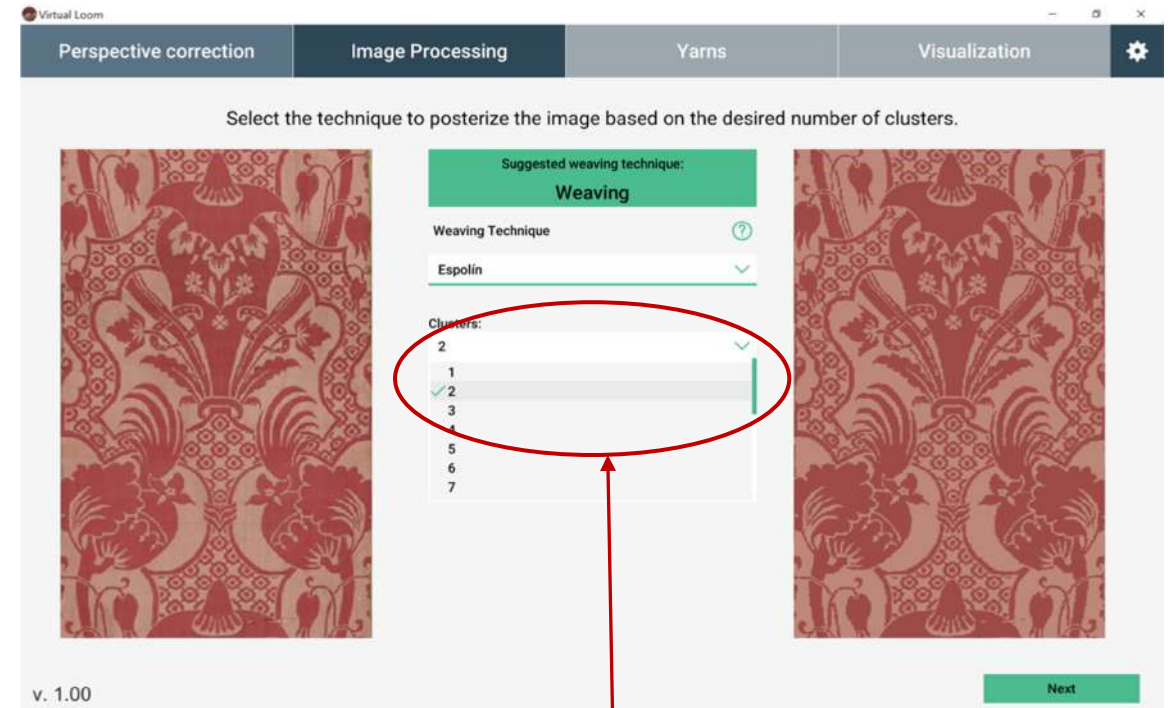
If you want to change the initial techniques

