



Healing Cocoon



Team 6





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Agenda

- 1 Project overview
- 2 Problem & Solution
- 3 Marketing
- 4 Ethics
- 5 Development
- 6 Video
- 7 Simulations

- 8 Hardware
- 9 App
- 10 Sustainability
- 11 Materials
- 12 Packaging
- 13 Q&A



Project overview



Designed for
waiting areas



Turning fear into
sense of wonder



Safe feeling



Scent



Visuals



Sound

The Problem



Fear



Stress



Anxiety



Overstimulation



**Loss of
comfort**



Hospital environments can increase stress and anxiety, especially for children.

Solution



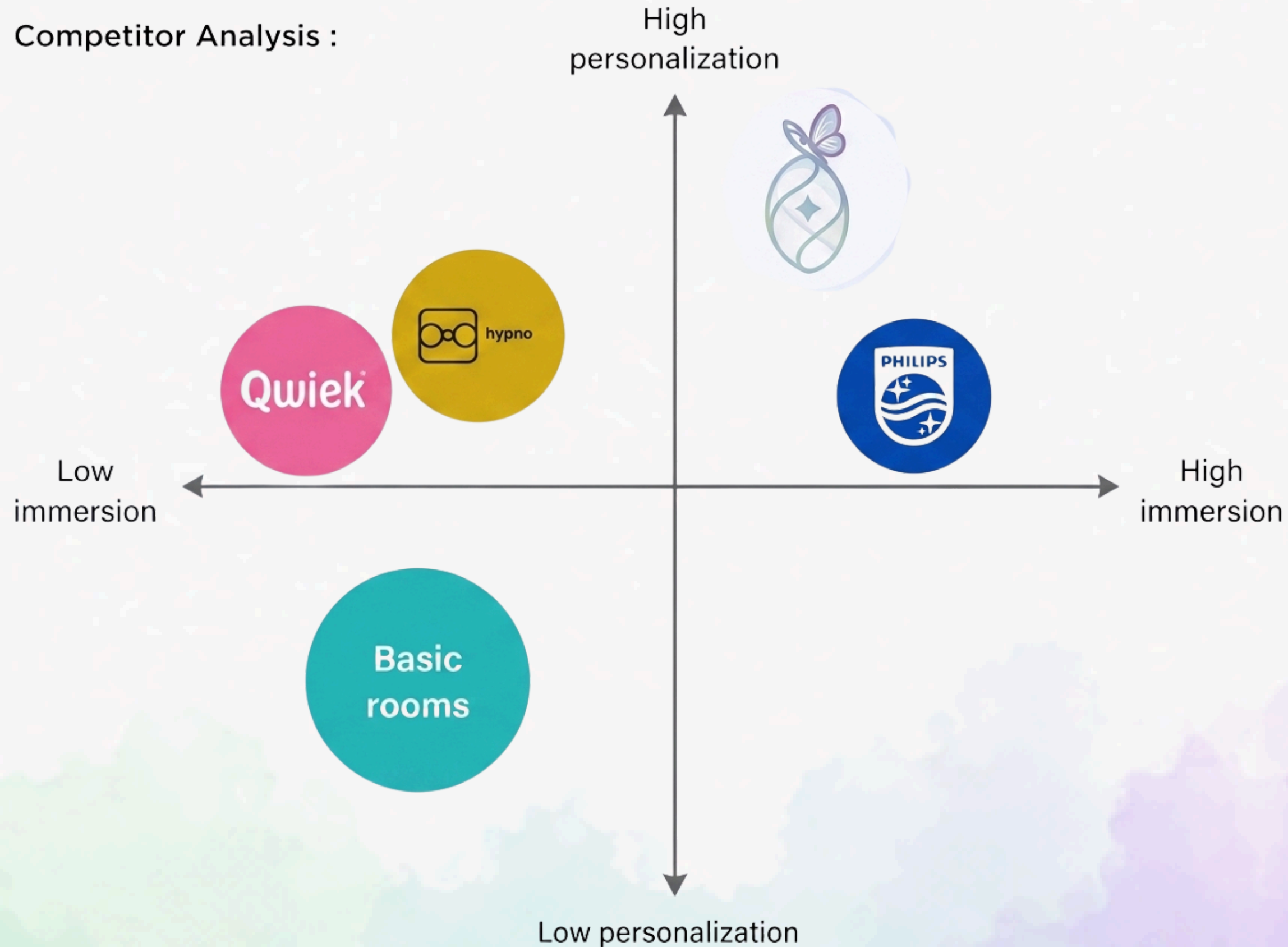
Immersive 180° projection
Calming audio & scent
Wheelchair accessible
Safe & comforting environment



