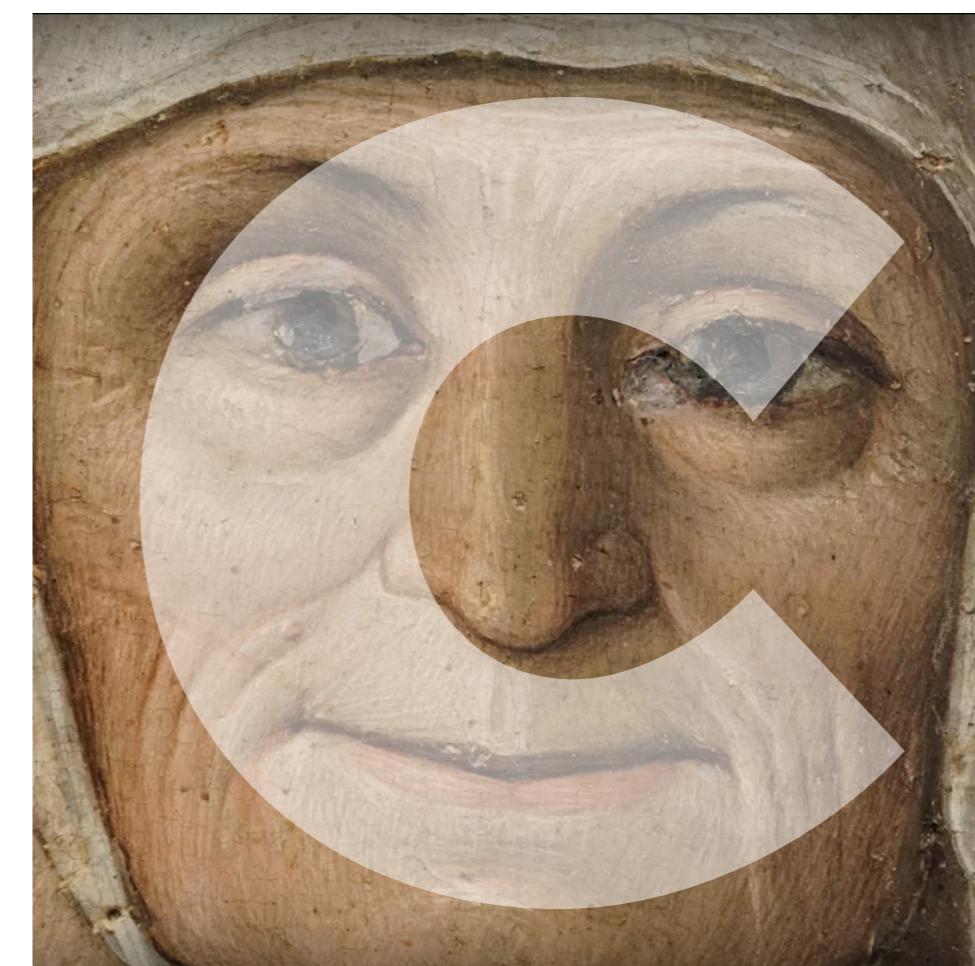
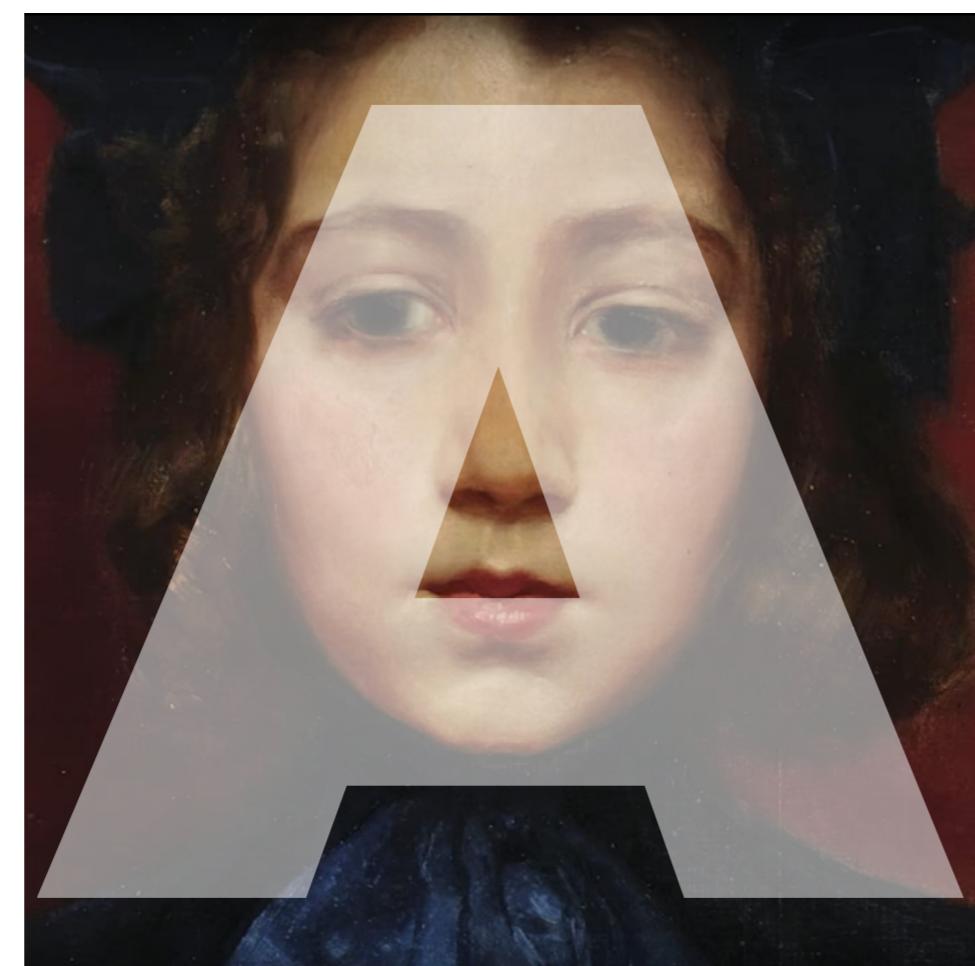


