Tree Diagram of Ideas

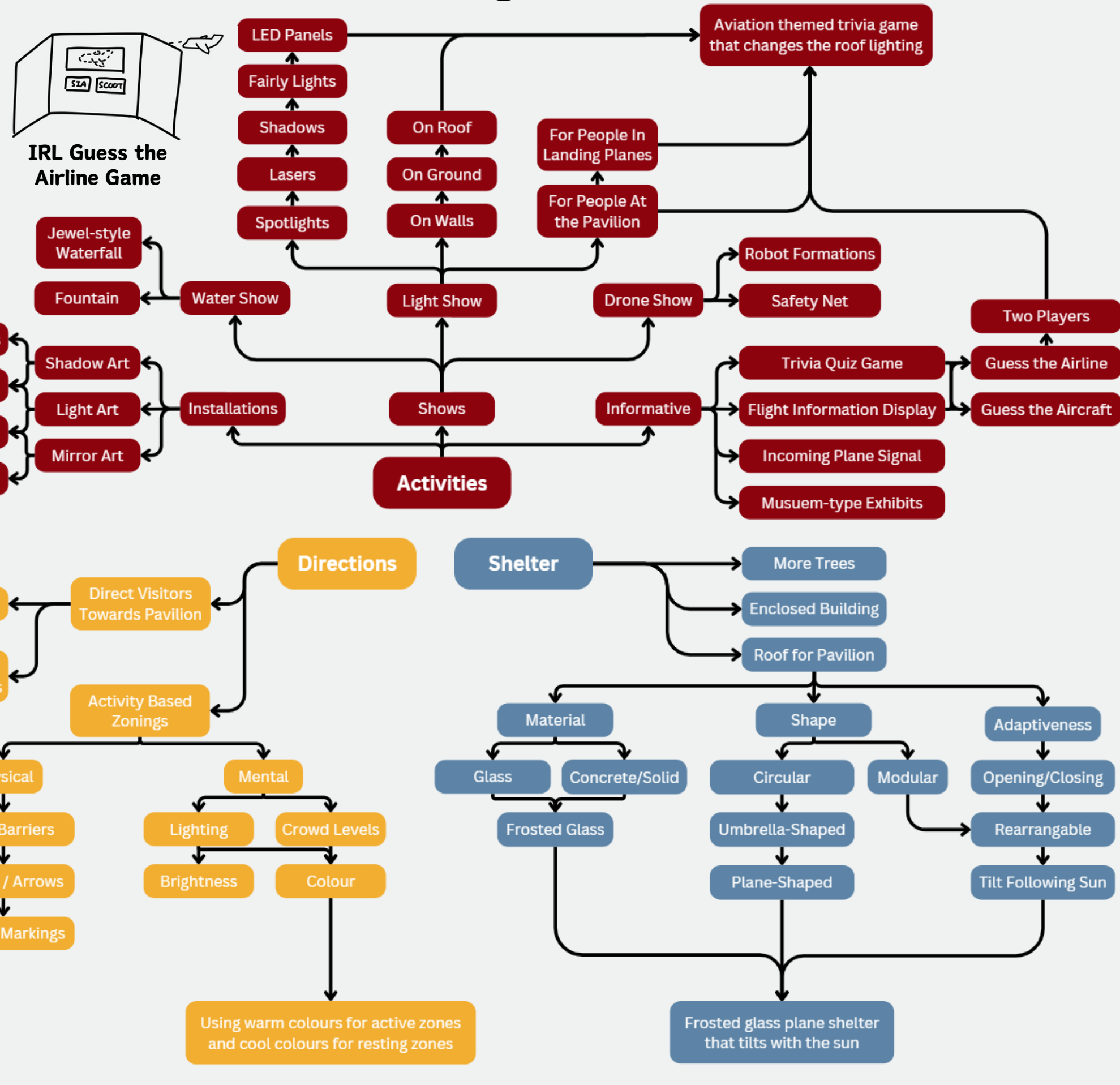**IRL Guess the Airline Game**

Problem Statement

Despite a relatively low presence of people during the day, the pavilion in the centre of the plane spotting site in Changi Business Park (CBP) is mostly left abandoned.

