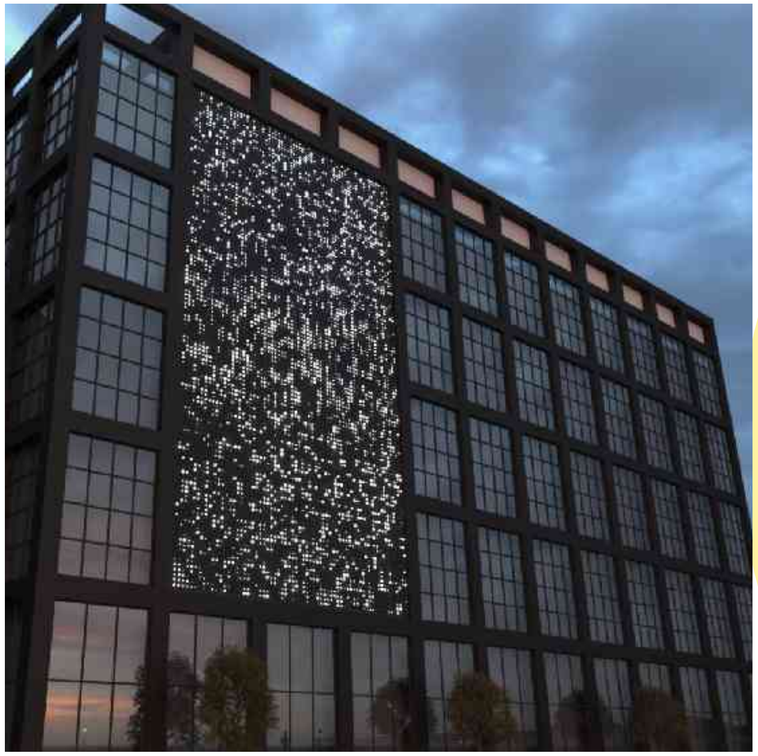
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The Globe Art Wall
By ENESS

Information for Planning
15/08/2024

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Project Overview:
THE GLOBE ART WALL - CONTENT