Skander **Hajri**

Licia **Tomaselli**

Costanza **Volpini**



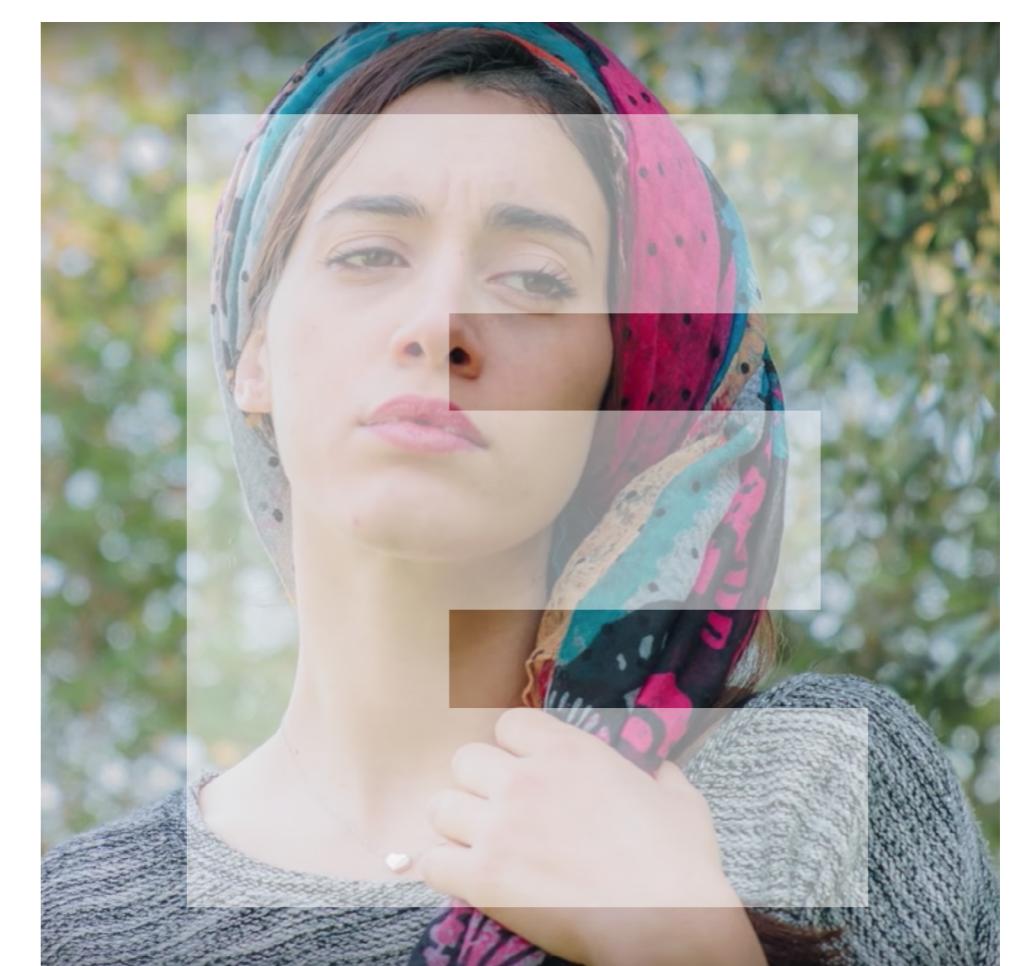
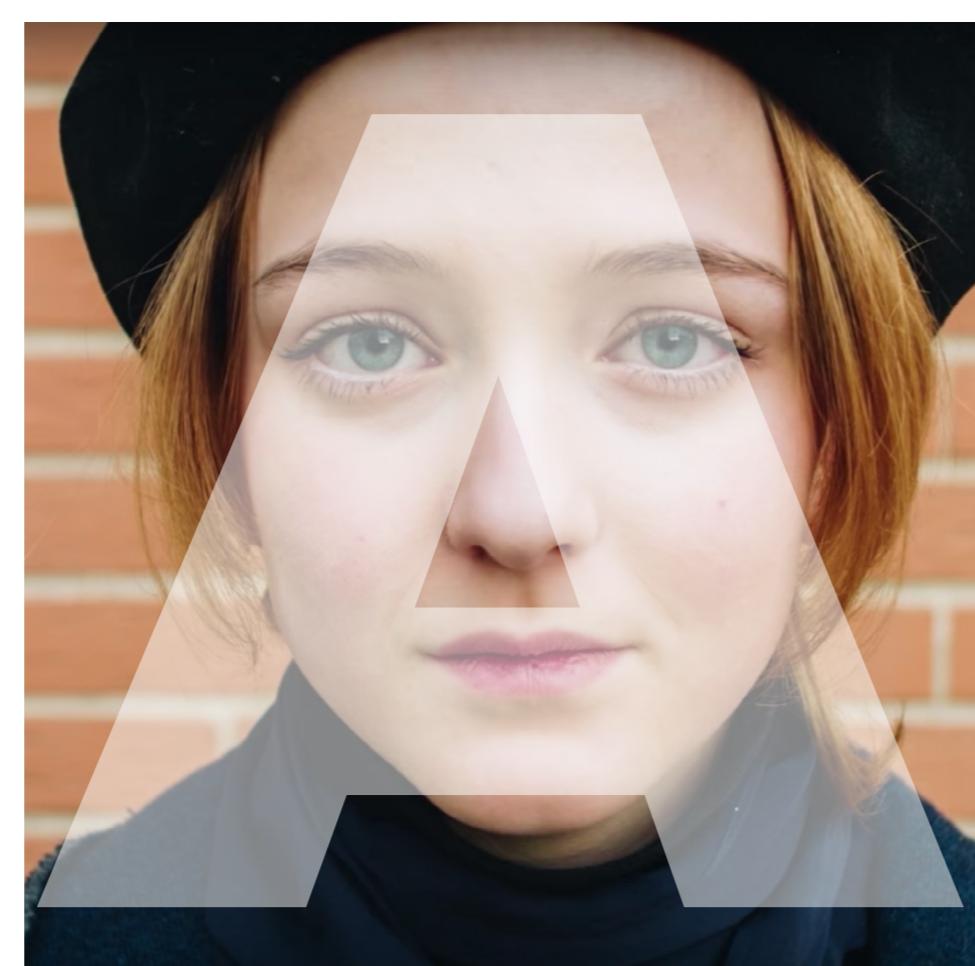
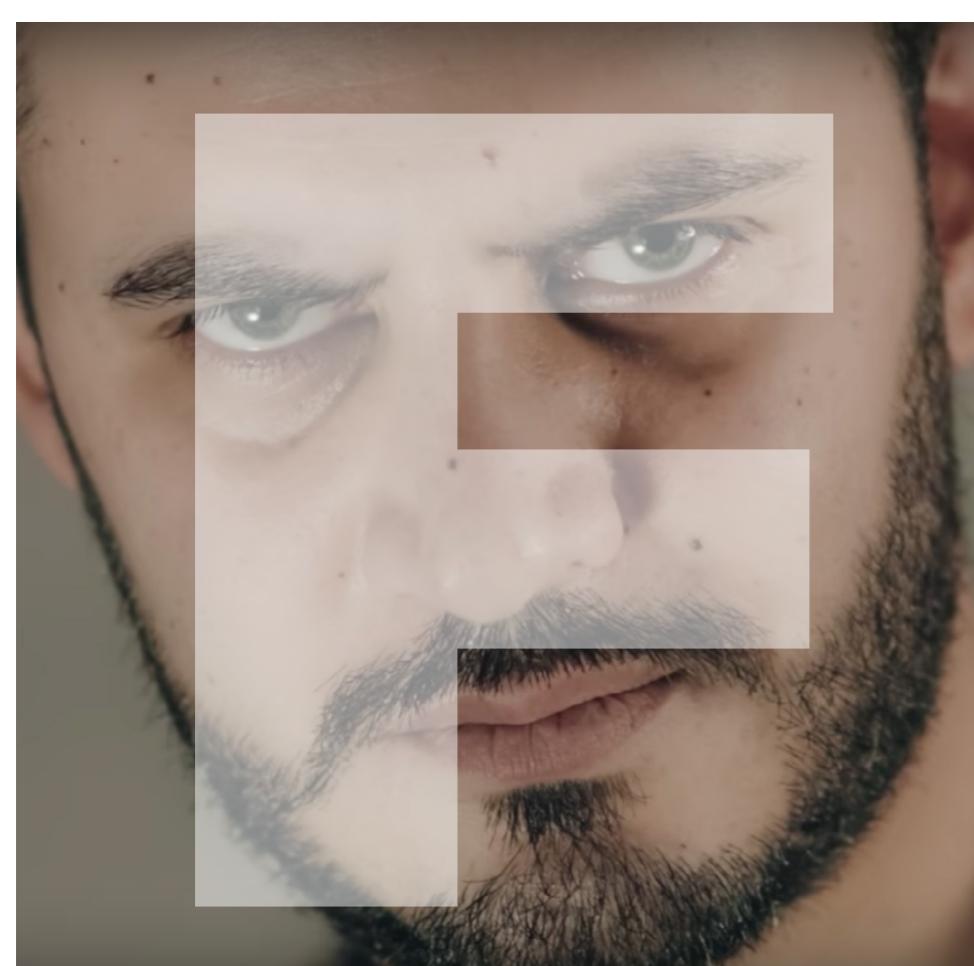
Reverse your perspective: for once the artwork will look at you like you're a work of art.

The paintings have eyes.

'I O

Create your own path following your emotions, making your experience in the museum unique.

Let your feelings guide you.



a r t i s w a t c h i n g y o u .

FACE TO FACE



Musée de l'Elysée

For our research we have chosen one particular exhibition (Liu Bolin - Le Théâtre des apparences) because his work is not too well known to interfere with the recording of visitors' impressions and it's at the same time various (in terms of atmosphere of the work), curious for most of the visitors and unconventional.



Eye-tracking and facial recognition

Emotions often burst out in a more or less evident way and we will try to catch what the visitor's face says about what they're feeling. Eye-tracking allows to know which items are looked at what time and can then be linked to a specific emotion using "deep learning" in order to define a global range of feelings for a particular piece of art.



Analysis of people's reactions

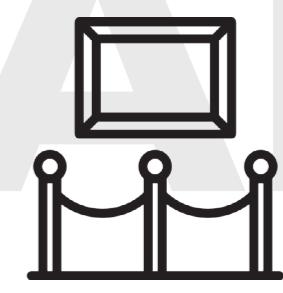
We intend to analyse and record feelings and emotions in visitors of different age, sex and cultural background in front of various paintings and investigate the way they look at artworks.



Emotional oriented path in existing museums

The aim is to set a specific path, museum design and succession of depictions based on a precise sequence of feelings that the viewer or even the organiser of the exhibition wants to evoke.

PROJECT PROPOSAL



Analysing visitors' reactions

Thanks to eye-tracking and some already set facial recognition tools it will be possible to trace how people feel in front of an artwork.

Rating artworks

Rating is done collecting data through direct observation in the physical museum. We expect to collect around 100 different sets.

Defining a set of emotions

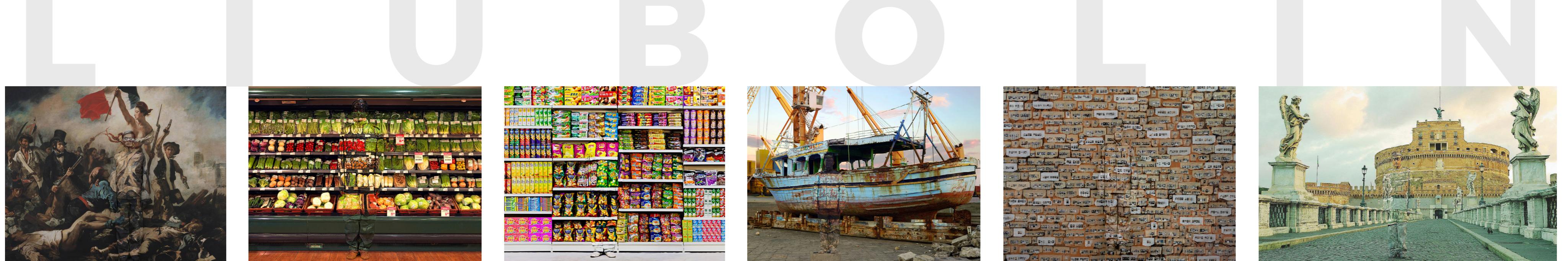
By collecting data it will be possible to "rate" images and put them in different categories based on the emotions range we aim to analyse.

