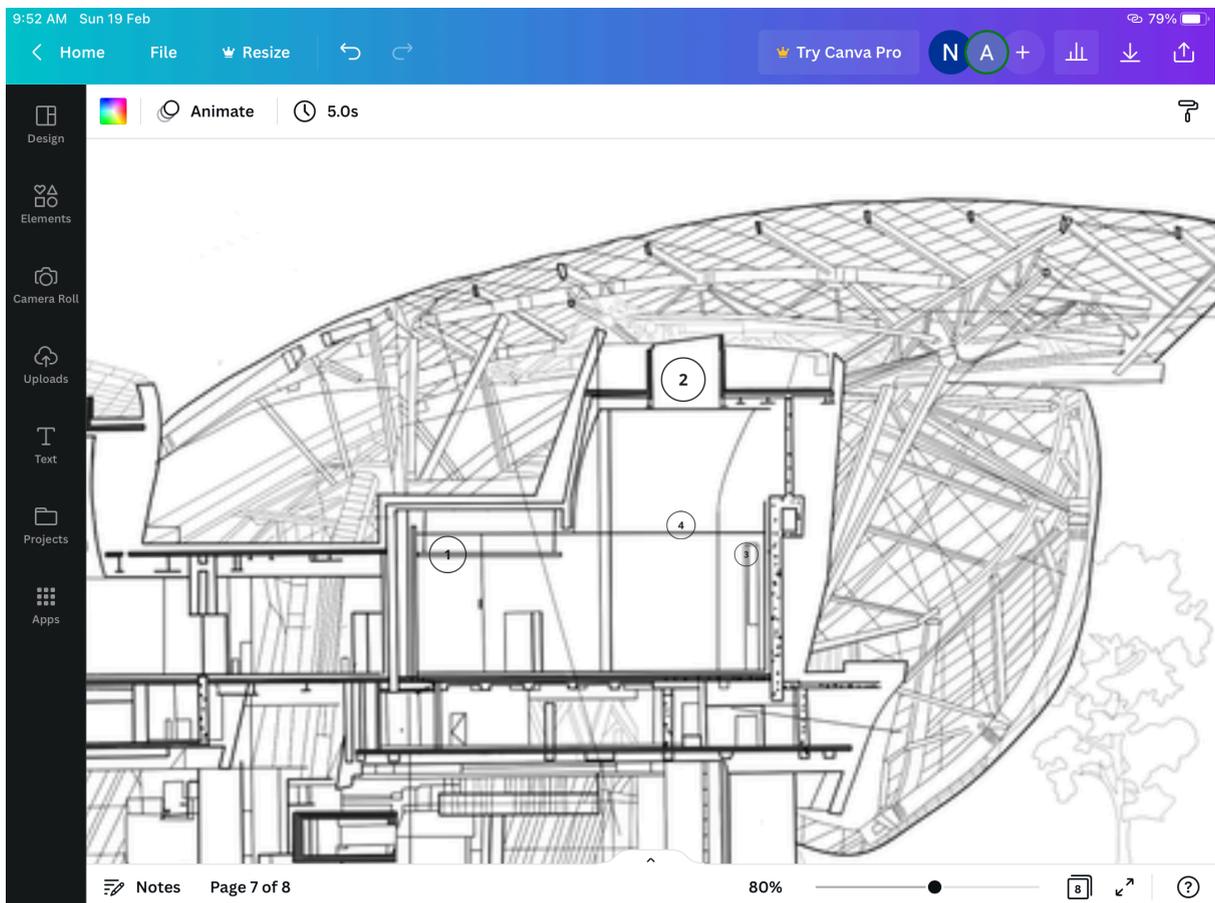
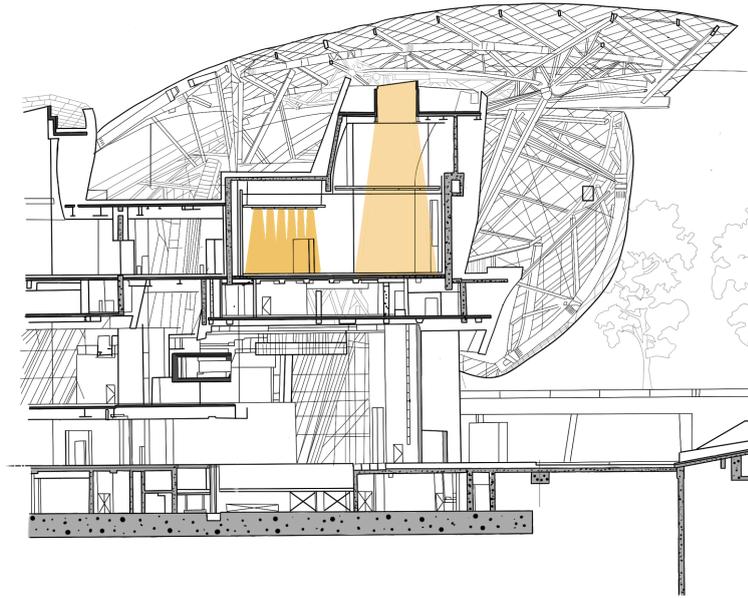


Page 2

1. Shorter section to list out the **problems** according to the labelled space. Include how light from the openings/lights can affect the space & the objects -Izmira (sculpture drawing meme- Cathy)
2. Explain the changes made (each one in detail) - Ari
3. Include lumen calculation for the track lights -Ari
4. Bigger section for the interventions layout (don't forget to put conclusion, reference and to put our assignment name, our names and student ID) -Nana
5. Explain how the changes affect the viewers, the art displays and the overall atmosphere. -Nana





Problems

Problem (1)

I. Distance between the spotlights to the wall is too far, causing the light to diffuse out and illuminating the entire space rather than focusing on a specific object. With no accent light on the displays, it gives off a feeling that the gallery room is filled with random junk. Viewers will fail to notice the importance of detail in the artwork.