Marketing

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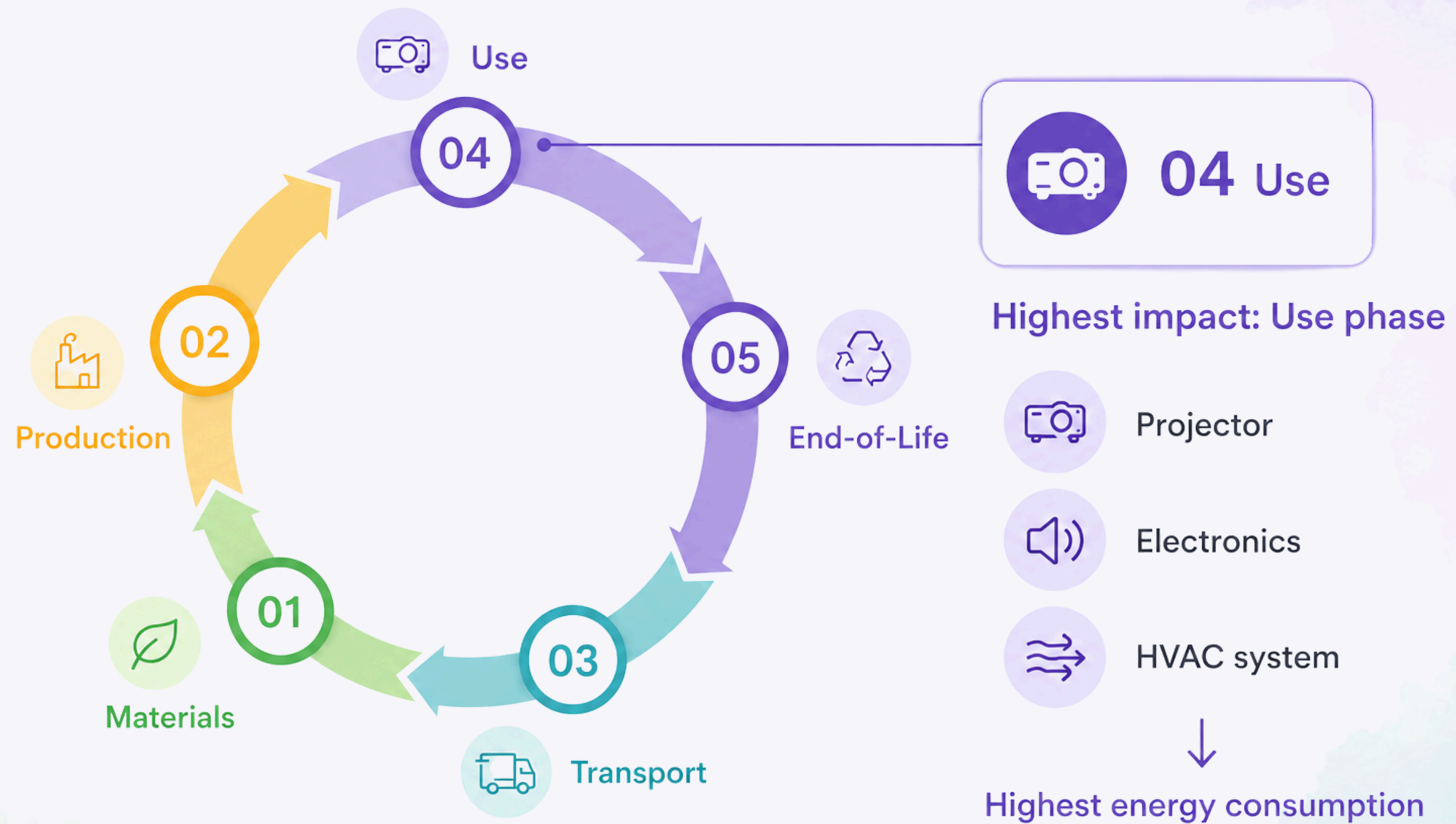
Competitor Analysis :



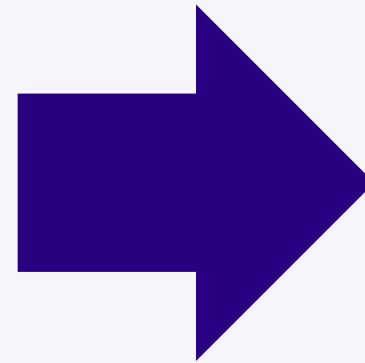
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Ethics

