

GAME GROUNDS

PLAYGROUND FOR GAMING
IN THE FUTURE CITY

P5 PRESENTATION

CONTENTS

INTRO

Assignment
Future vision
Future society
Amsterdam



CONTEXT

Media Consumption
Gaming Industry
Esports
Problem statement
Research question



RESEARCH

Demographics of gamers
Gaming Technology
Spatial impact of gaming
Case studies
Design brief
Design principles



DESIGN

Form Generation
Building Programme
Routing and Flows
Building Structure
Climate Design



INTRO



CONTEXT



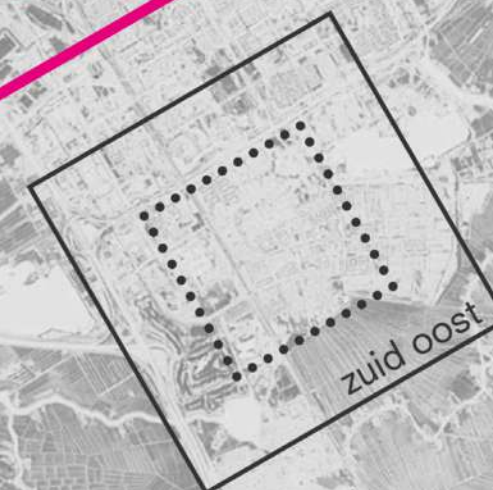
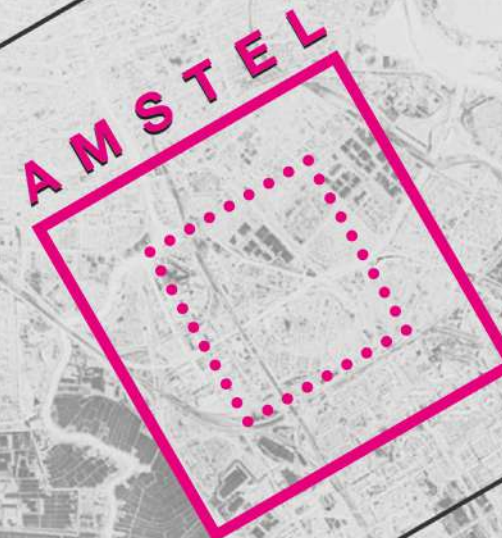
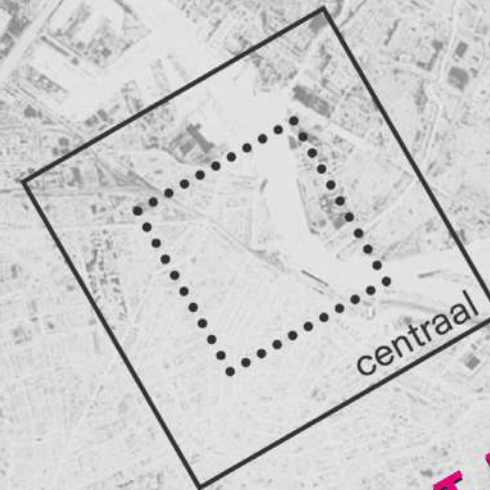
RESEARCH

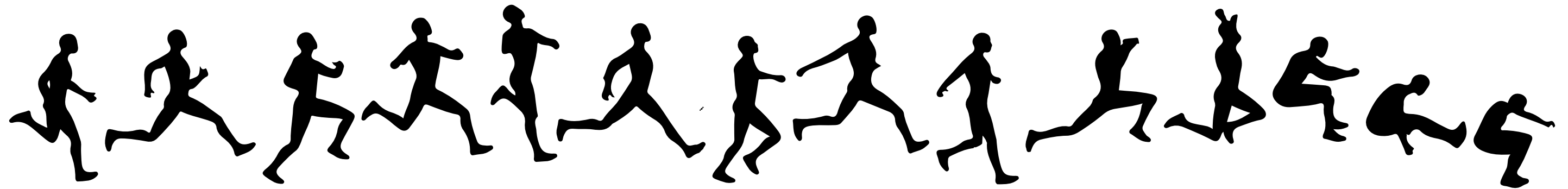


DESIGN



AMSTERDAM 2100?