Emotional oriented path

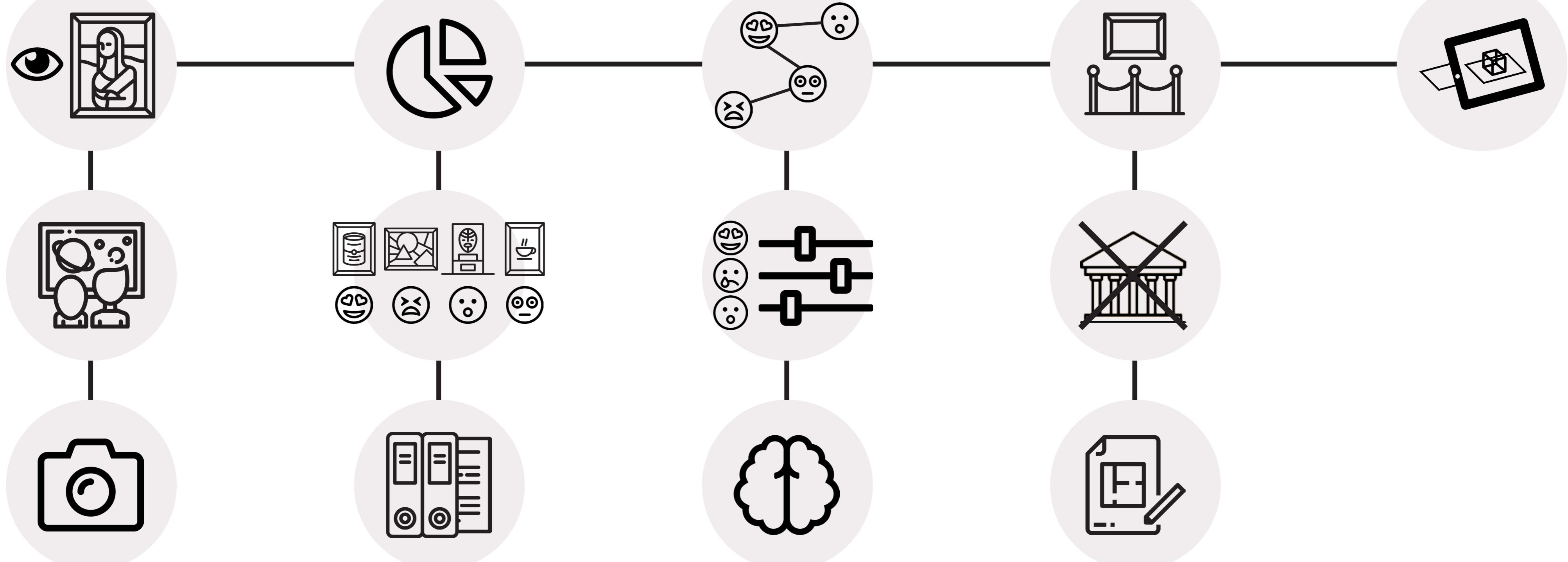
Thanks to categories, eventually, we can create an algorithm of how the paintings sequence should be according to the swing of emotions we want to reach.

Designing of physical museum

The physical exhibition should go along with feelings and thus be coherent and reinforce paintings through the use of spacial conformational escamotages.



PROCEDURE



FACE TO FACE

CURATION

curation= {

“def”: “The ability of positioning and managing different pieces of art according to an emotional impact the curator wants to achieve. What we aim to do is emphasising this feeling centred attention and let the visitors embrace the essence of the exhibition”,

“museum”: “Musée de l’Elysée (Liu Bolin)”,

“added-value”: “We would like to suggest new ways to explore the museum, in order to emotionally connect with the artist. A personally tuned visit will allow the viewer to fully appreciate the exhibition and/or the curator to share an exclusive point of view”,

“thick”: “Definition of how you want to feel during your visit”

},

“thin”: {

“data-aquisition”: “Camera filming people”,

“database”: “Microsoft DB”,

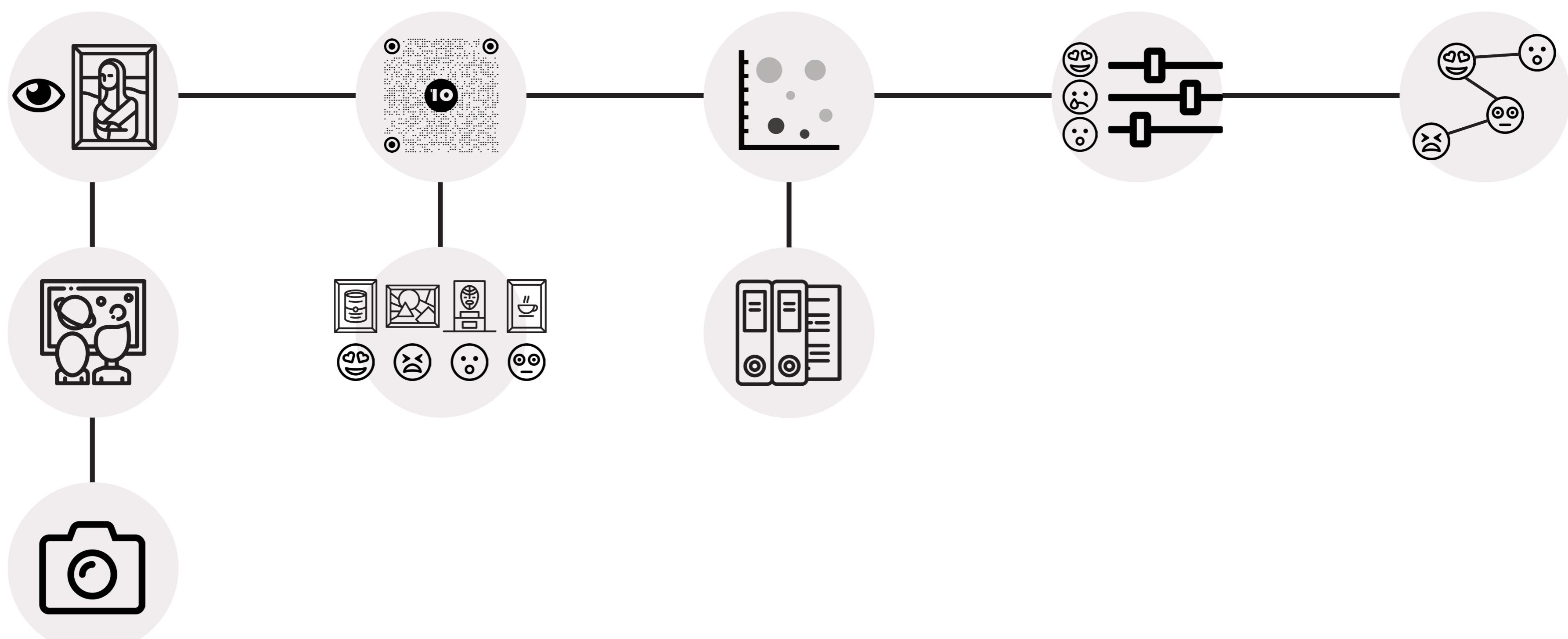
“algorithm”: “Face by Microsoft Azure”,

“clustering”: “Classify pieces of art by feeling and then grouping them by emotion classes”,

“user-interface”: “A web application where the curator can create different paths for visitors”