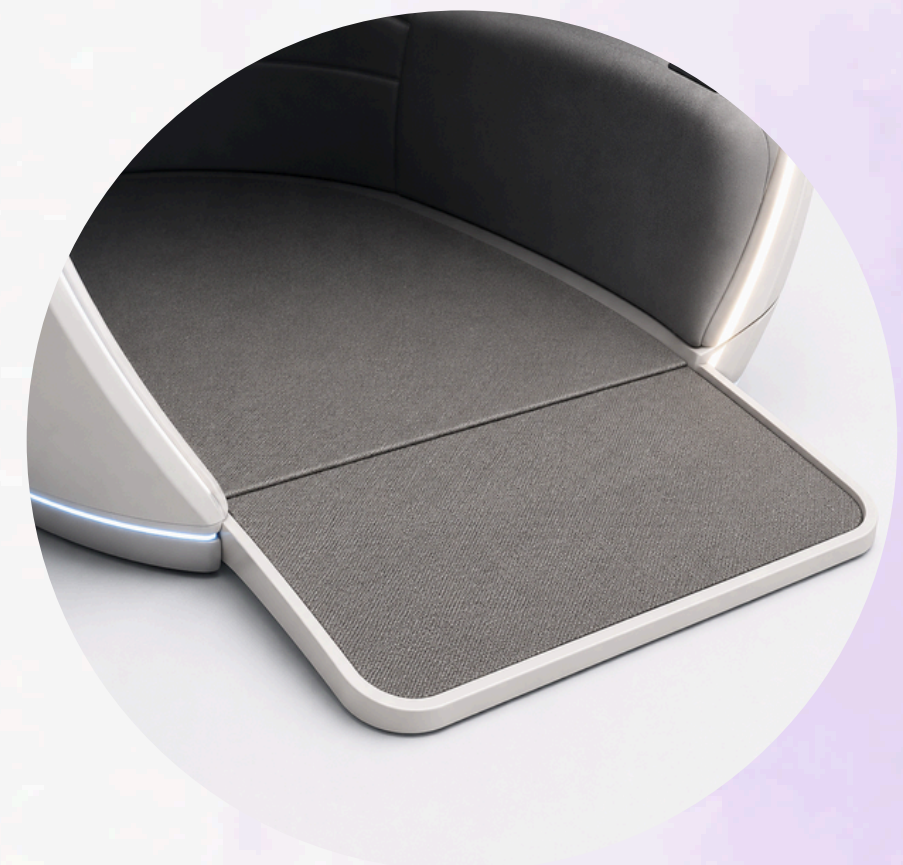
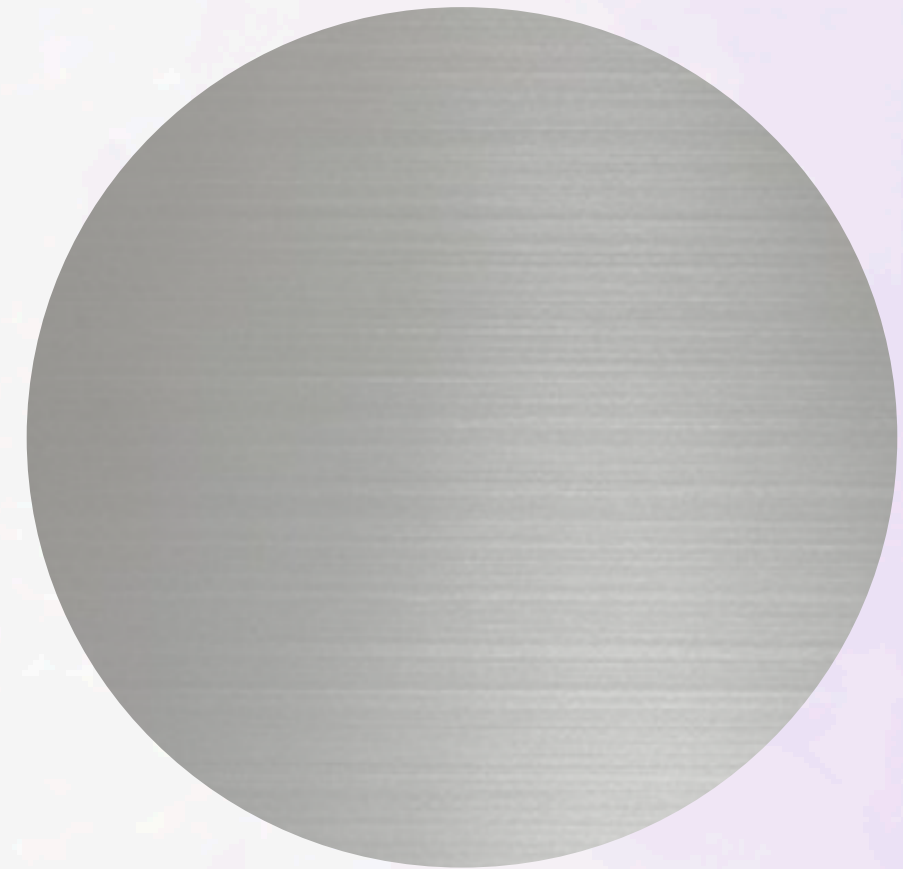
LIFE CYCLE ASSESSMENT