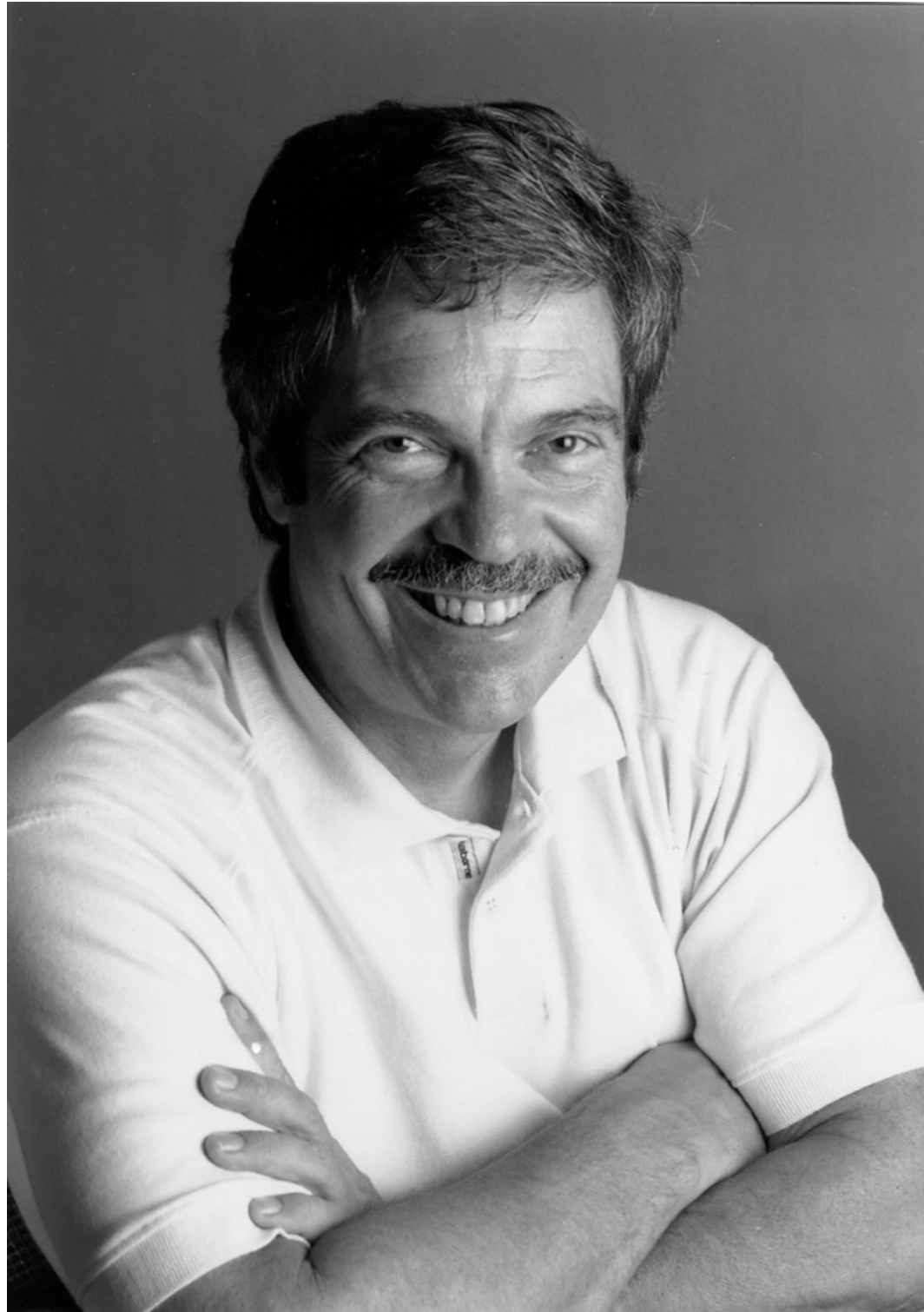


2020
Structure vision
Amsterdam municipality
**‘Woonvisie Amsterdam
tot 2020’**

2040
Structure vision
Amsterdam municipality
**‘Ontwerp structuurvisie
Amsterdam 2040
Economisch sterk
en Duurzaam’**

2050
Structure vision
AMS MID-City Amstel
17/18
‘Amstel 2050’
&
AMS MID-City
Amsterdam
‘Amsterdam 2050’

2100
Structure vision
AMS MID-City Amstel
18/19
‘Amstel 2100’

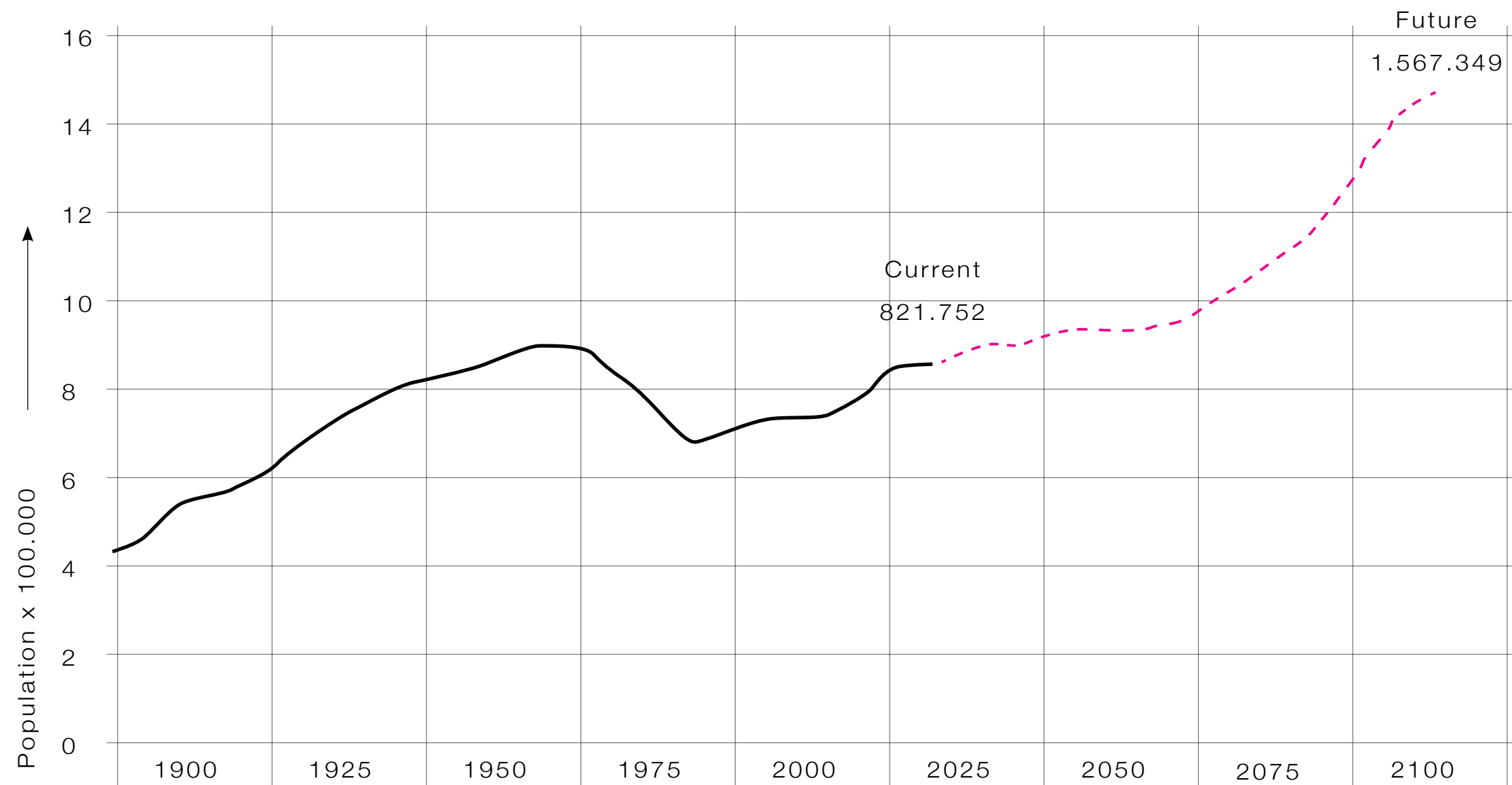


“THE BEST WAY TO
PREDICT THE FUTURE
IS TO **MAKE IT.**”