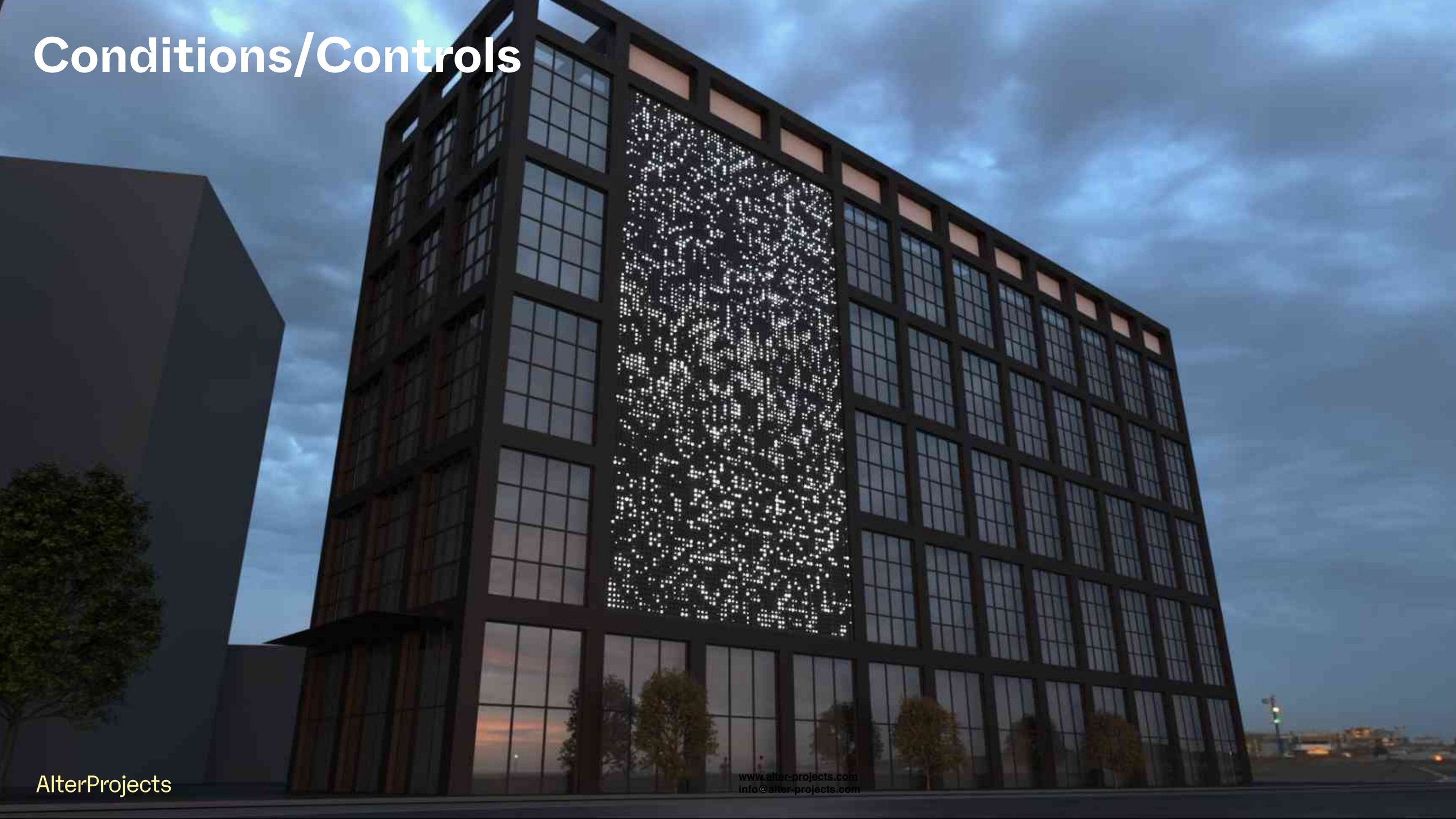


CONCEPT:

Images will sporadically and slowly emerge from abstract patterns, signifying the richness of the Manchester scene. The behaviour of the LED nodes will change in response to the movement of passersby – a metaphor for the people of Manchester being the catalyst for creation.

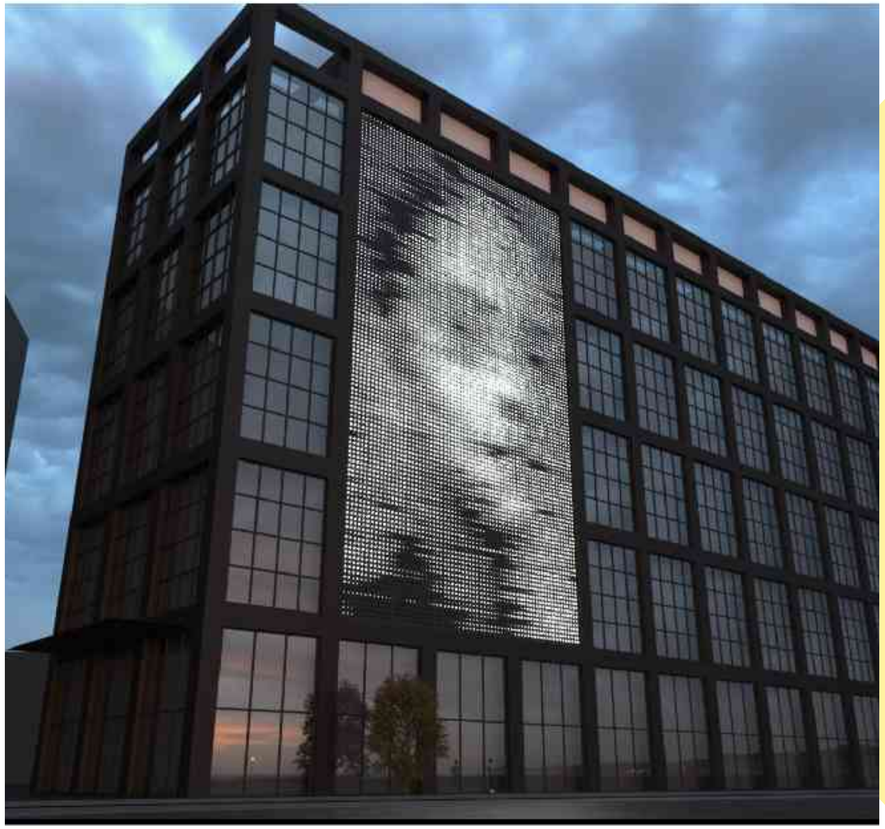
Exact content is still in development.