Click here to go back to Image Processing
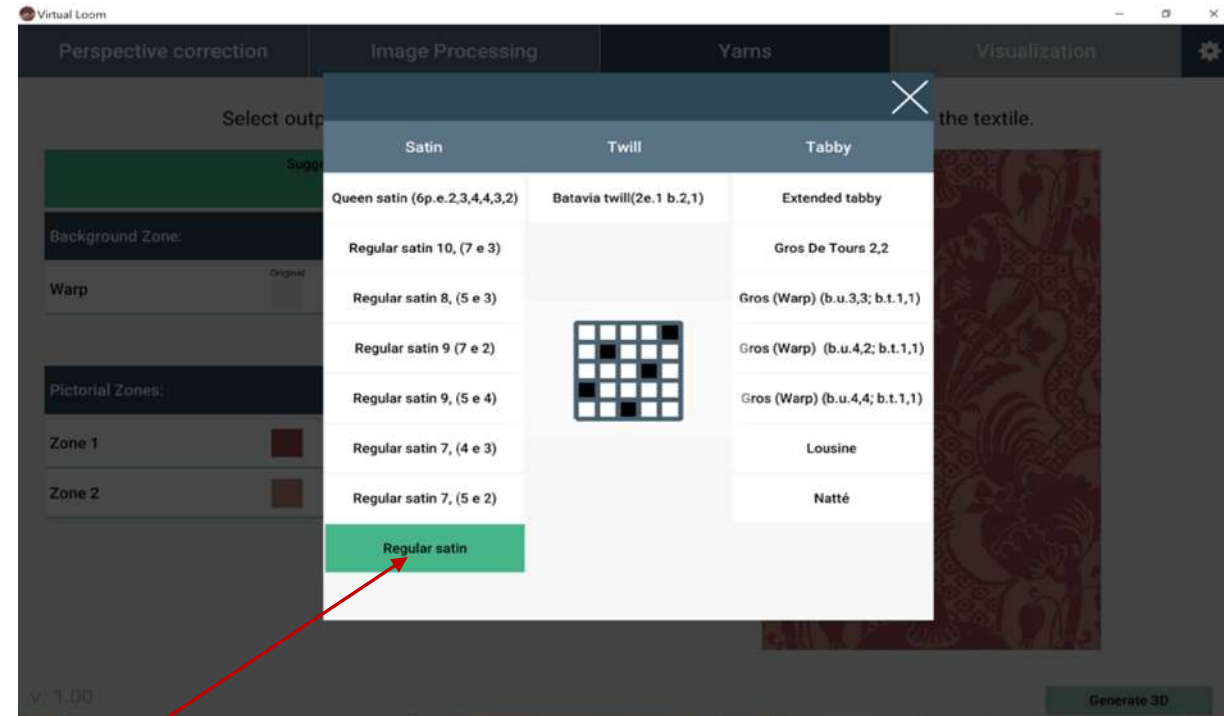
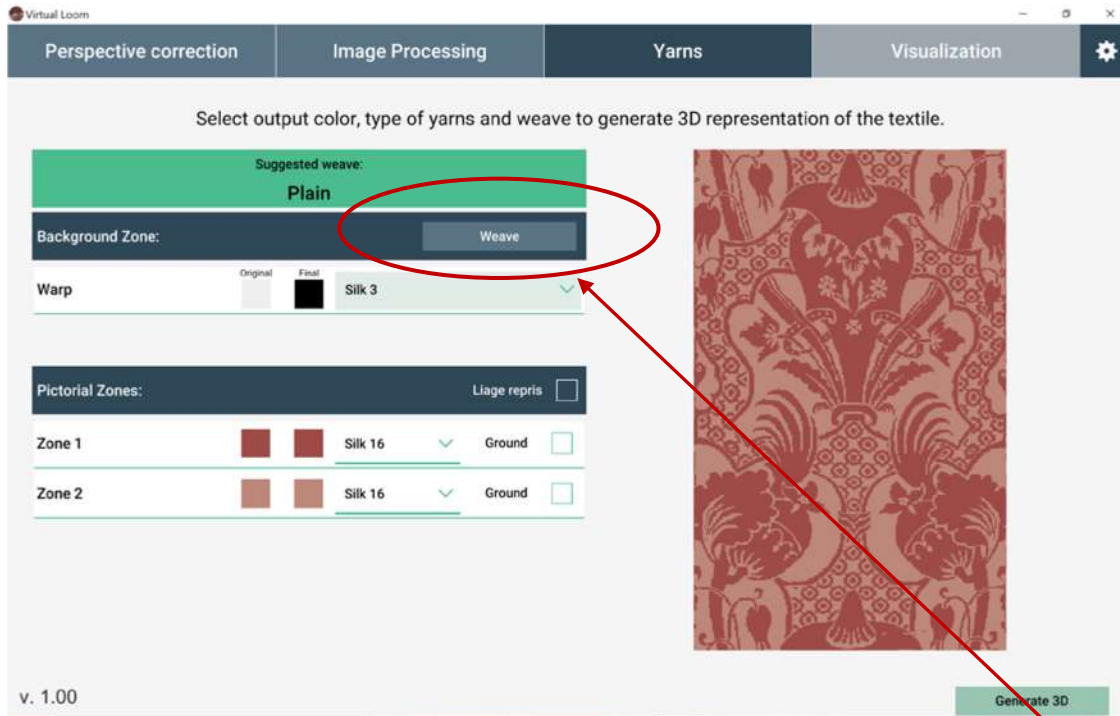# Selecting other techniques