- ALAN KAY

(The future, 2017)

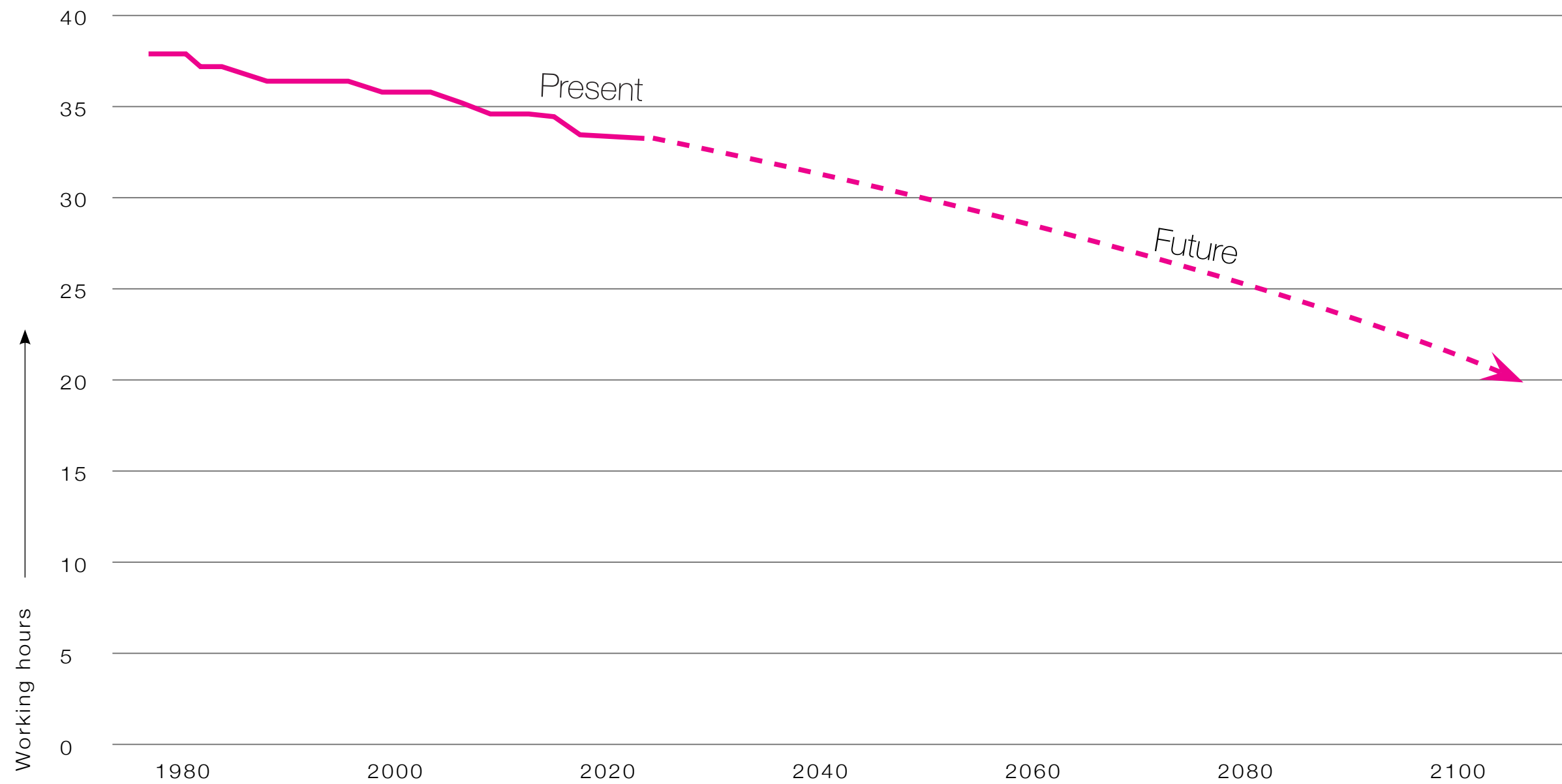
Population growth in Amsterdam



(CBS, 2018)

(OIS, Gemeente amsterdam. 2017)

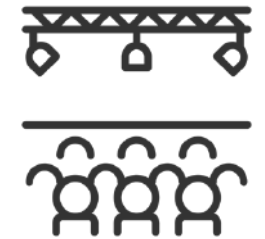
Decrease in average working hours



(OECD, 2017)