Conditions/Controls



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Conditions

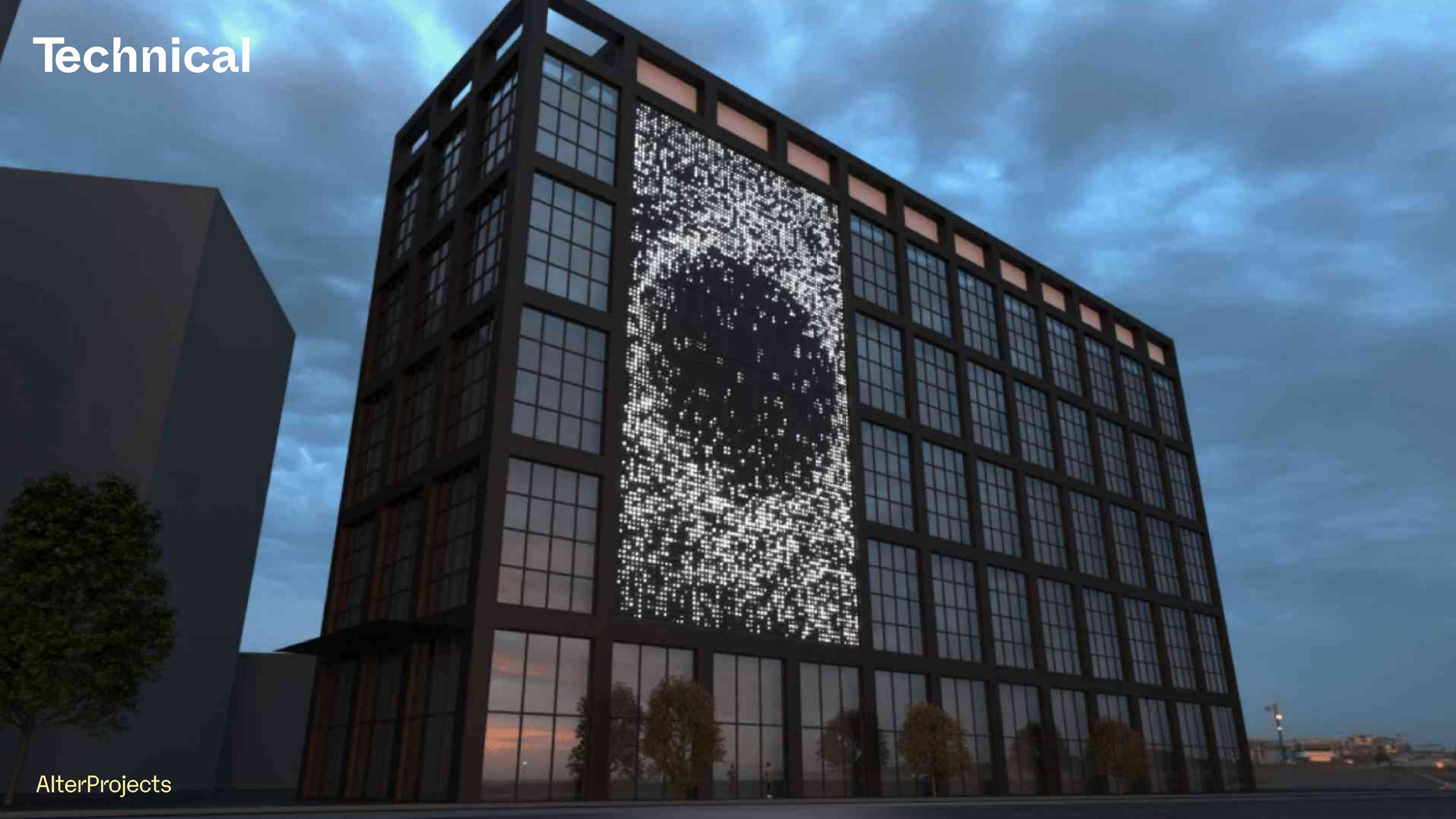


Conditions to help mitigate safety concerns

Following the pre-app meeting, we agree the following measures to be put in place:

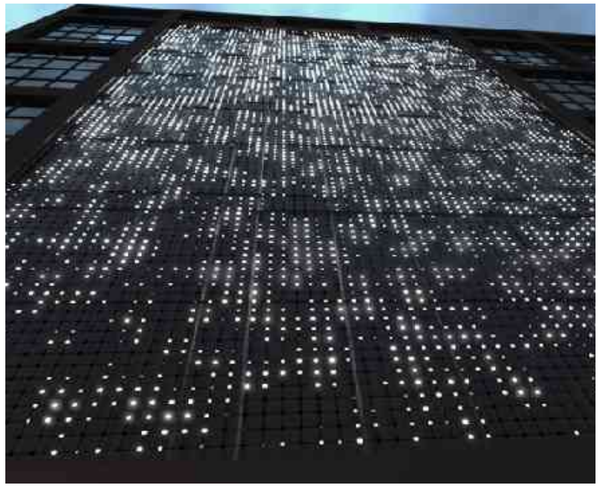
- The art wall will not use the colours red, green or amber to help avoid any potential driver confusion with traffic lights and the art wall.
- Officers from MCC Planning Authority and TFGM are to be invited onsite during the programming to review live the content, and may ask for reasonable changes to speed or brightness if there are any safety concerns.
- Accident data to be reviewed in 6 months time to ensure no adverse effect has been created by the full motion artwork - if any incidents arise earlier, the review will happen sooner.
- Candela to be within the recommendations contained within the Institute of Lighting Professionals Lighting Guide - Technical Report Number 5, so not to exceed 300 cdm/m2 at night.