Development



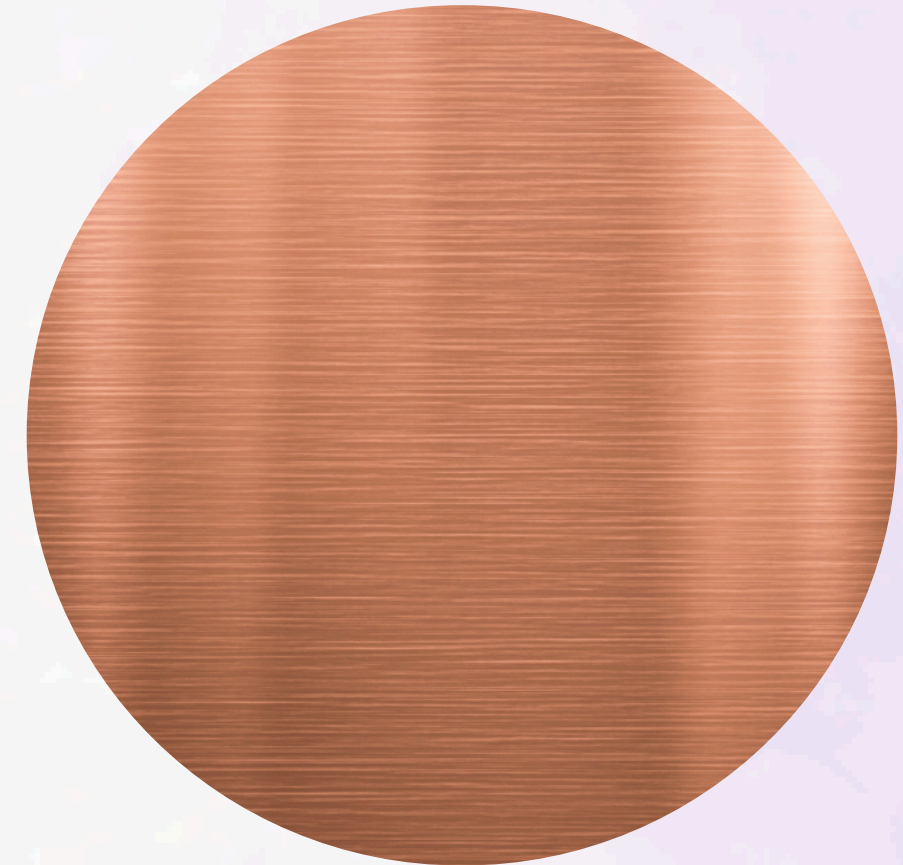
Old



Immersive 180° projection
Calming audio & scent
Rotating chair
Built in display



New



Immersive 180° projection
Calming audio & scent
Wheelchair accessible
Safe & comforting environment



Video





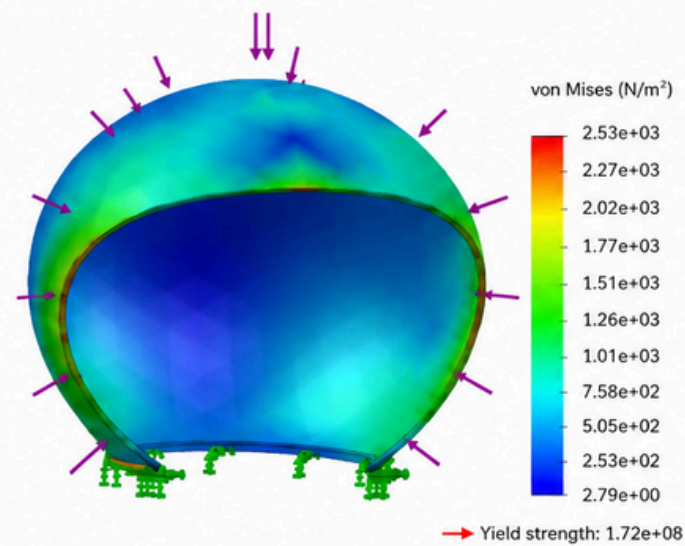
Simulations

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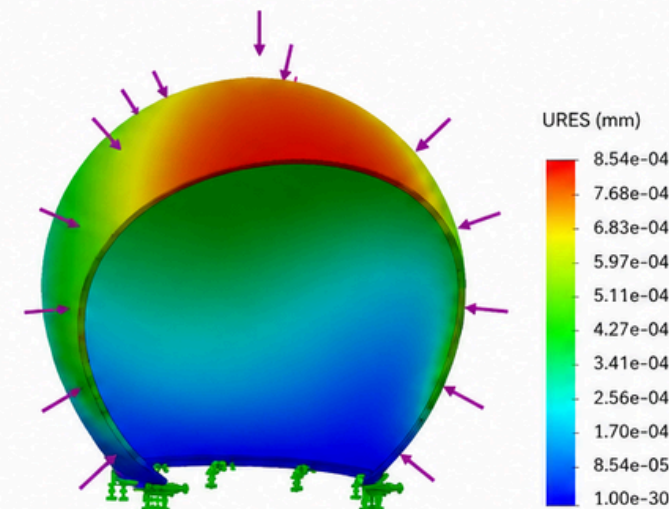
STRUCTURAL VALIDATION