WORKING BECOMES A MATTER OF **CHOICE** RATHER THAN NEED





Materialism

Present

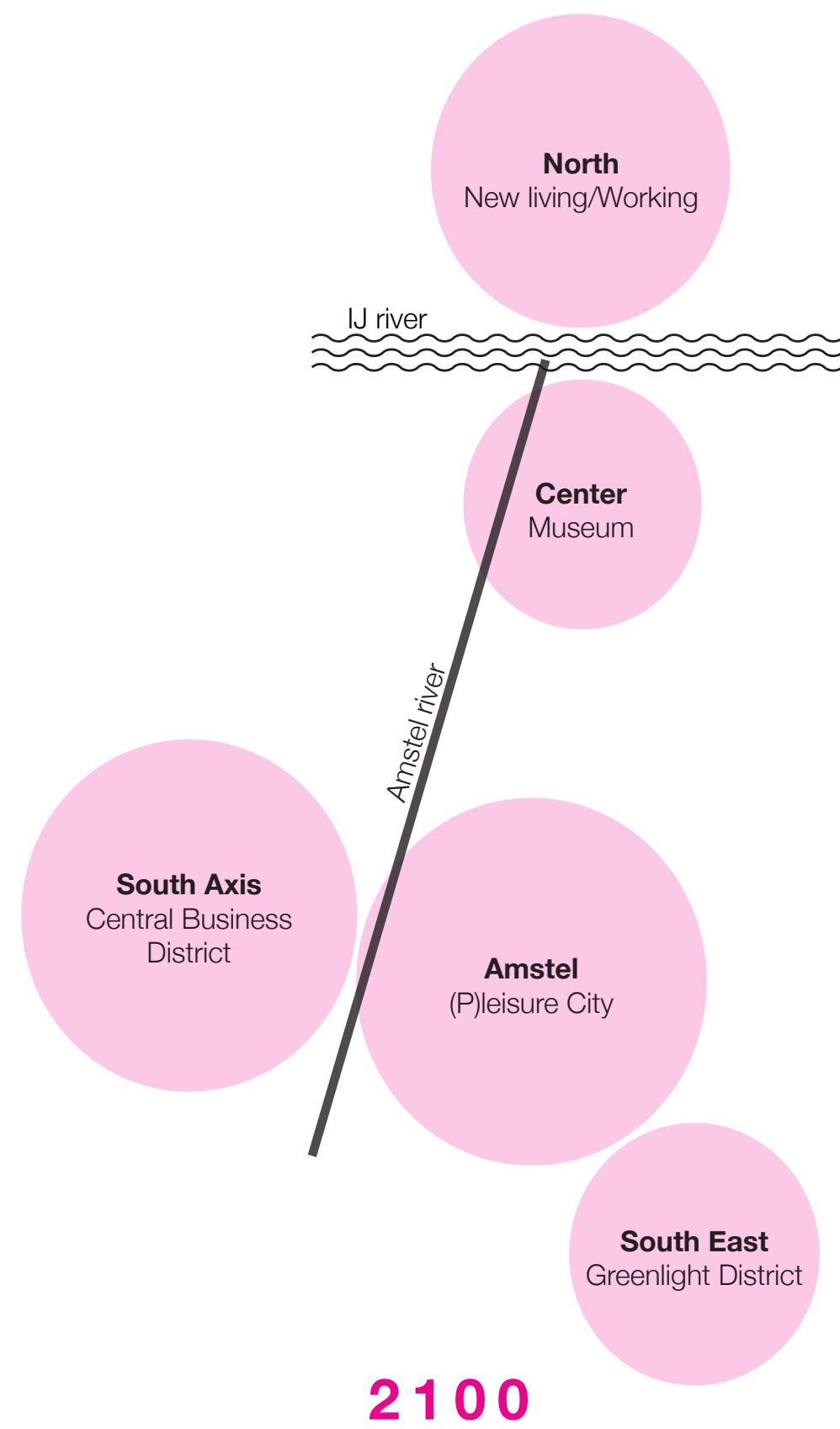
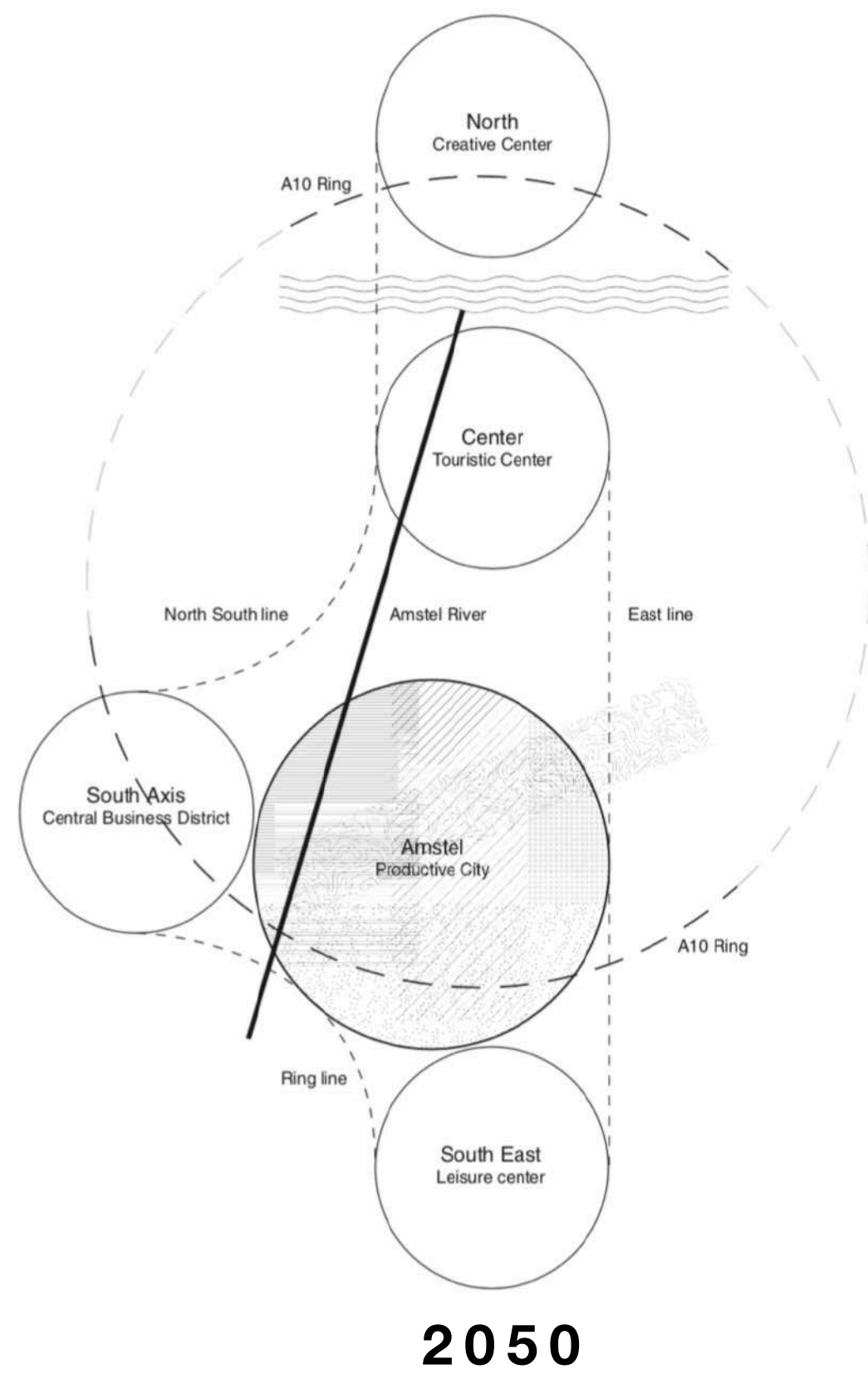