Due to the presence of a large tree blocking the view from the pavilion, plane spotters often opt to take photographs from the nearby field, where they can capture the full descent path of the aircraft.
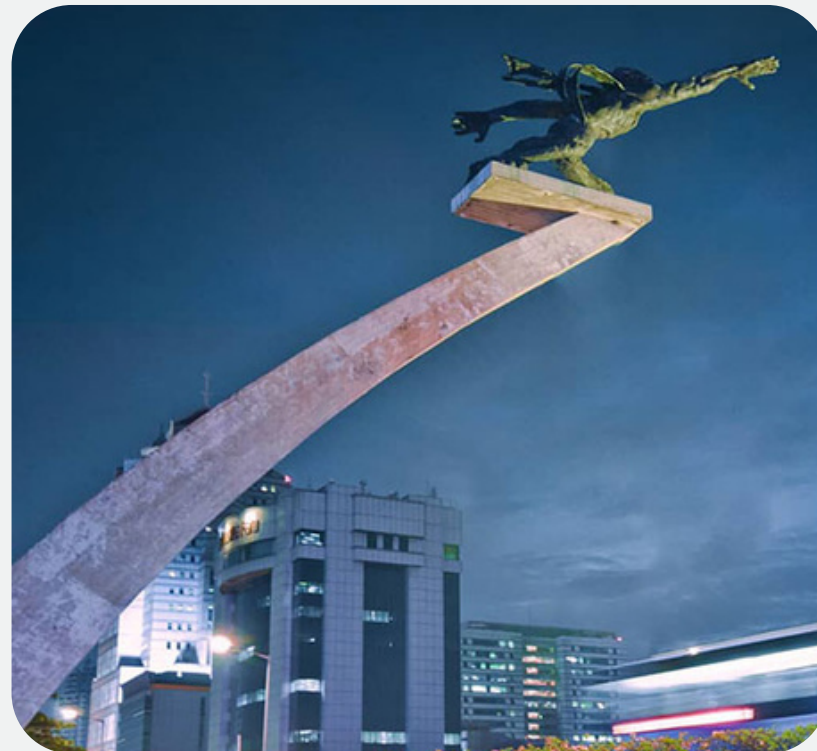
Meanwhile, the pavilion is not interesting enough to attract resting drivers and joggers.

Due to these, our problem statement will be "**how can we incentivise all the users, from plane spotters to those resting at site, to come and use the pavilion both day and night.**"

Activities

- LED Panels
- Fairly Lights
- Shadows
- Lasers
- Spotlights
- On Roof
- On Ground
- On Walls
- For People In Landing Planes
- For People At the Pavilion
- Aviation themed trivia game that changes the roof lighting

- Jewel-style Waterfall
- Fountain
- Water Show
- Light Show
- Drone Show
  - Robot Formations
  - Safety Net
- Two Players

- Coloured Shadows
- Interactive Art
- Plane Sculptures
- Kinetic Sculptures
- Shadow Art
- Light Art
- Mirror Art
- Installations
- Shows
- Informative
  - Trivia Quiz Game → Guess the Airline
  - Flight Information Display → Guess the Aircraft
  - Incoming Plane Signal
  - Musuem-type Exhibits

Directions

- Mini Airport Follow-me Vehicles
- Robot Dogs
- Guide Robots
- Direct Visitors Towards Pavilion
- Tiles that Light Up
- Runway Path
- Flashing / Blinking Lights
- Activity Based Zonings
  - Physical
    - Wall / Barriers
    - Signage / Arrows
    - Ground Markings
  - Mental
    - Lighting
      - Brightness
    - Crowd Levels
      - Colour
    - Using warm colours for active zones and cool colours for resting zones

Mini Airport Follow–me Vehicle

Pavilion

Runway Path towards Pavilion

Shelter

- More Trees
- Enclosed Building
- Roof for Pavilion
  - Material
    - Glass
    - Concrete/Solid
    - Frosted Glass
  - Shape
    - Circular
      - Umbrella-Shaped
        - Plane-Shaped
    - Modular
  - Adaptiveness
    - Opening/Closing
    - Rearrangable
    - Tilt Following Sun