Technical



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Technical:
PIXEL PITCH/SPEED





PIXEL PITCH:

Standard LED pitch for an outdoor advertising screen is 6.67mm, meaning there is one LED dot every 6.67mm resulting in a high definition display.

In contrast, the Art Wall consists of 13,500 LED RGB nodes at a pixel pitch of 200mm, meaning there is one dot every 200mm. This results in a much lower resolution and more abstracted output.

To give you a more accurate reference point, the pitch is the same as what is used on the bottom part of the SODA facade, or similar to Christmas Lights, resulting in a pixelated image.

CUSTOMISATION:

In addition to the low pixel pitch, we will be customising a standard LED mesh with an acrylic cover over the nodes which will have a slight reflective quality (as you can see to the left). This will assist in muting yet spreading the light, and when the wall is off, will still give a kinetic feeling with the gentle reflections it will pick up from surrounding traffic and light pollution.

SPEED:

Because of this lower pixel pitch, images will appear to be moving much more slowly than those of a high resolution advertising screen which has content designed to grab your attention quickly.

The content is also fully customisable, so if on review it is felt that the imagery was moving too quickly, this could be modified.

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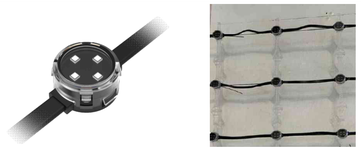
Technical: CANDELA

Shenzhen SH LED Technology Co., Ltd

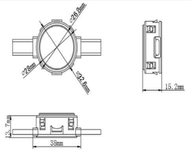
Product specification

Product name	LED mesh screen	Model	E33-P200

Product picture

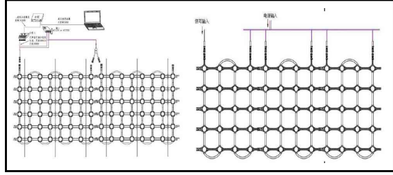


Size picture

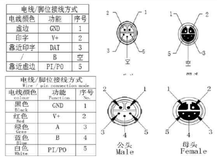


Electrical parameters		Light source parameters	
• Rated working voltage	DC24V	• LED Qty	3535RGB*4 each pixel with lens
• Rated power	1.1w/pixel	• LED Brand	Cree (USA)
•Lead wire specification	2x0.75mm²+3x0.3mm²/2.9mm*9.7mm	• Light source life	≥30000 Hr
• Line sequence definition	Red: V+/ Green:A /Blue :B/White:PI/PO/Black:GND	**Optical parameters**	
• Optional spacing(mm)	Pitch 200mm	• Gray scale	16 Bits / 65536
• PIXELS per square meter	25	• Brightness	850-900lm/sqm
• Control mode	TTL	• Luminous intensity	10.1lm,17.1lm,27.1lm/pixel (change by RGB*2/3/6)
• Control chip IC	UCS5903	• Wavelength	RGB(R:615-630nm G:525-545nm B:460-480n
•Pixel segment	R1 £6 £8 £10 £12 £14	• Color temperature	None White
Mechanical parameters		• LED Beam	110°±10%
• Body	94-V0 Flame-Retardant PC	• Color rendering index	CRI 94 minimum with R9 > 85
• Cover	94-V0 Flame-Retardant PC	**Lighting Distribution**	
• Shell color	Black		
• Net Weight(single pixel)	30 gram		
Others			
• Oper Temp	-20℃~+60℃		
• Storage temp	-40℃~+75℃		
• Degree of Protection	IP67		