SOLIDWORKS Static Simulation Results

1. STRESS ANALYSIS (von Mises)



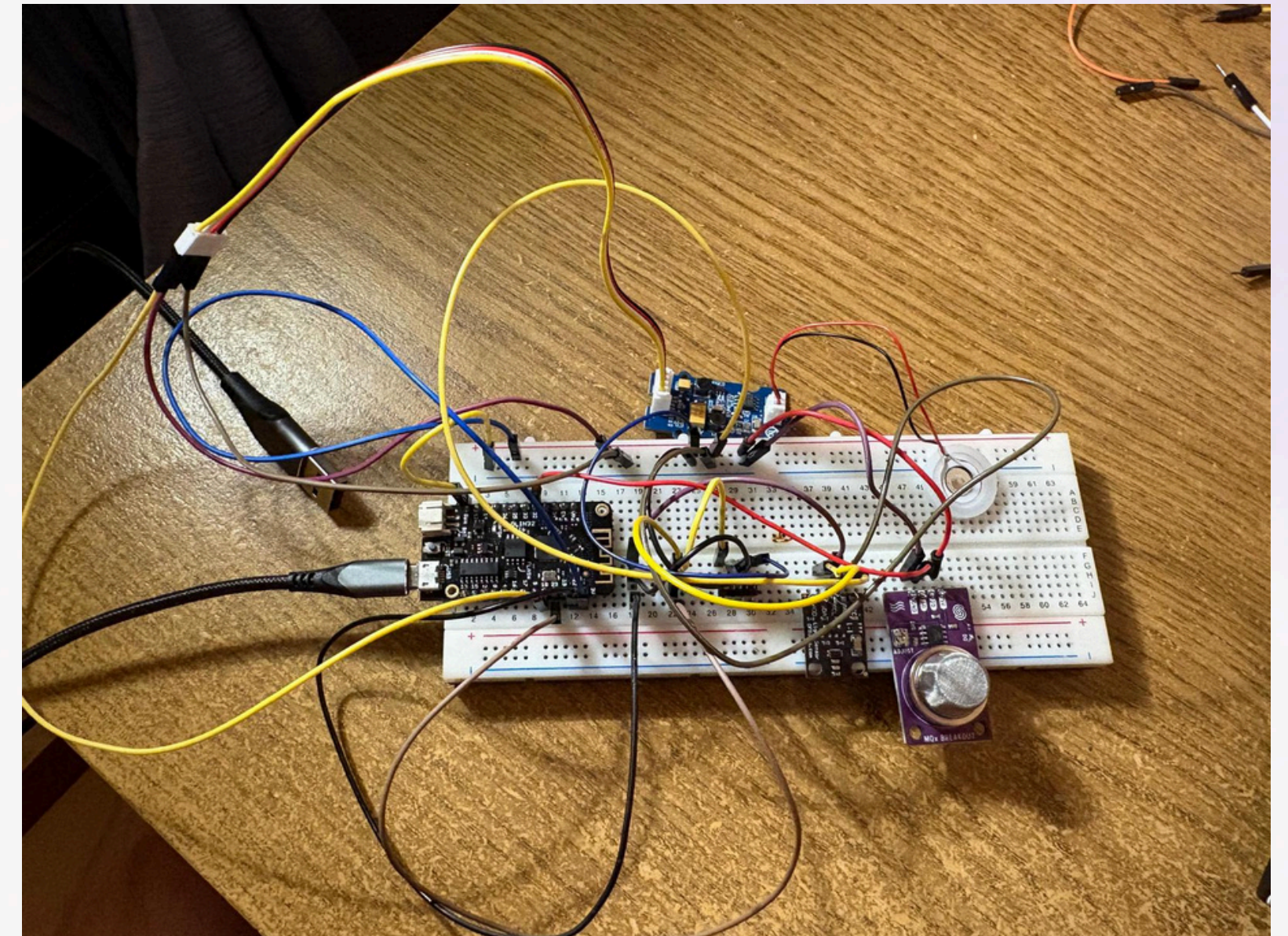
2. DISPLACEMENT ANALYSIS



STRESS ANALYSIS



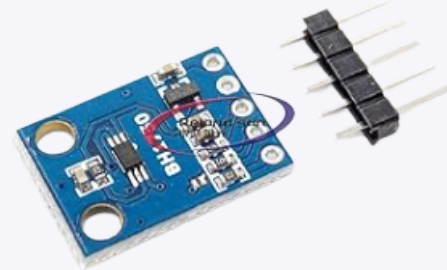
DISPLACEMENT ANALYSIS



Hardware



**Air Humidity
and Temp
Sensor**