Frosted glass plane shelter that tilts with the sun

Mood Board

Family 家
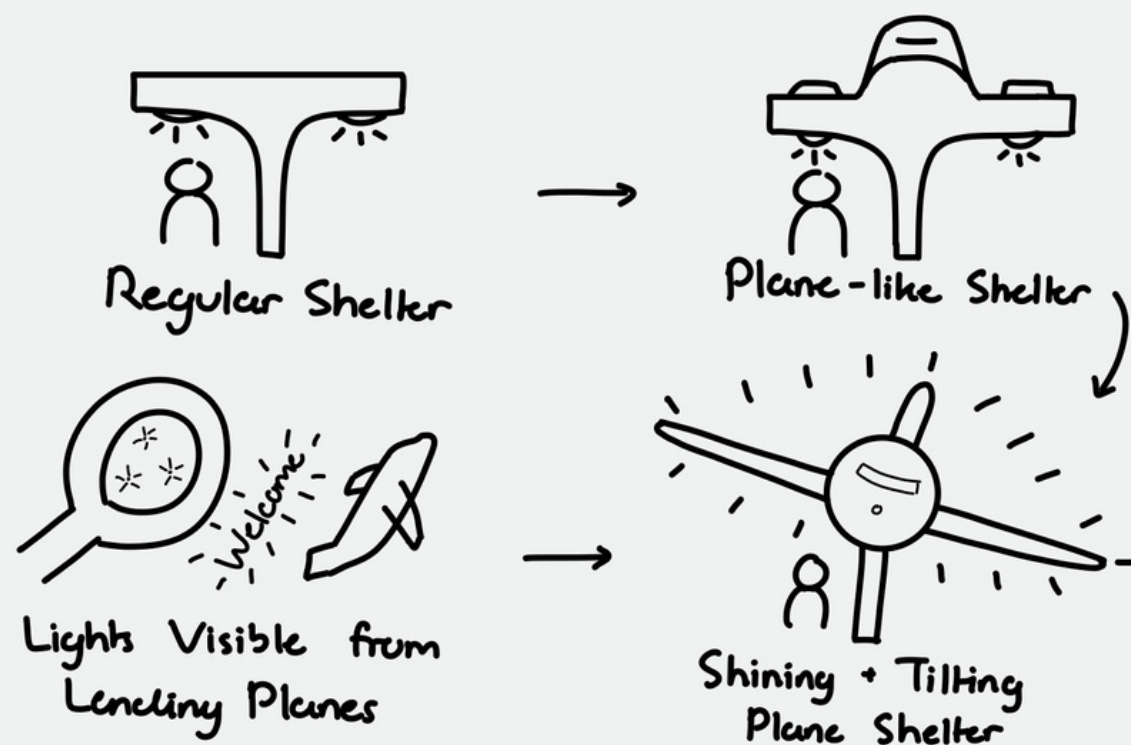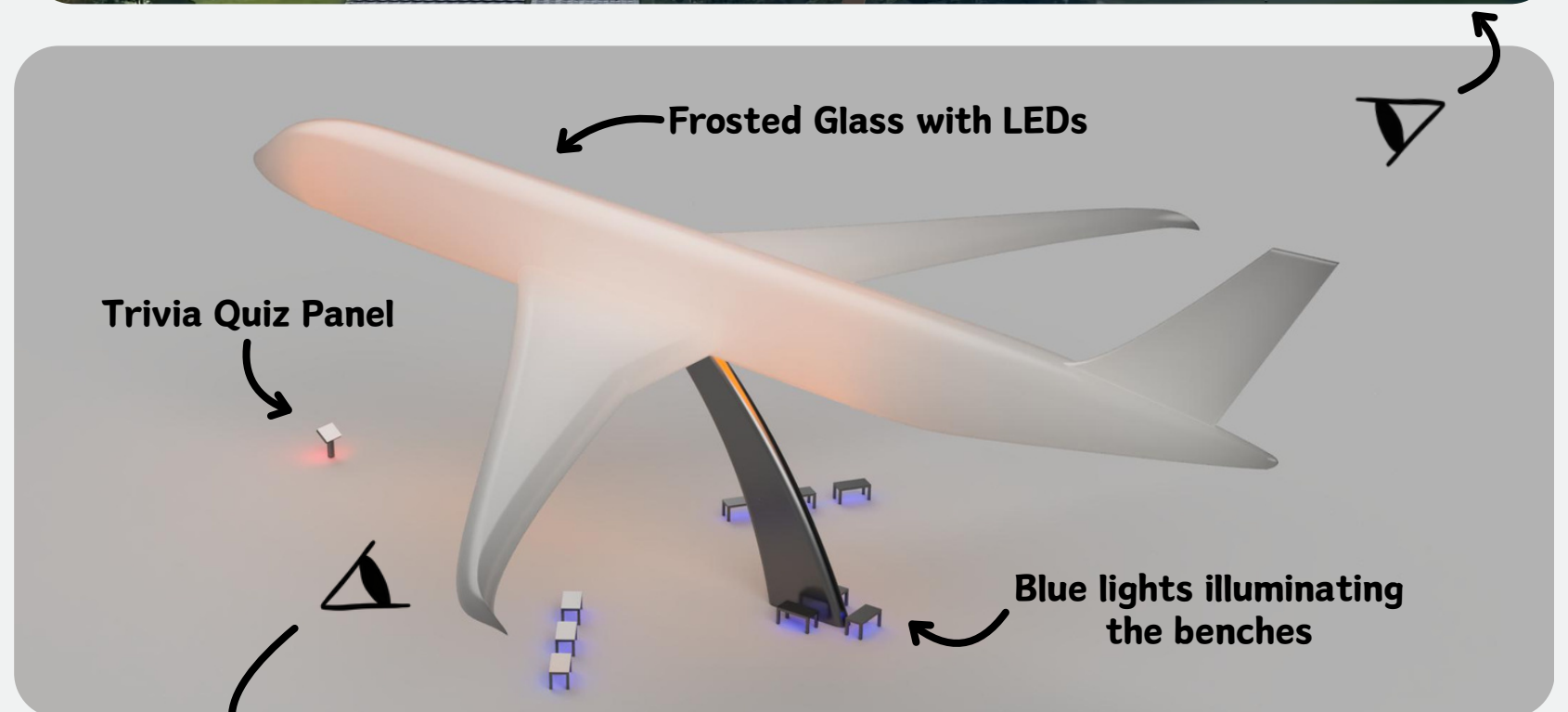
RESILIENT