List of weaving techniques

List of clusters

Selecting yarns, colors…generating 3D

Select the Background zone

Selecting yarns, colors…generating 3D

Select the pictorial backgrounds

Selecting yarns, colors...generating 3D
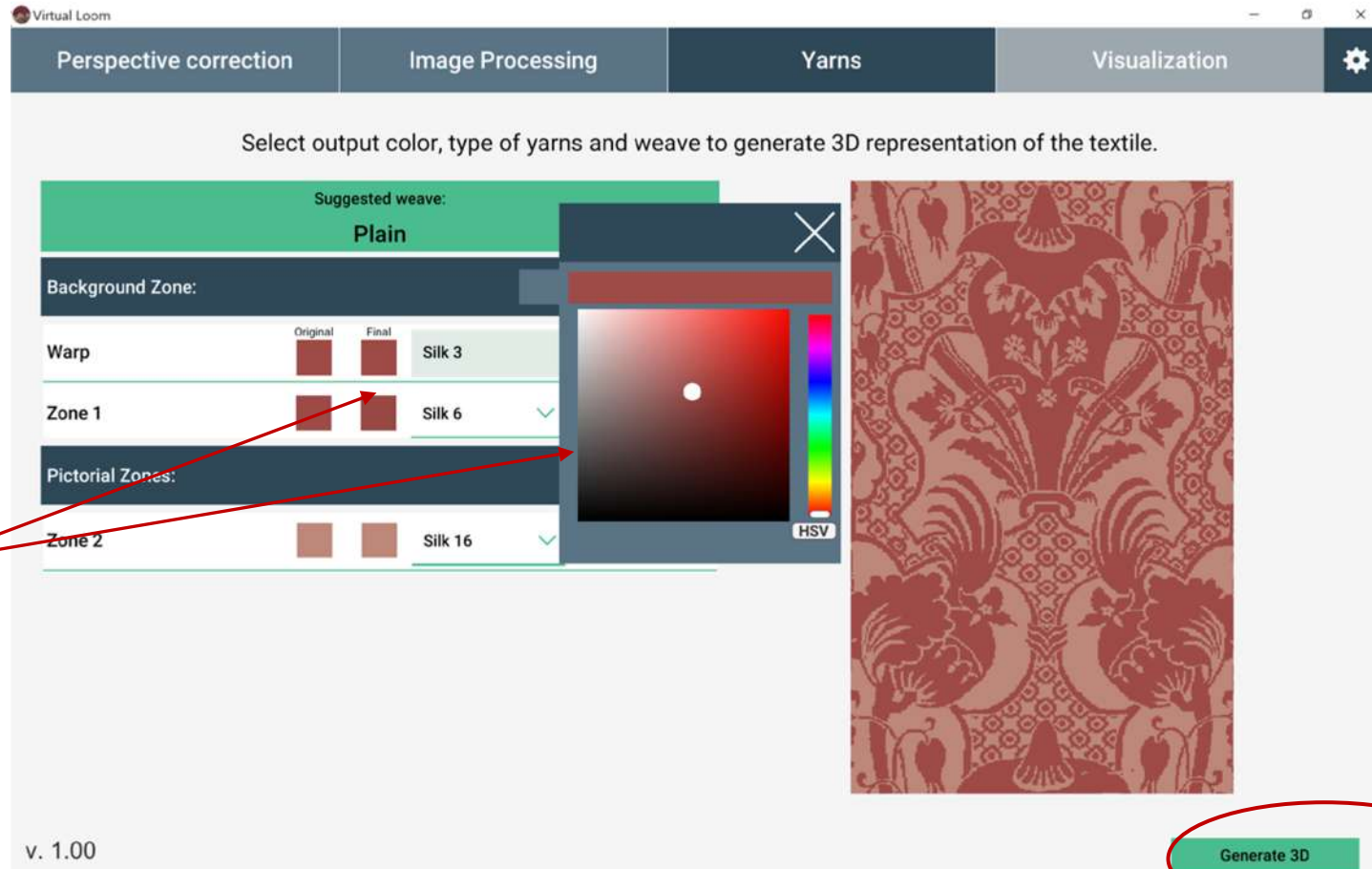
Click on the final color to open the palette

Generate the 3D version

Navigating the 3D model

Hide visualization menu

Rotate

Generate the STL file

Take snapshot

Change area in the image

Hide yarns