**Light
Sensor**



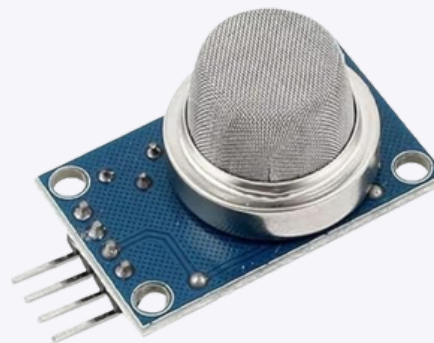
Projector



**ESP32
DevKit V1**



**Scent
Sprayer**



**CO2
sensor**



Speaker

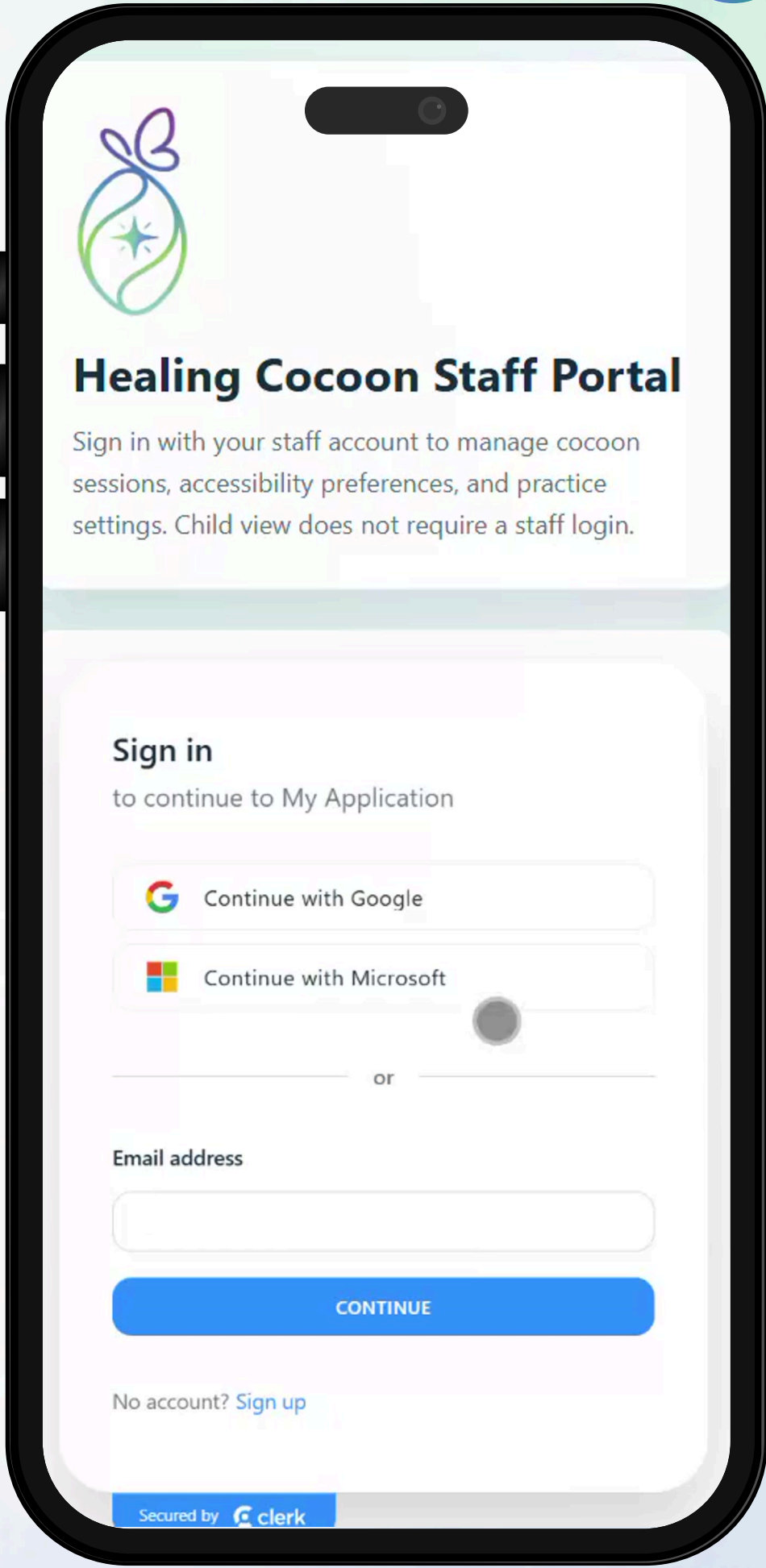
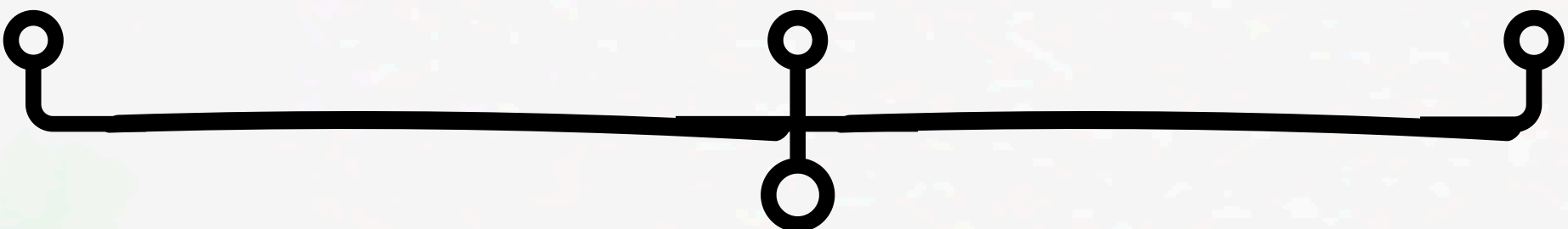


App

Frontend

Backend/API

Database



Sustainability

SDG:



Local Portuguese suppliers →
min. transport distance



Selecting robust materials →
long service life



Smart construction method →
air gap for sound insulation



Materials



Suitable for
healthcare environments



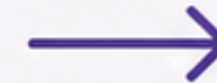
Easy to clean
and maintain



Recycled &
recyclable



Exterior structure



Material layers



Brass panels



Aluminium
+ air gap



Acoustic
absorber



Antimicrobial
fabrics



PACKAGING



HEALING COCOON

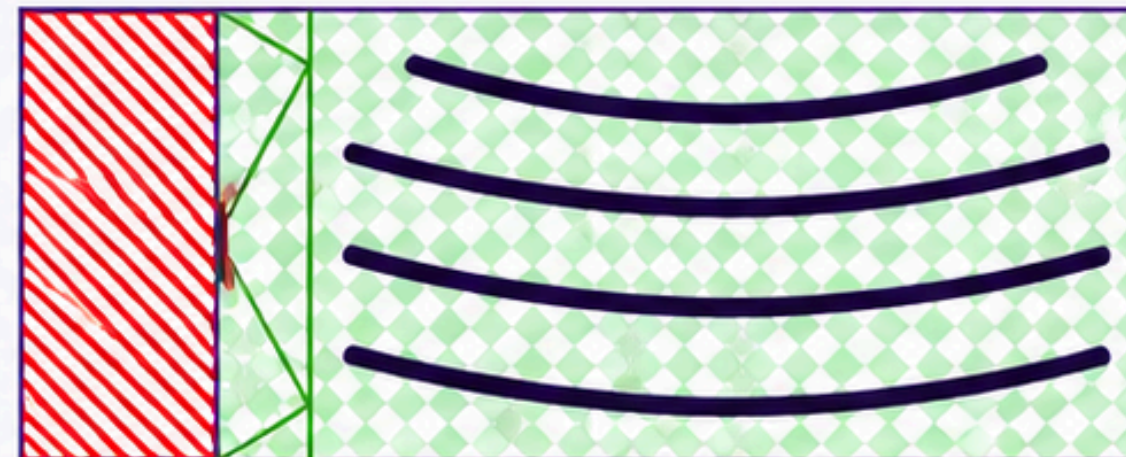