Welcoming

AeroPark

An aviation themed attraction for all not just from the ground, but also from the sky.

AeroPark aims to promote social interactions through three different aspects: providing shelter, activities and directions towards specific zones within the installation.
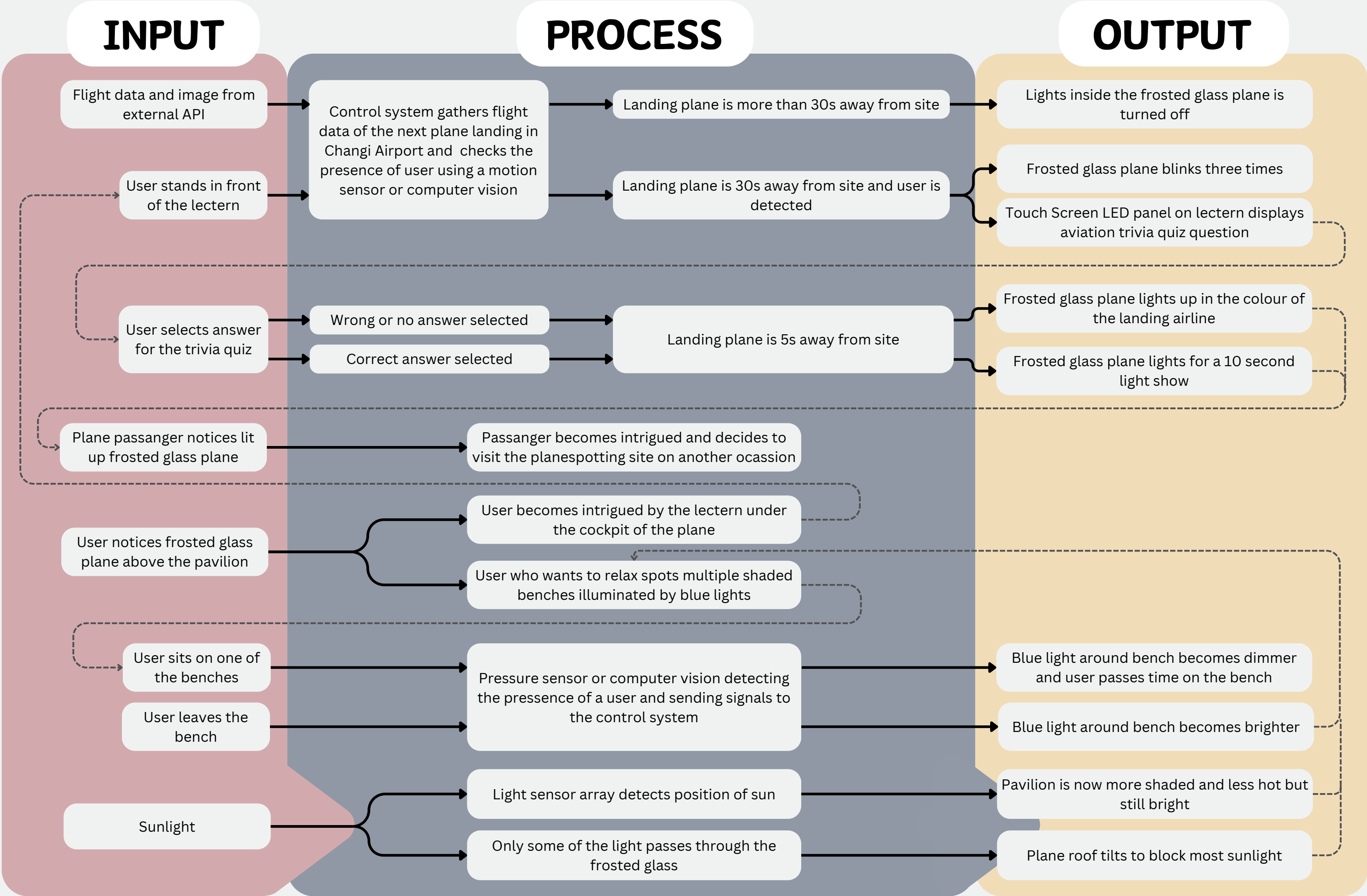
Evolving from a regular shelter, the centre piece of AeroPark is a frosted glass plane, with its wings and body providing shade to the benches underneath it. Like a plane soaring through the sky, the model plane will be able to tilt with the sun to provide maximum shade.