Experiences

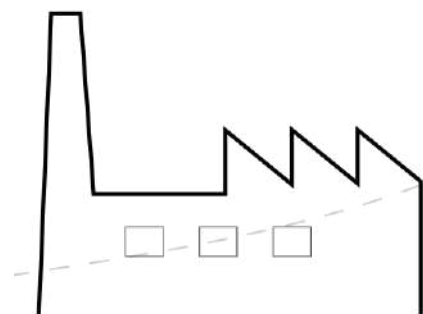
Future



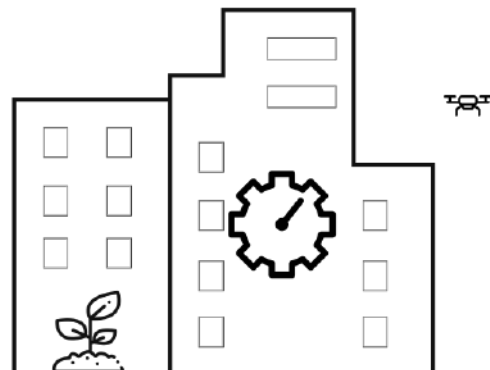
IDENTITY SHIFT AMSTERDAM



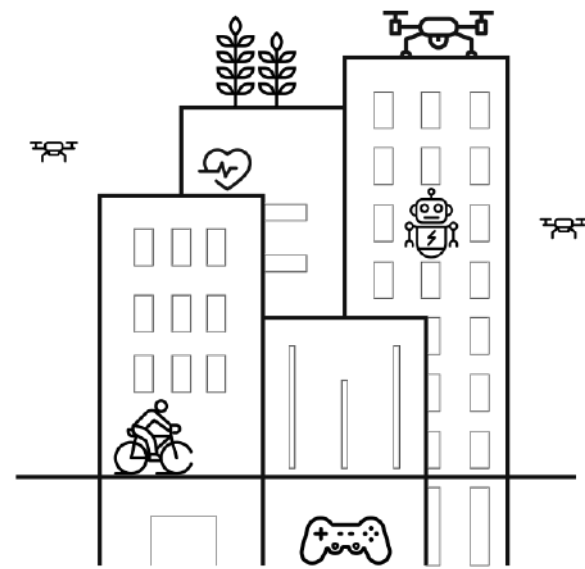
IDENTITY SHIFT AMSTEL



**20th Century
Industrial
area**



**2050
Productive
City**



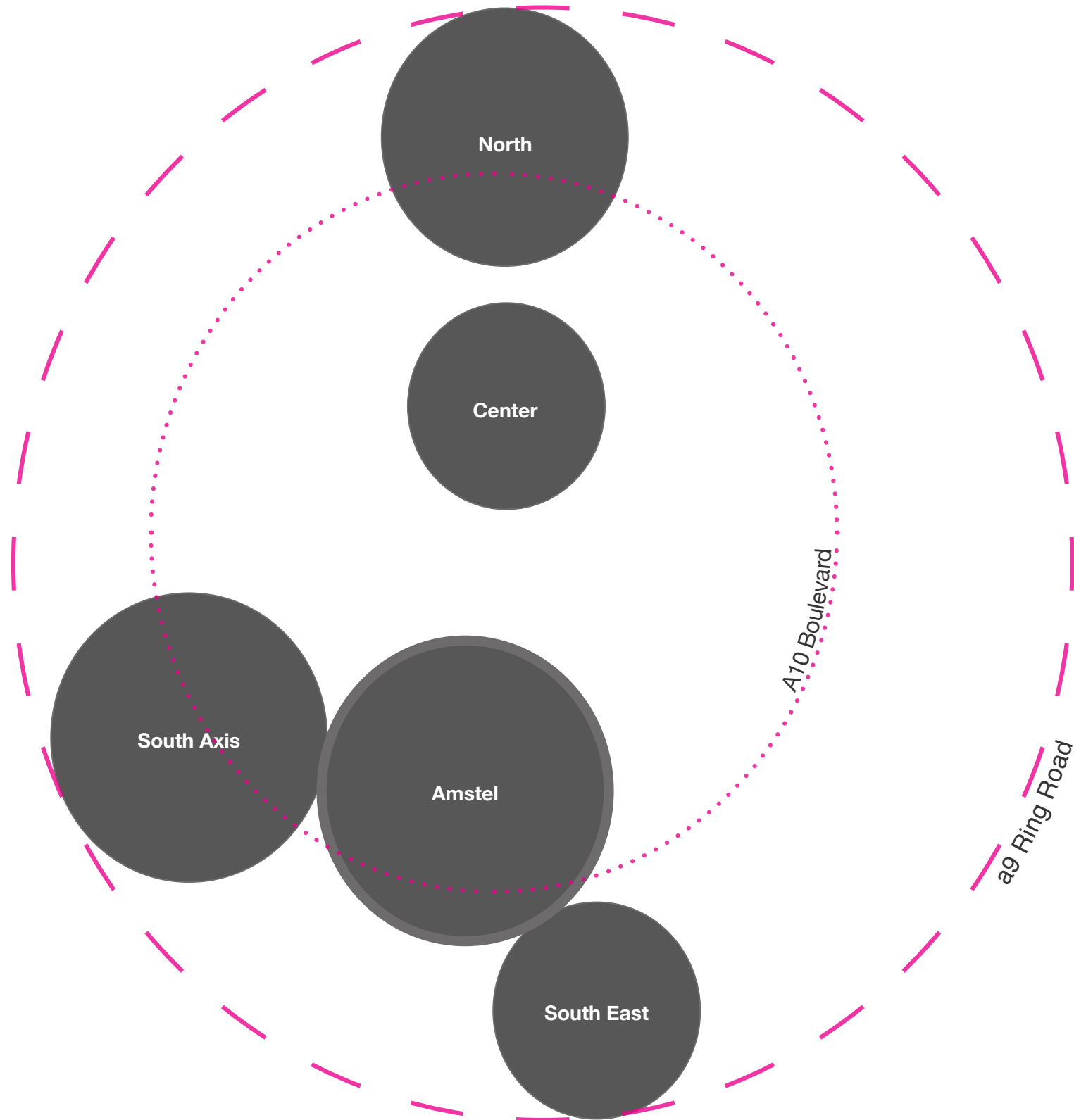
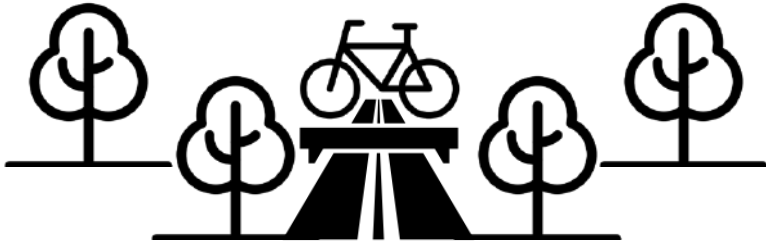
**2100
Pleasure & Leisure
City**