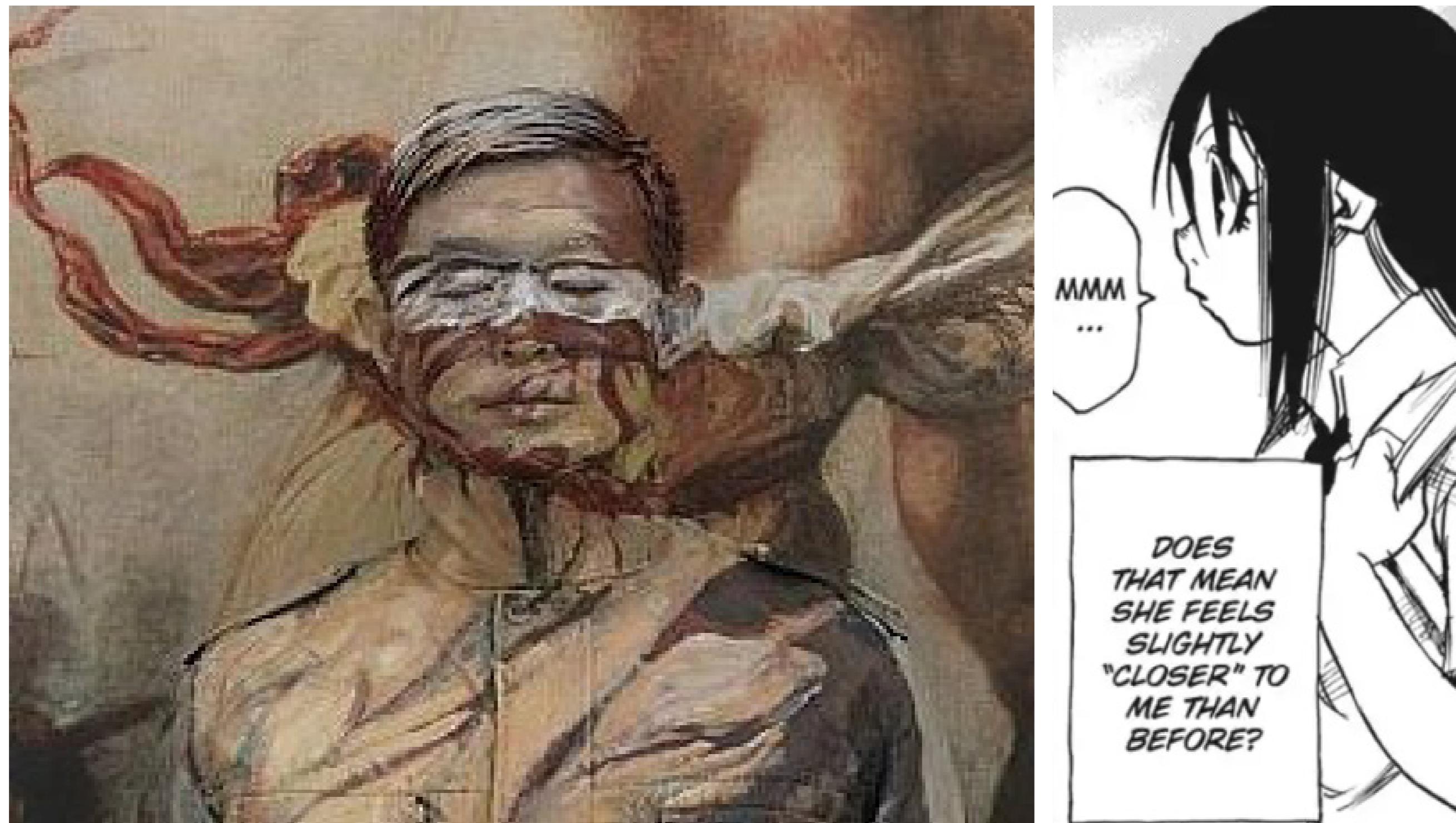
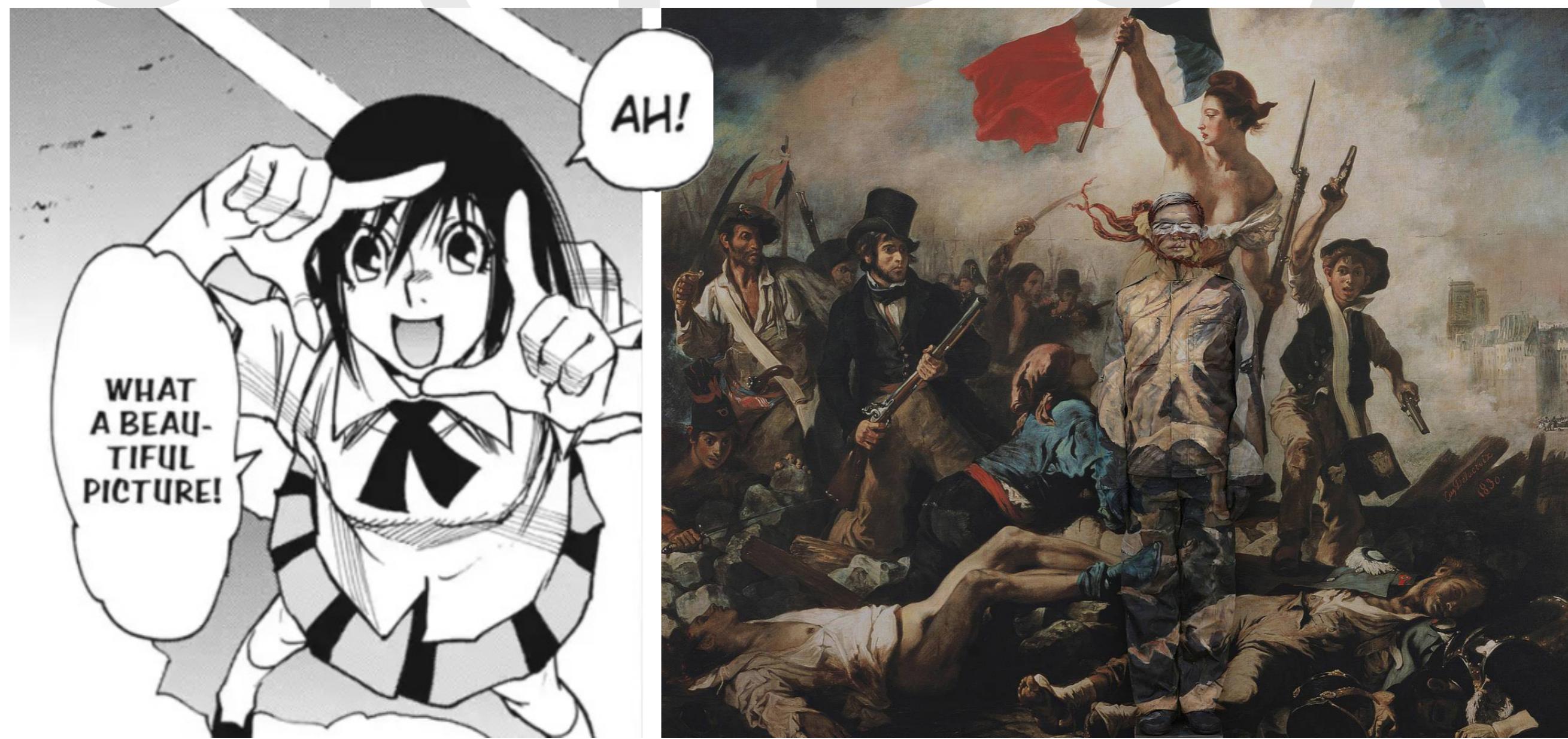
}

}



FACE TO FACE

STORYBOARD

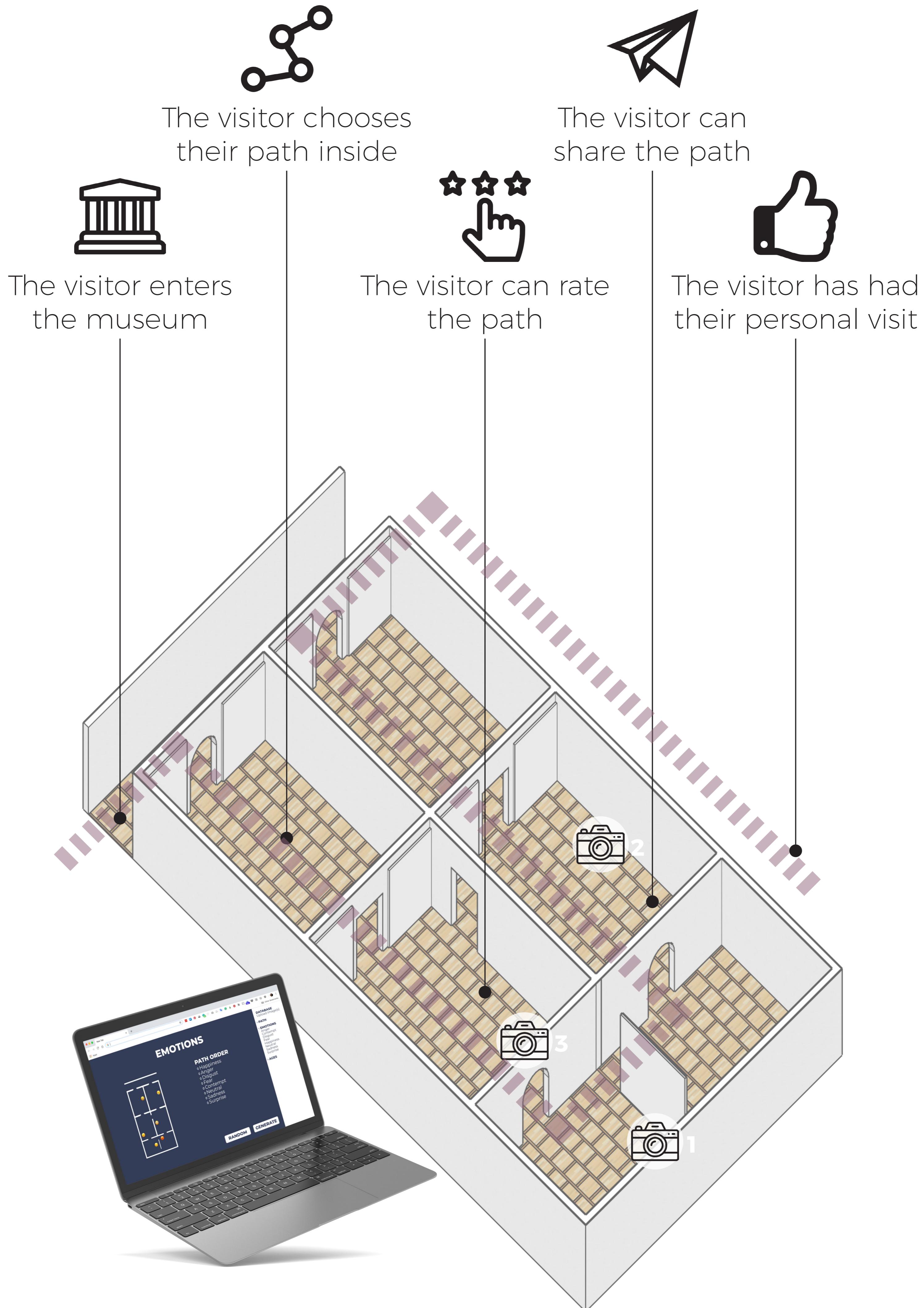


DOES THAT MEAN SHE FEELS SLIGHTLY "CLOSER" TO ME THAN BEFORE?