Additionally, the frosted glass plane will be fitted with LEDs, lighting it up and making it distinct when viewed from below and above. A trivia quiz panel is also added to the park where the answer selected deteremines the colours of the LED, providing a medium for interaction between visitors and landing planes.

Lastly, a subtle zoning system will be implemented making use of colour psychology, where active areas will have a warmer colour ambience, while resting areas will have colder ones.
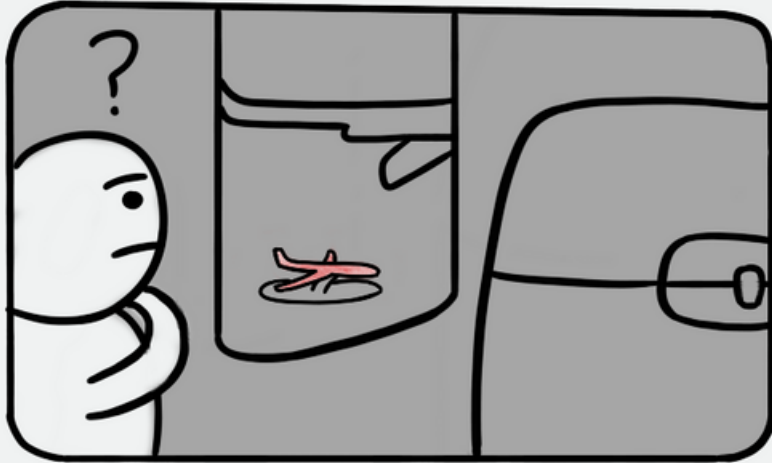
Regular Shelter

Plane-like Shelter
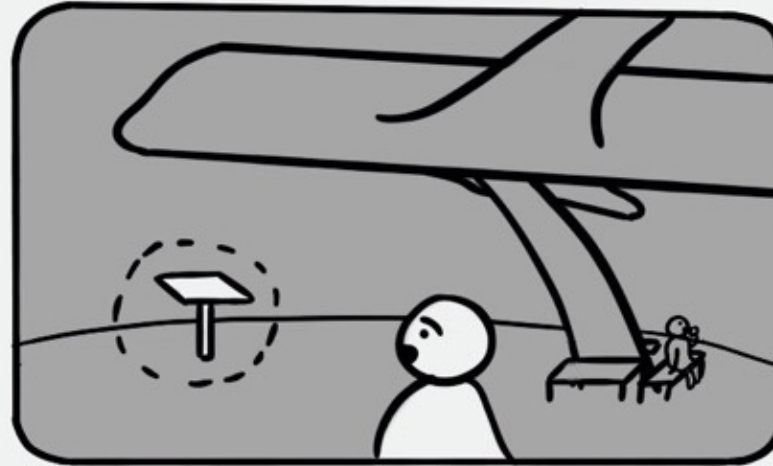
Lights Visible from Landing Planes