MOBILITY AMSTERDAM

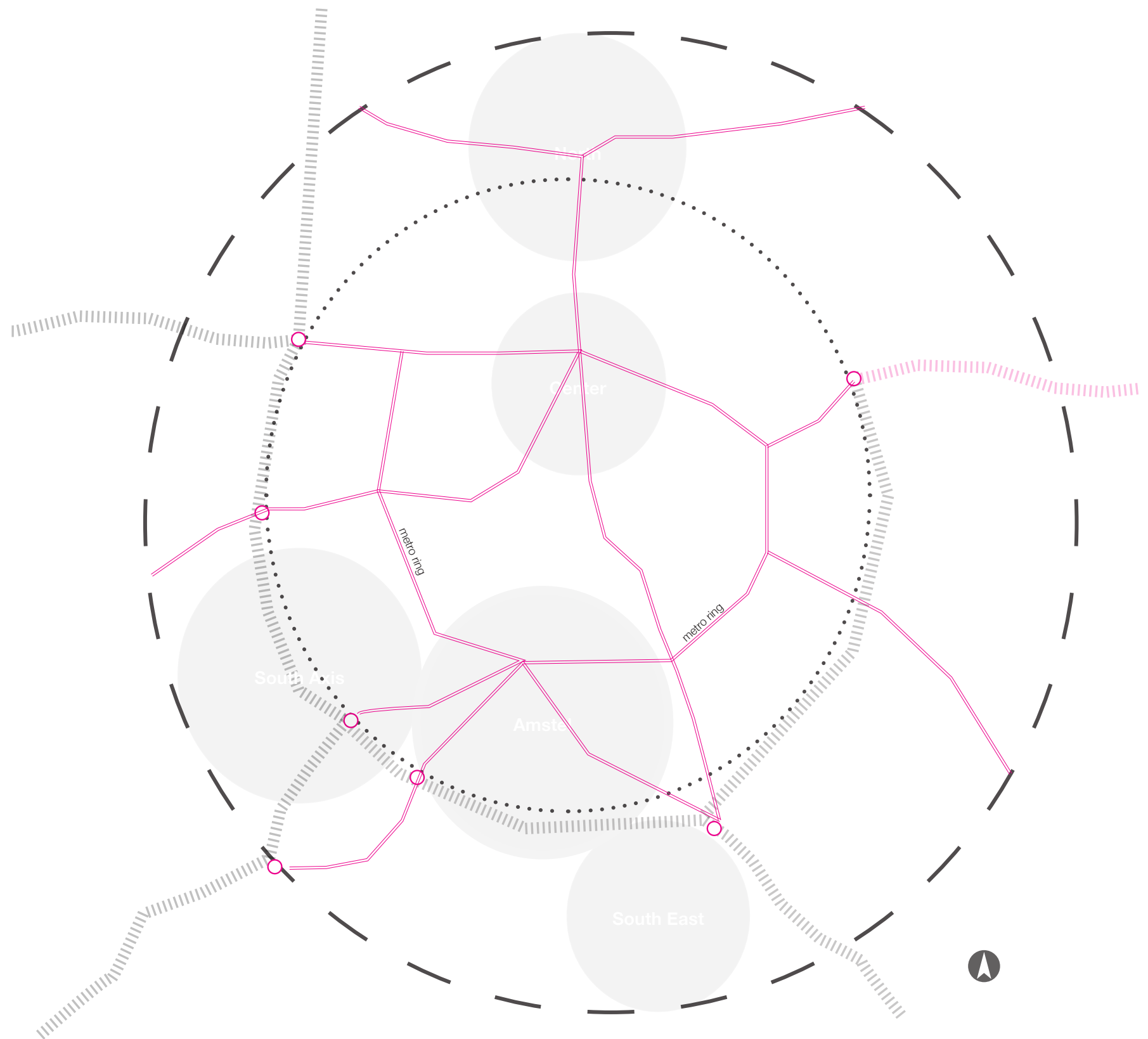
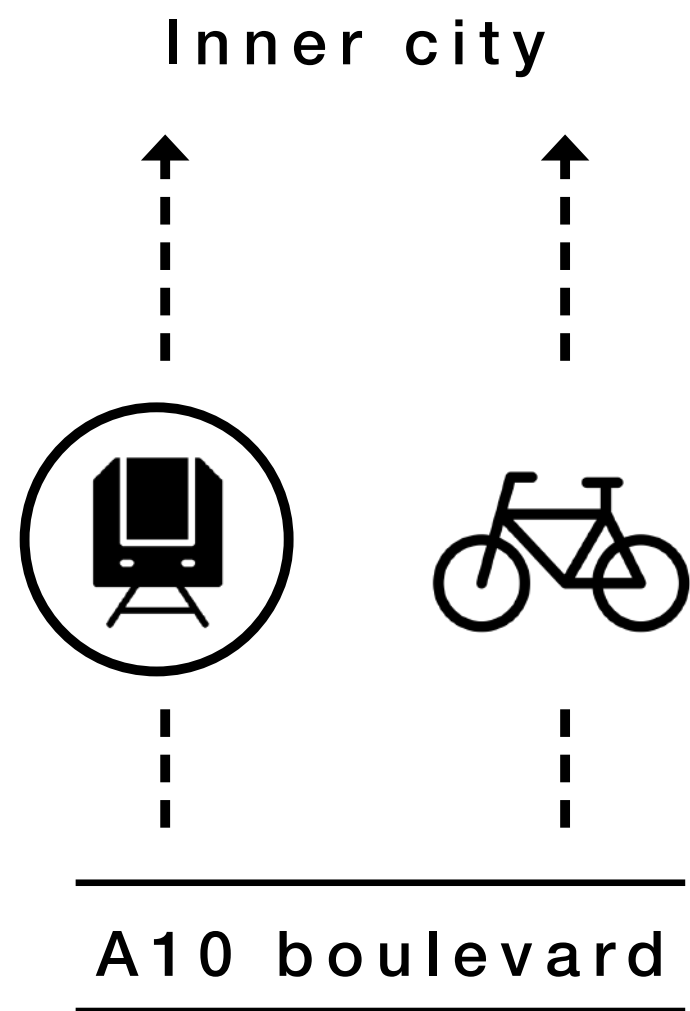
Auto highway