FACE TO FACE

Musée de l'Elysee as a test field



FACE TO FACE



BACK-END



Send POST request
to Microsoft Azure

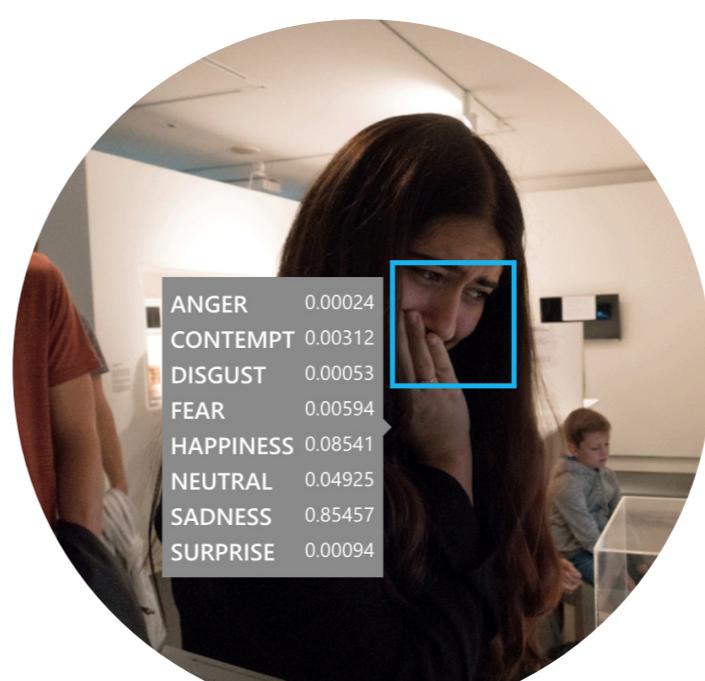
FRONT-END



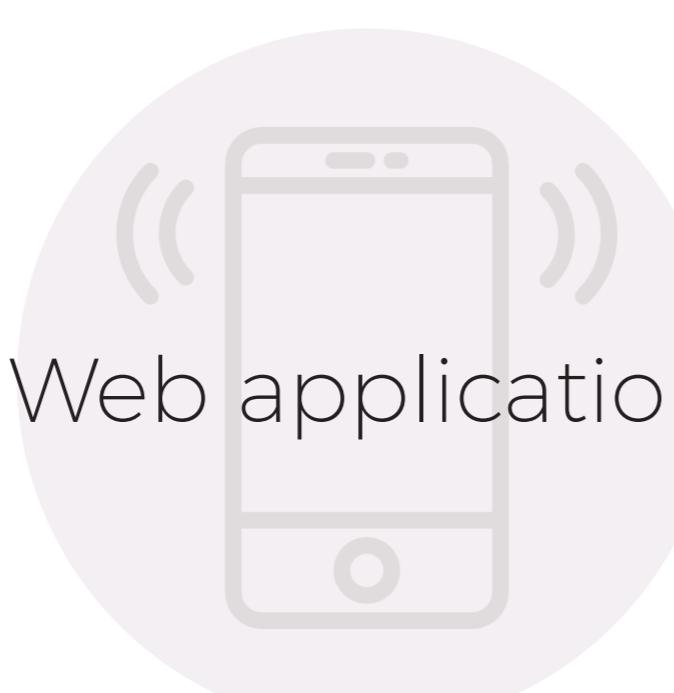
Upload a photo or
a set of photos



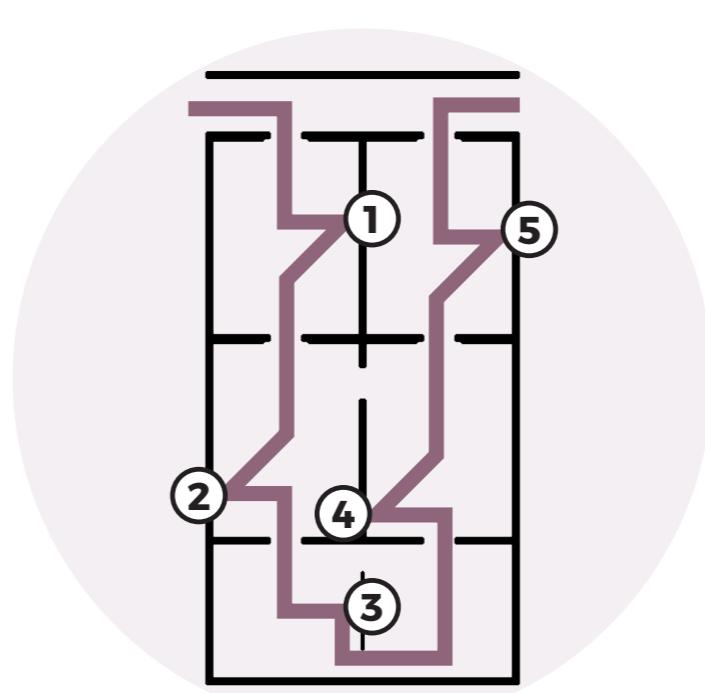
Receive JSON



Make clusters by lo-
oking at emotions
or ages



Web application



FACE TO FACE

EXPERIMENT

1 Video and people watching paintings

We have asked a few people to sit in front of a screen and simply watch some images that we had prepared for them: no-one was aware of the subject of the exhibition.

We have randomised the order of the paintings in order to obtain the most neutral result possible, as we thought the previous painting could affect the reaction in front of the following.

We have left every picture for 5 seconds, in our opinion a reasonable amount of time to make the initial facial expression fade before switching to the following image.

We have taken one picture of the person in front of the screen within the first second in which the image was displayed, when the facial expression was the most genuine.

2 Sending and processing results

We have collected all the pictures and submitted to Microsoft Azure's API, obtained the JSON with the corresponding scores. We used the results to create a chart that shows the average spectrum of emotions people felt in front of that given image.

We imagine that, using this web-app in a real museum, the spectrum could constantly change giving the impression of the painting having a mood too.

3 Representation of the museum

In parallel we have re-designed the plan of the Musée de l'Elysée and transformed it into a matrix: in this way it is possible to define the areas in front of the paintings, walls and the areas where visitors can walk and where they cannot.

We have kept the actual display of the museum, therefore the pieces of art are in the real position and sequence.