Shining + Tilting Plane Shelter

Frosted Glass with LEDs

Trivia Quiz Panel

Blue lights illuminating the benches

Functional Diagram

INPUT

- Flight data and image from external API
- User stands in front of the lectern
- User selects answer for the trivia quiz
- Plane passanger notices lit up frosted glass plane
- User notices frosted glass plane above the pavilion
- User sits on one of the benches
- User leaves the bench
- Sunlight

PROCESS

- Control system gathers flight data of the next plane landing in Changi Airport and checks the presence of user using a motion sensor or computer vision
- Landing plane is more than 30s away from site
- Landing plane is 30s away from site and user is detected
- Wrong or no answer selected
- Correct answer selected
- Landing plane is 5s away from site
- Passanger becomes intrigued and decides to visit the planespotting site on another ocassion
- User becomes intrigued by the lectern under the cockpit of the plane
- User who wants to relax spots multiple shaded benches illuminated by blue lights
- Pressure sensor or computer vision detecting the pressence of a user and sending signals to the control system
- Light sensor array detects position of sun
- Only some of the light passes through the frosted glass

OUTPUT

- Lights inside the frosted glass plane is turned off
- Frosted glass plane blinks three times
- Touch Screen LED panel on lectern displays aviation trivia quiz question
- Frosted glass plane lights up in the colour of the landing airline
- Frosted glass plane lights for a 10 second light show
- Blue light around bench becomes dimmer and user passes time on the bench
- Blue light around bench becomes brighter
- Pavilion is now more shaded and less hot but still bright
- Plane roof tilts to block most sunlight

Storyboard

1 Joe was landing at Changi Airport when he notices something out the window

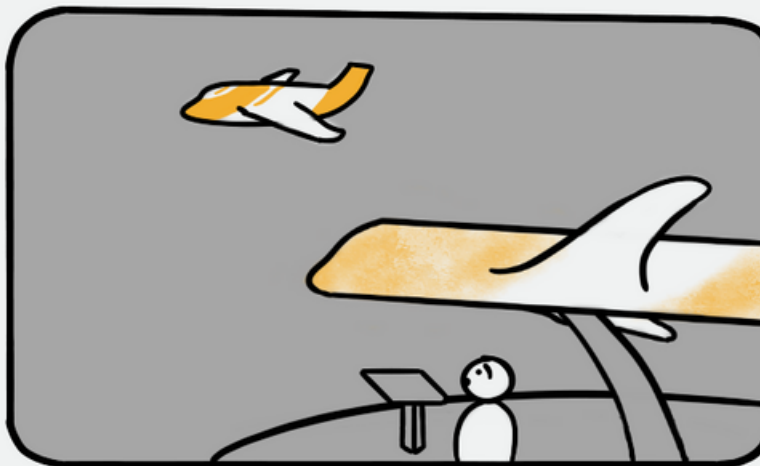**2** After searching about it online, he decides to go visit the next day

3 He approaches the lectern near the front which turns out to be an LED Panel for a trivia game
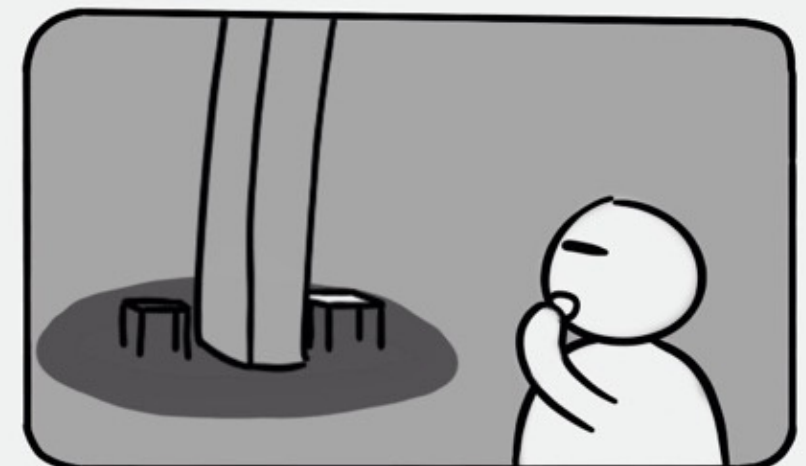