Boulevard



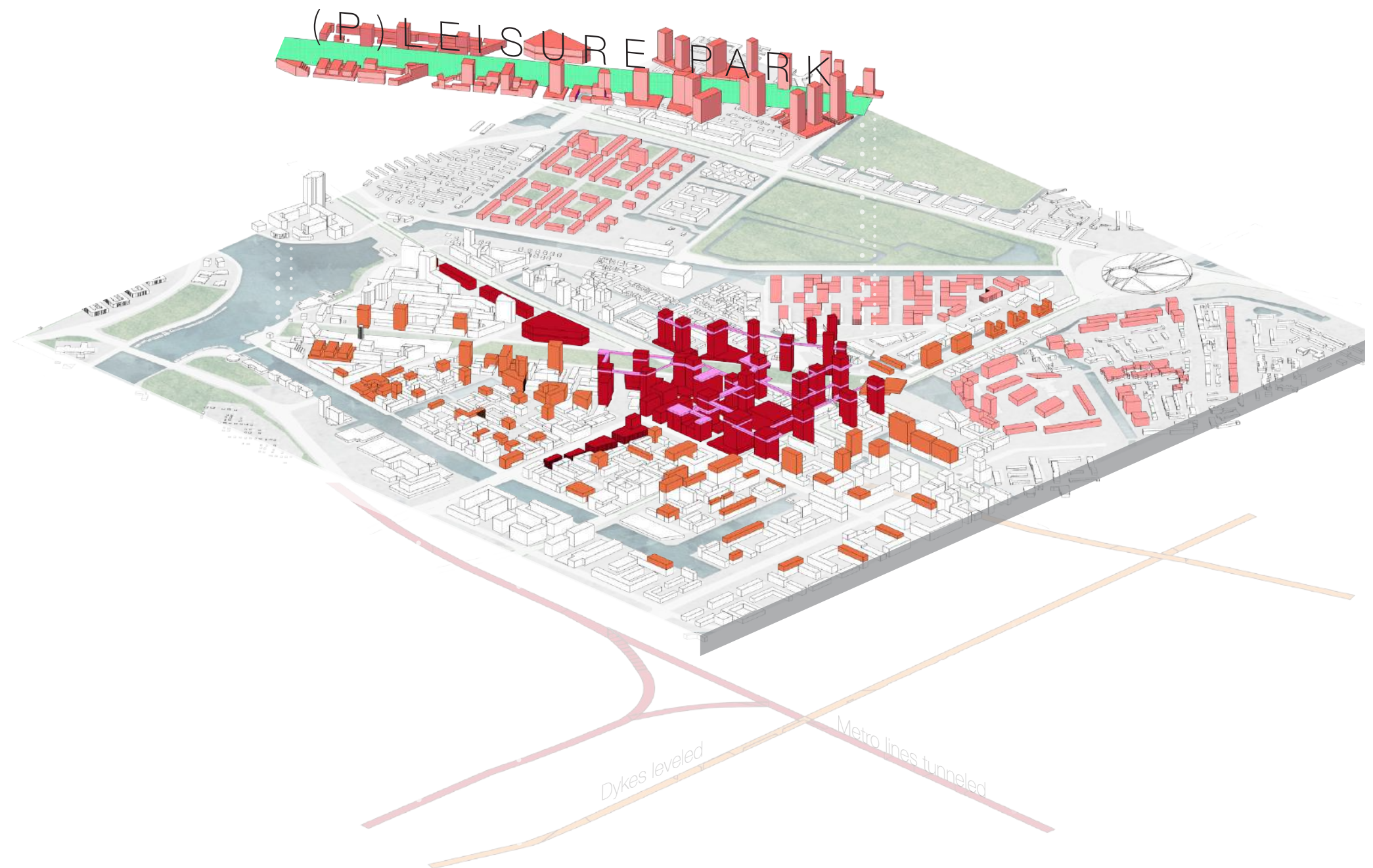
MOBILITY AMSTERDAM

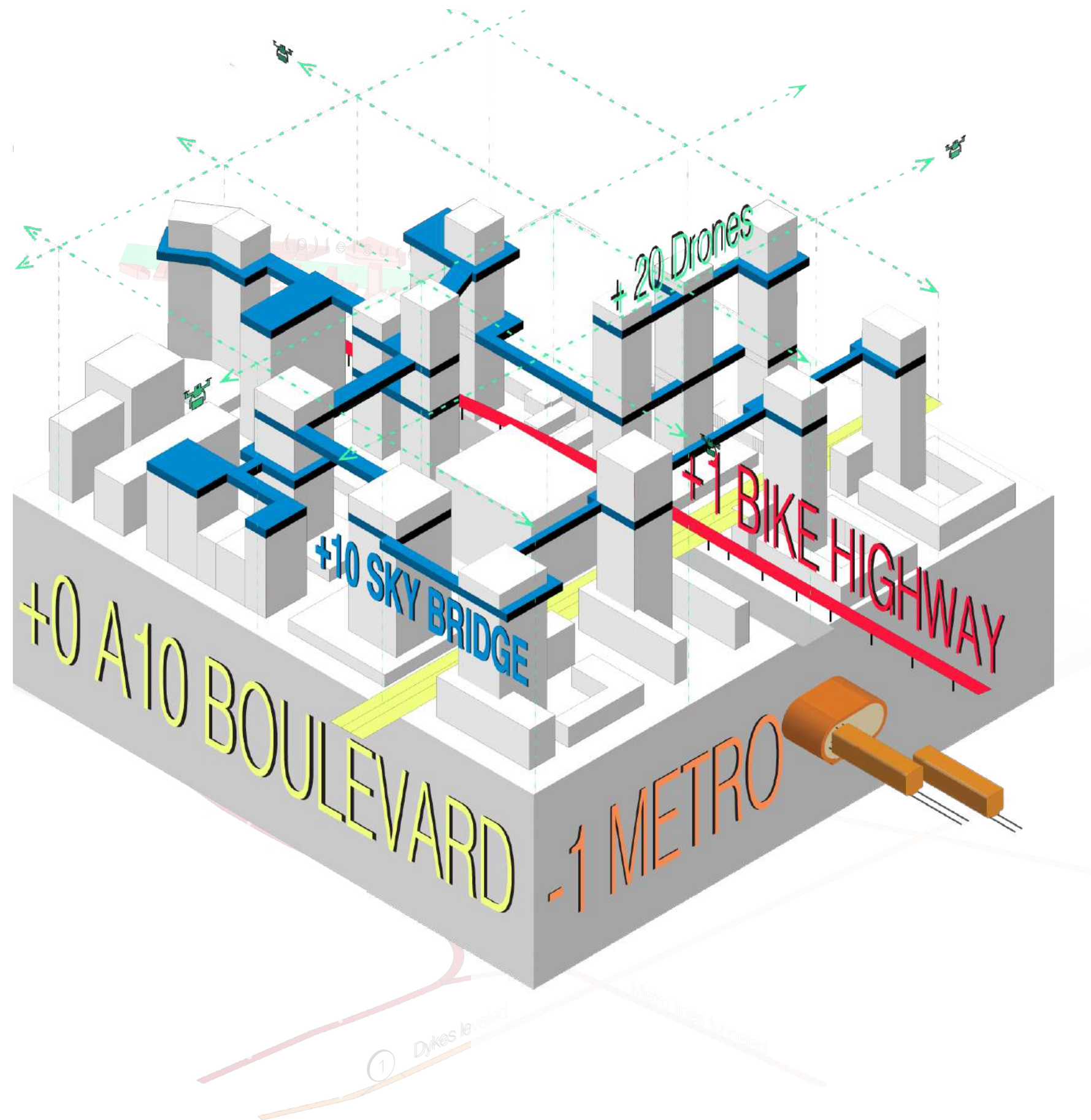