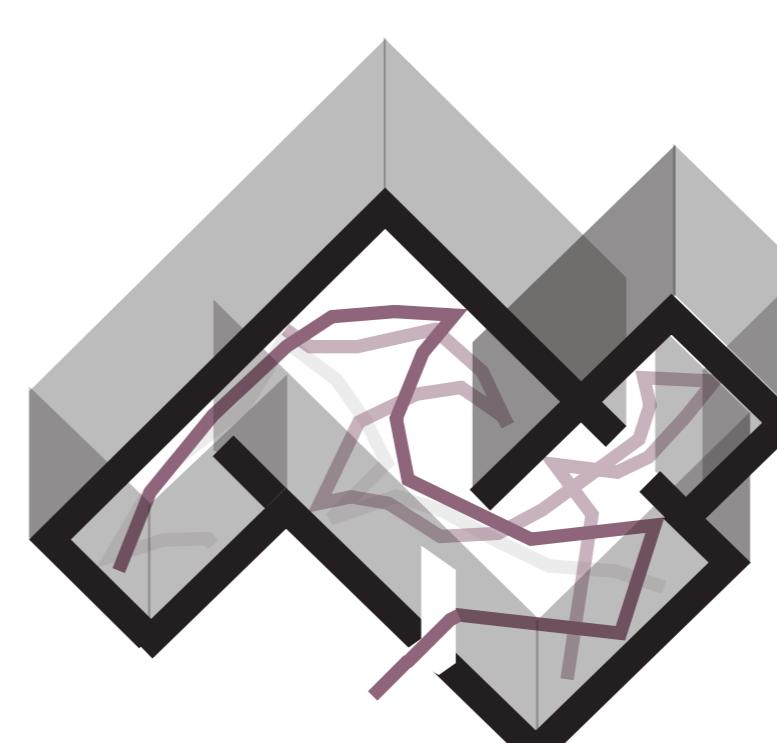
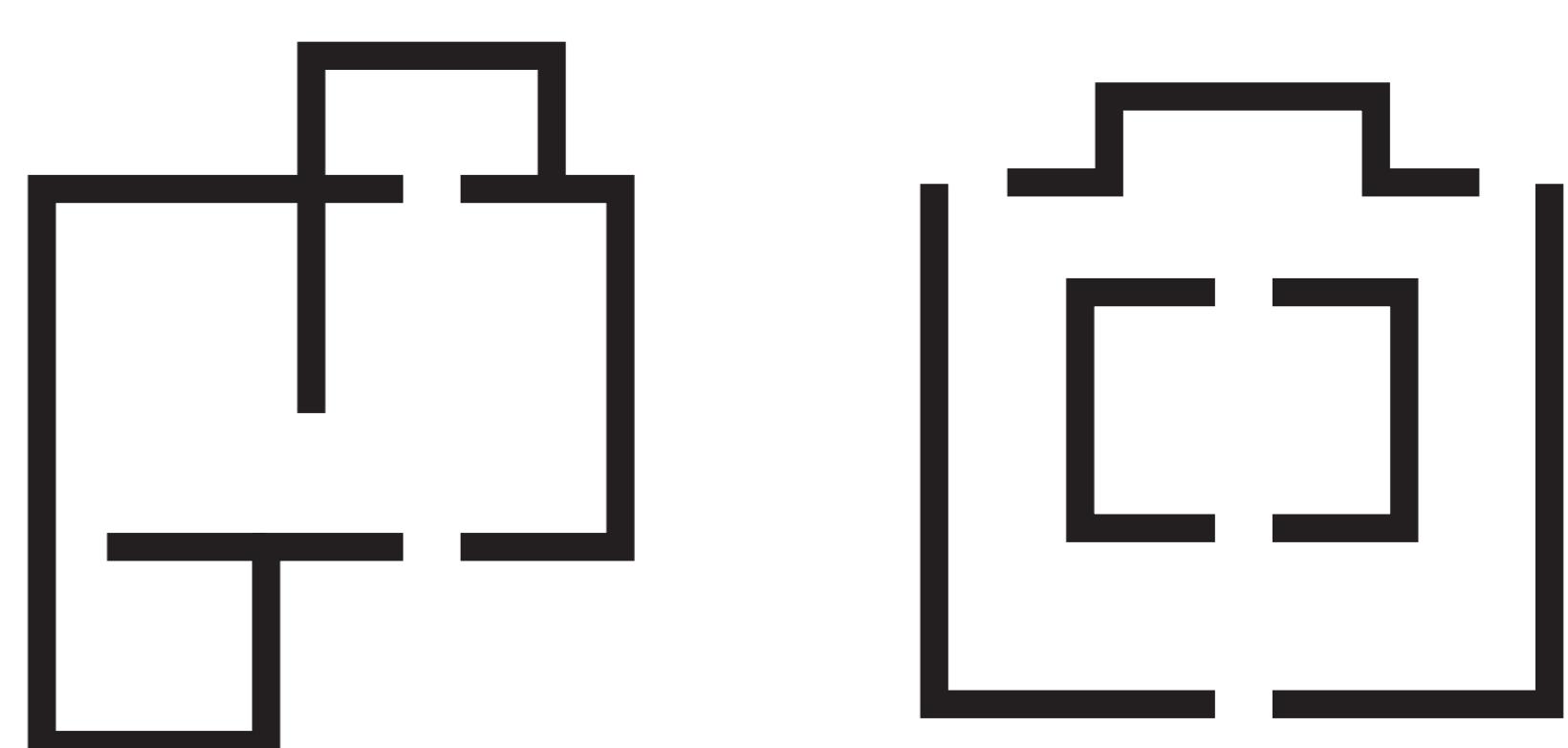
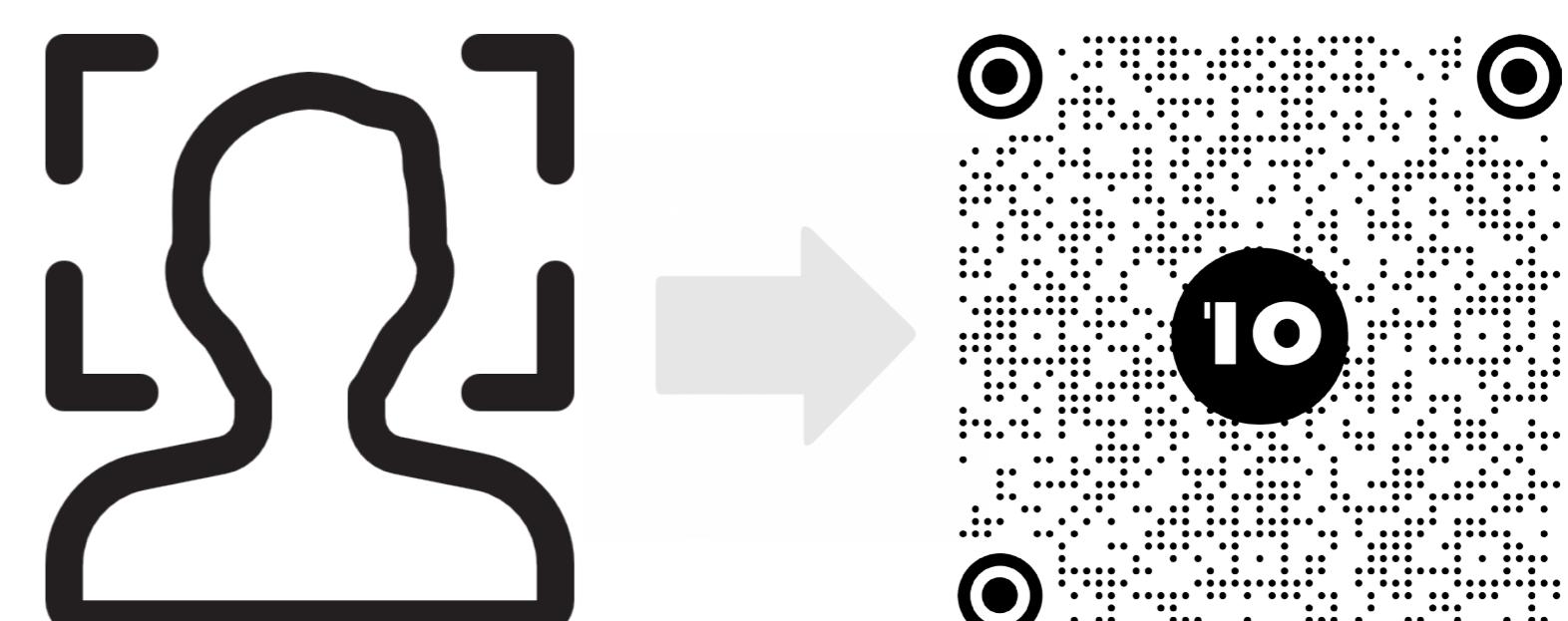
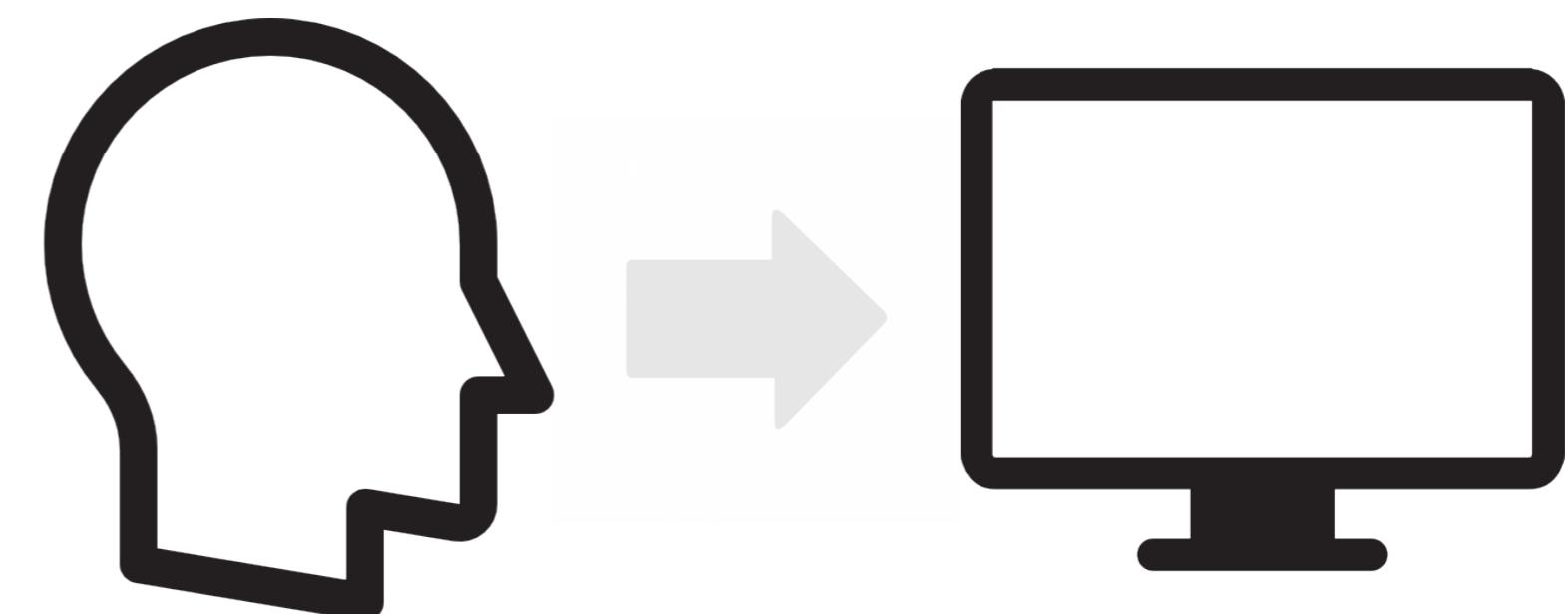
4 Creating the path inside the museum

Once the data for the spectrum of emotion have been collected the paintings are ranked according to them.