Due to too big a distance between the spotlight and the wall the light diffuses out and does not let focus on a specific object. With the lack of accent light viewers will fail to spot the importance of the artworks' detail.

II. Too many sport lights on the rack, causing the light rays to clash/overlap and are reflected onto the white walls. Does not create an ambient light (focused light) towards the painting. There is no contrast between the artwork and the wall, viewers will not feel how important the artwork is in the room.

There are too many sports lights on the rack, which causes light rays to collide and bounce off of the white walls. Hence it does not give any ambient light so viewers will not catch the significance of the art in the space.

III. Purpose of the room is to display different artworks every year during the annual exhibition event. But the spotlights are non adjustable and it is hard for the curator to customise the lighting to perfectly show the details of their artworks.

Due to the spotlights being not adjustable it is very hard for the curator to customise the lighting for yearly artworks with its own individual approach.

Problem 2

- I. The window allows natural light to enter the space, though the light enters from the backside of where a centrepiece sculpture is displayed, the sculpture which represents the main attraction of the gallery room. During the day, natural light from the window casts onto the sculpture and creates a shadow which darkens the front view of the sculpture. The light gives optimal lighting to see the details of this sculpture from the back instead of illuminating the sculpture at a 360 degree angle.

Even though the natural light is entering the space, it is coming from the backside of the sculpture which itself is the main attraction of the gallery. Throughout the day the light casts onto the masterpiece and creates a shadow which darkens its front view. So the light instead of illuminating the sculpture at a 360 degree angle only lets you see its details from the back.

Problem 3

- I. The void in the centre of the high ceiling space serves as a key feature in the entire room. Assuming that the purpose of the void is to serve as a spotlight to put emphasis on the centrepiece sculpture displayed, though the size of the void is too big and is reflected by the white walls and

doesn't emphasise the sculpture at all, this serving as its main purpose is to simply illuminate the space below it.

The central void is taking the role of the key feature of the whole room with its main purpose to put emphasis on the centrepiece sculpture. However, due to its too big size and the natural light being reflected by the white walls it does not really manage to emphasise the artwork at all.

- II. Size of the void is not adjustable, thus some artists who wish for a darker space/ specific lighting area, cannot cancel out the light coming from the void. Because the size of the void and the light coming through it is non adjustable and is a permanent feature of the gallery room.

Due to the void size not being adjustable some artists who need a darker space or specific lightning area cannot get it because of the light coming from the opening.

Solutions (in detail)

Solution 1 (according to problem 1 above)

- I. Lowering the track lights wire to ensure that the distance between the lights and the walls is exactly 29 inches to achieve a 30 degree angle illumination.
- II. Replacing the non-adjustable spotlights on the track to adjustable and multi-optional spotlights that can emit about 3470lm per lamp. In total, 70686lm is needed to optimal illumination to illuminate the displayed artworks.
- III. Installing adjustable recessed floor lights, at a distance of () to achieve a 60 degree angle. This give the curator more options to focus on different displayed objects. Light can be used when needed.

Solution 2

- I. Adding circular adjustable track lights to replace the track lights under the void. This gives more flexible options for lighting for the centrepiece sculpture. Light that comes in from the window illuminates the back of the sculpture, these spotlights on the circular track can be adjusted to illuminate the front of the sculpture, thus creating a 360 degree Illumination on the sculpture.

Solution 3

- I. Adding retractable blinds onto the void that can be adjusted according to the curators' needs. Inspired by the same retractable blinds installed in the Green diamond in Putrajaya.

Lumen calc

Higher lux for Sculpture Centre.

→ BS 76 TRACK LIGHTING (2170lm or 3470lm)
80 50 TRACK 80 70 TRACK

No. of lights required,

$$N = \frac{AE}{F \times UF \times MF}$$

⇒ 2170 lm (80 50%)

$$N = \frac{(12.75)(10.5)(100)}{(2170)(0.35)(0.80)}$$

$$= \frac{13387.5}{607.6}$$

$$= 22 \text{ lights.}$$

⇒ 3470 lm

$$N = \frac{13387.5}{971.6}$$

$$= 13 \text{ lights.}$$

* Required lighting
 ↳ 70686 lm
 ↳ showroom is 1442 sqft.

Although the total luminous flux needed is 70686lm to fully illuminate the space, the main goal is to create a darker space with an accent light focused onto the displayed artworks. Thus according the lumen output per spotlight, a total of 13 spotlights at a strategic layout is optimal for accentuating the painting.

No. Of spotlights on track - 6 on top

No. Of spotlights on the floor - 3(?)