Installation method



Wiring diagram



批准： 审核： 制表：王丝

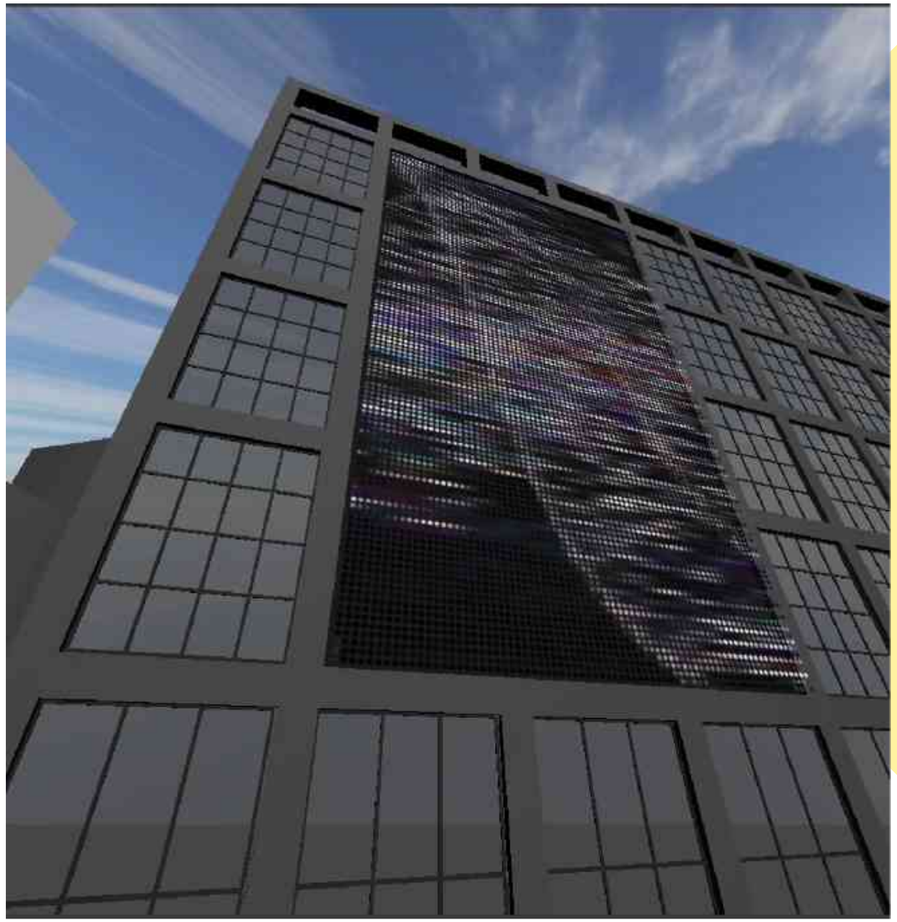
Maximum Candela Daytime:
550 cd/m2

Maximum Candela Nighttime:
300 cd/m2

The product has a maximum luminance of 550 cd/m2 when all the lights are on full brightness in white. However, the product is fully controllable and adjustable and so we can ensure that it does not exceed 300 cd/m2 during the night time hours which would keep the luminance levels in accordance with the recommendations contained within the Institute of Lighting Professionals Lighting Guide - Technical Report Number 5. We can measure it's output onsite taking into account the ambient light in the area once we have completed install.

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Trouble Shooting & Maintenance



Trouble Shooting

There are several things that could fail when working with any kind of LED installation. As part of the Artists contract with Allied, they will be preparing a robust maintenance and trouble shooting manual with a plan for all common eventualities.
The key issues that could arise and the plan we will enact for these are as follows:

- LED Controller or Power Supply Fail - These will all be located within the building in a specially designated control room within a server rack meaning that if these need to be changed out, this can be done easily without further access to the facade needed. A surplus of LED controllers and Power Supplies will be supplied for this eventuality. Further components can be bought at a later date by Allied as needed.
- Programming Error - In the unlikely eventuality there is a programming error, possibly because of a power cut, this will be fixed by the designers remotely.
- LED Node fails - This will happen at some point. We will provide a surplus so that they can be replaced as required. Due to the nature of the artwork, if any nodes failed, chances that this would be noticeable are very slim, which means that the switching out of any nodes can wait until the yearly maintenance. However, if for any reason the nodes that went out caused any disturbance to the artwork, it could be reprogrammed remotely so that they were no longer an issue, and could be swapped out during the annual maintenance. This would be organised by Allied.

Yearly Maintenance

There will be a yearly maintenance contract put in place by Allied for the AV installer to come to site and inspect the LED wall to ensure the wall is still operating as required, that fixings are still in good working order, and to carry out any maintenance work required (such as swapping out any malfunctioning LEDs).

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Thank you