It is now possible to select a path by dragging the emoticon of how you imagine your emotional journey to be.

The app will calculate the next painting with the corresponding feeling and will guide you through the physical museum.

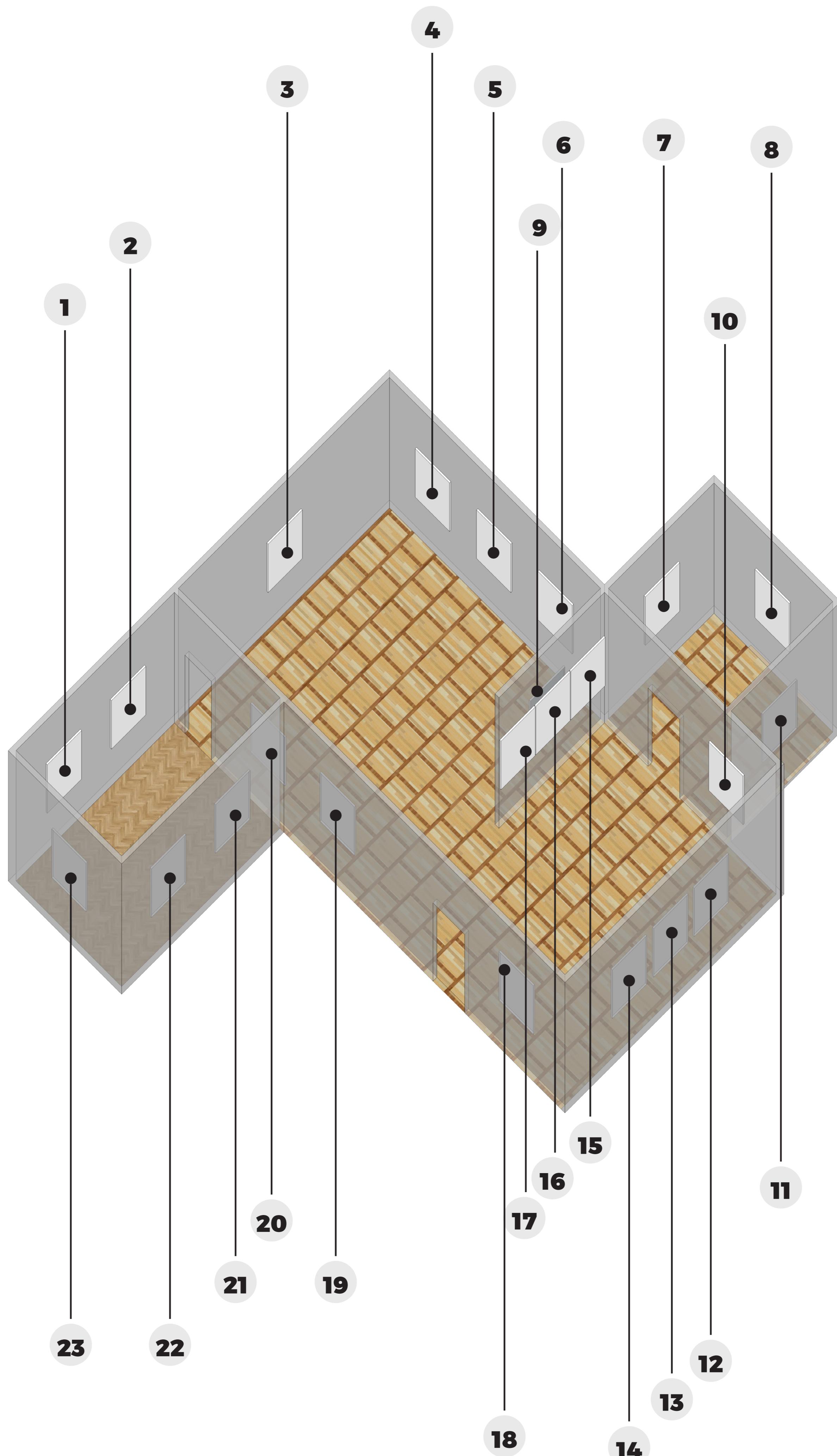
It uses a combination of distance and similarity score to find the next hop on your way through the exhibit.



-
-
-

FACE TO FACE

musée de l'lysée
LIU BOLIN

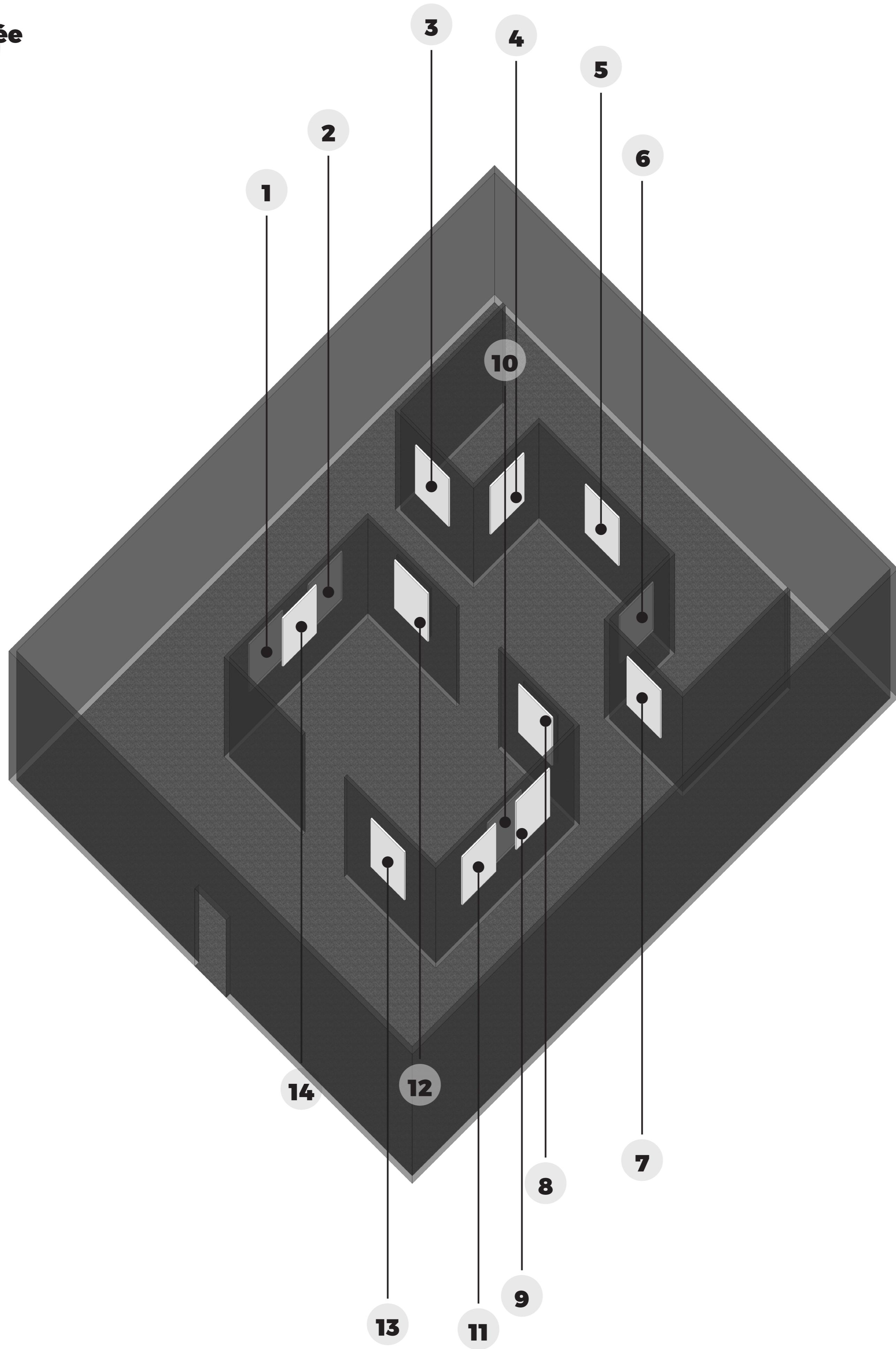


1ST FLOOR

- | | | |
|--|--|--|
| 1.01 Pipes | 1.09 Info port | 1.17 In front of the party flag |
| 1.02 Provisional wall | 1.10 Monastery | 1.18 Policeman and civilian 2 |
| 1.03 The laid-off workers | 1.11 Chinese fan 2 | 1.19 The inheritance |
| 1.04 Open field | 1.12 United struggling | 1.20 Info wall |
| 1.05 Unify the thought to promote education | 1.13 New culture needs more ___ | 1.21 Road block |
| 1.06 Voter registration is in accordance with the law | 1.14 Suoja Village 2 | 1.22 Forklift |
| 1.07 Chinese fan 3 | 1.15 Learn by figure | 1.23 Creeping forward |
| 1.08 Nine-dragon screen | 1.16 Head portrait (Mao) | |