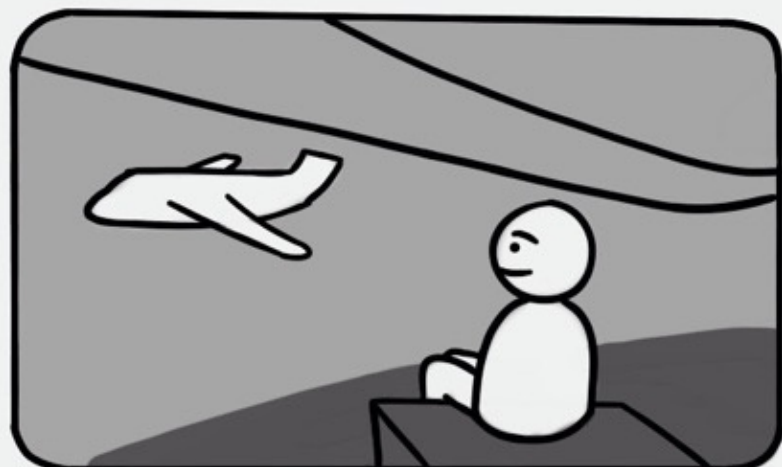**4** Joe decides to give it a go as he hears a plane approaching in the background

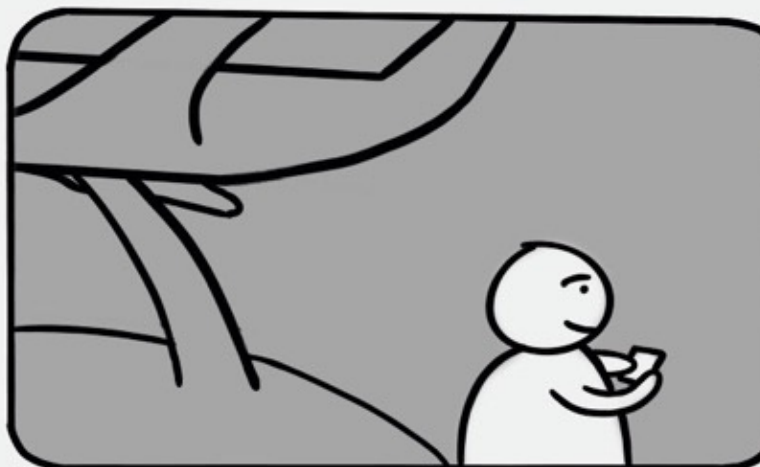**5** Because he answered wrong, the frosted glass plane shines with the same colours as the incoming plane

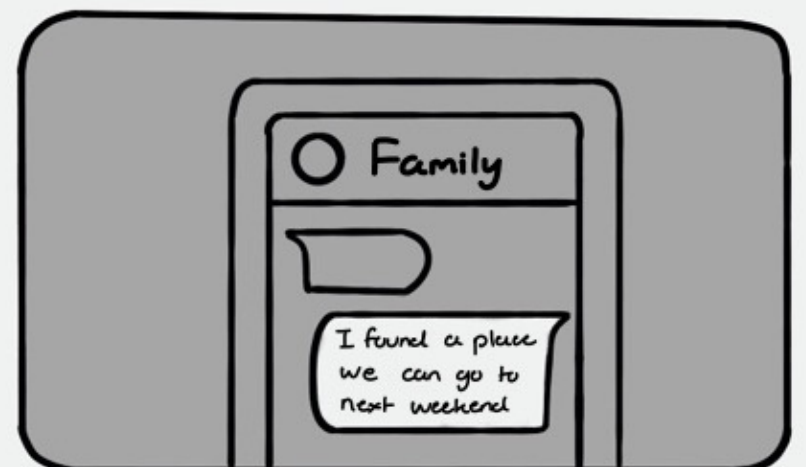**6** After a while he feels tired and looks for a place to sit

7 He spends some time on a shaded bench while watching planes land

8 Feeling refreshed, Joe eventually decides to leave

9 But not before informing his family about his new discovery