Hardware system box



+ cushioning material



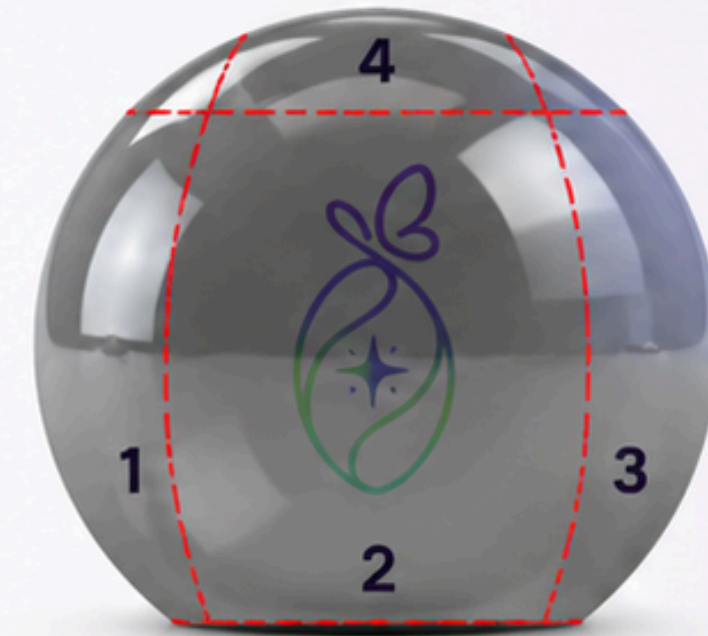
Top view of the inside
of the main box



Compostable or usable as craft material



The cocoon is transported
divided into 4 parts



— Corrugated cardboard insert

 Hardware system box

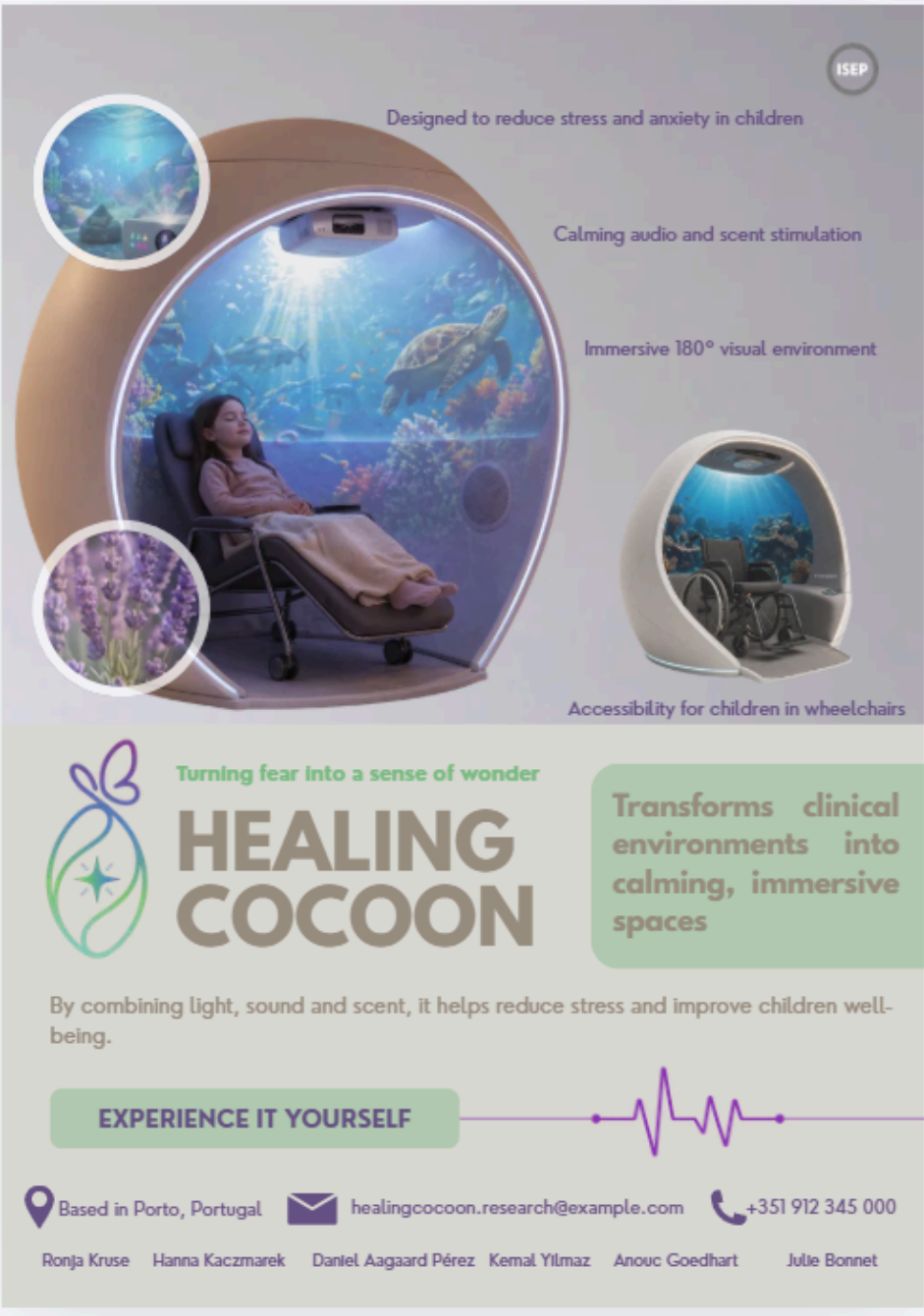
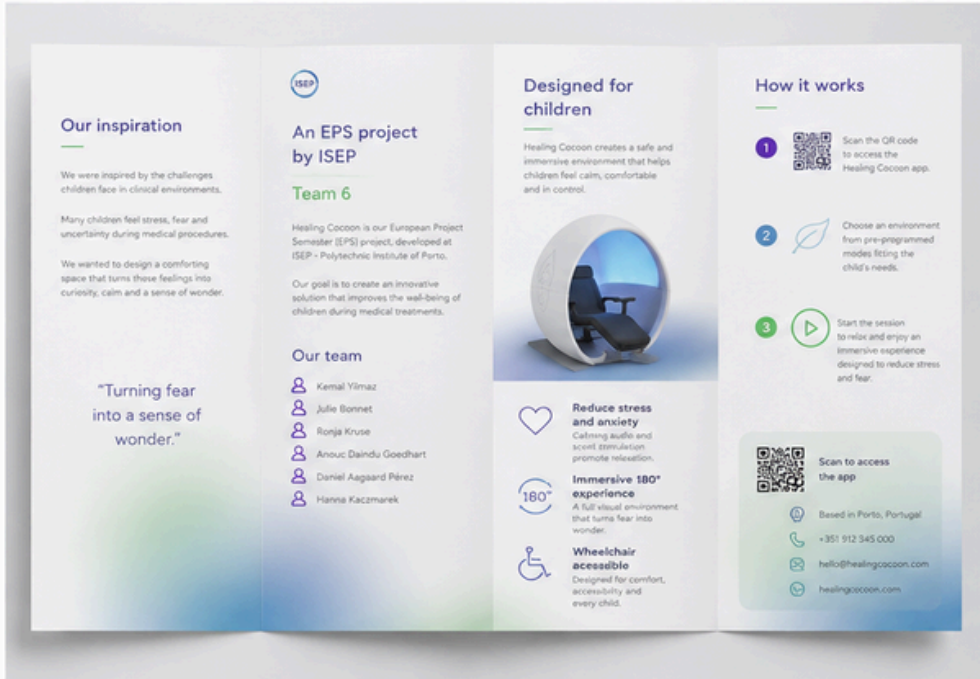
 Cushioning material

 Part of the Cocoon



Communication

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ISEP