FACE TO FACE

musée de l'lysée
LIU BOLIN

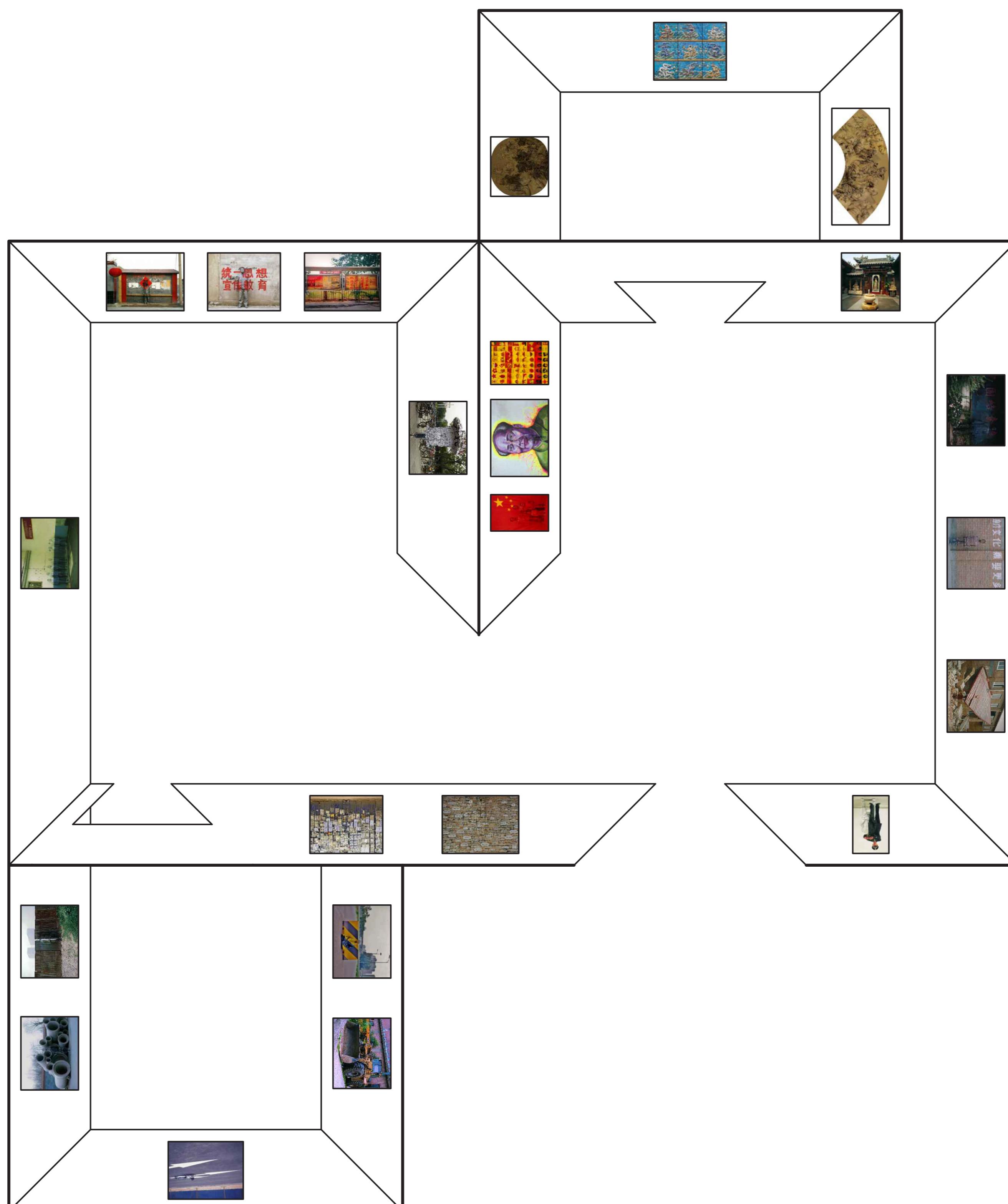


**2ND
FLOOR**

- | | | | |
|-------------|------------------|-------------|---------------------|
| 2.01 | Temple of heaven | 2.08 | Screen in rest |
| 2.02 | Bird's nest | 2.09 | Into the woods |
| 2.03 | Green food | 2.10 | Cancer village |
| 2.04 | Supermarket 3 | 2.11 | The great wall |
| 2.05 | Your world | 2.12 | Water crisis |
| 2.06 | Mobile phones | 2.13 | Cooperate with rero |
| 2.07 | Panda | 2.14 | Forest 2 |

FACE TO FACE

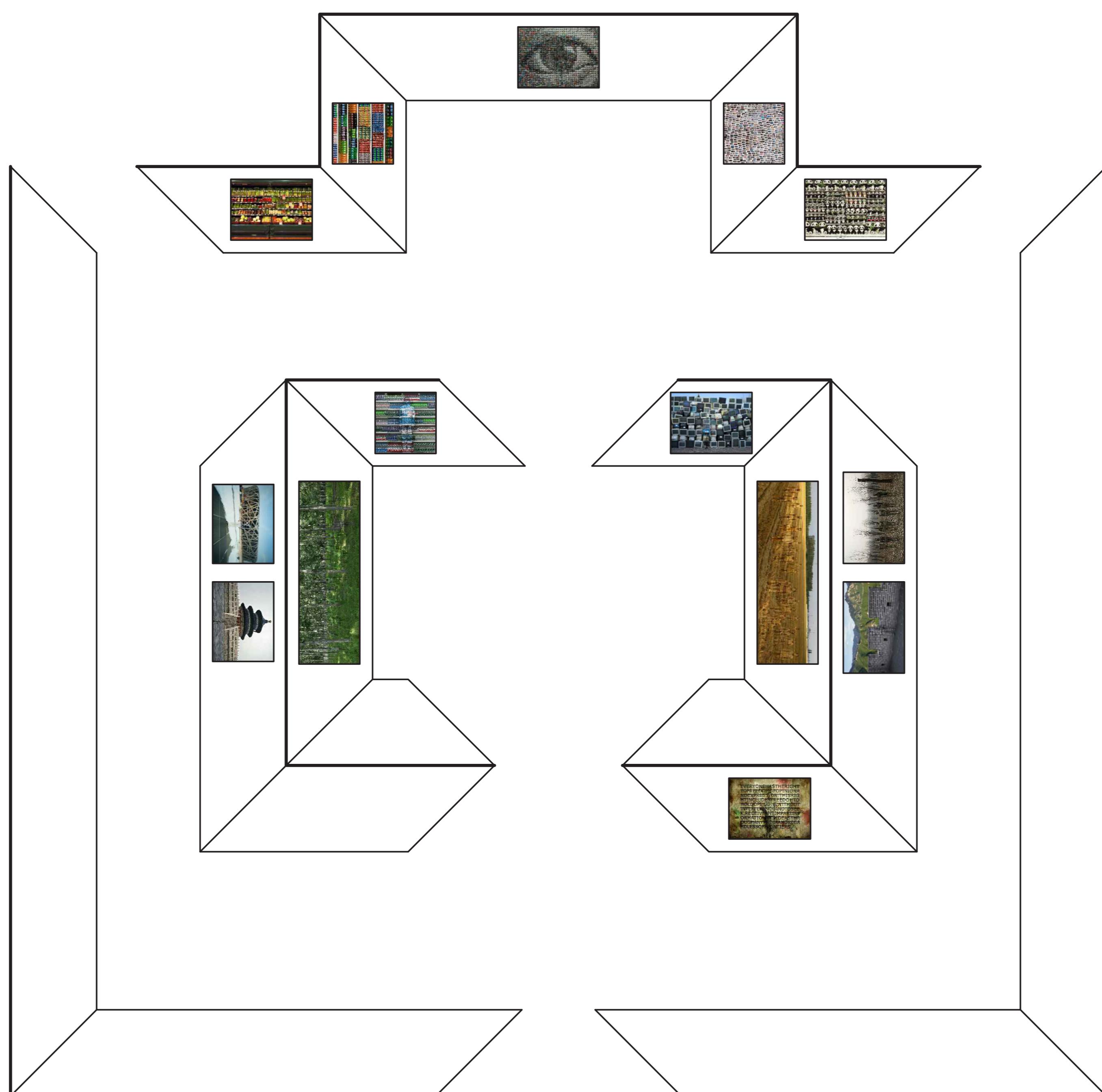
musée de l'lysée
LIU BOLIN



**1ST
FLOOR**

FACE TO FACE

musée de l'lysée
LIU BOLIN



**2ND
FLOOR**