Highrises

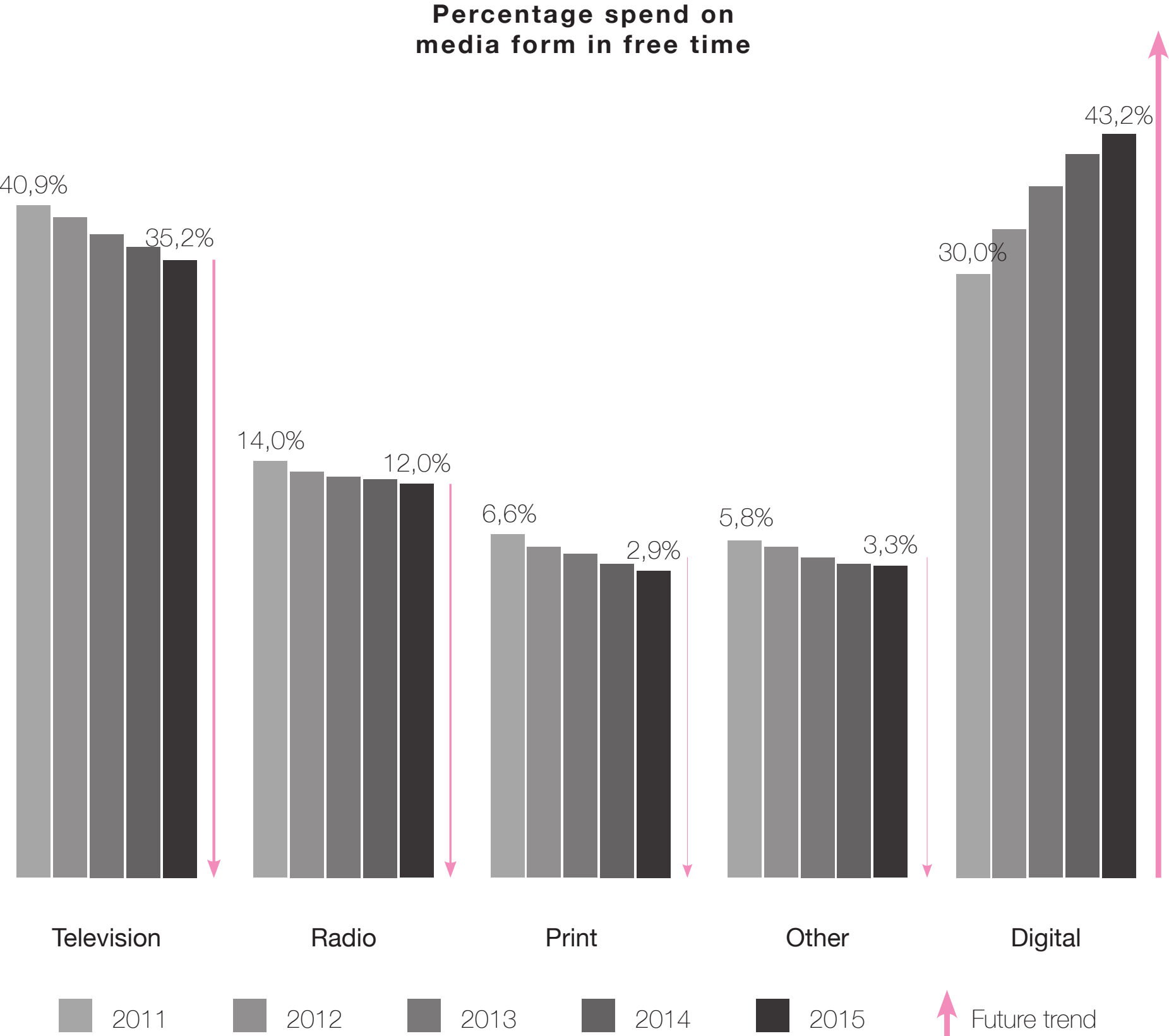
Redevelopment

Topping up





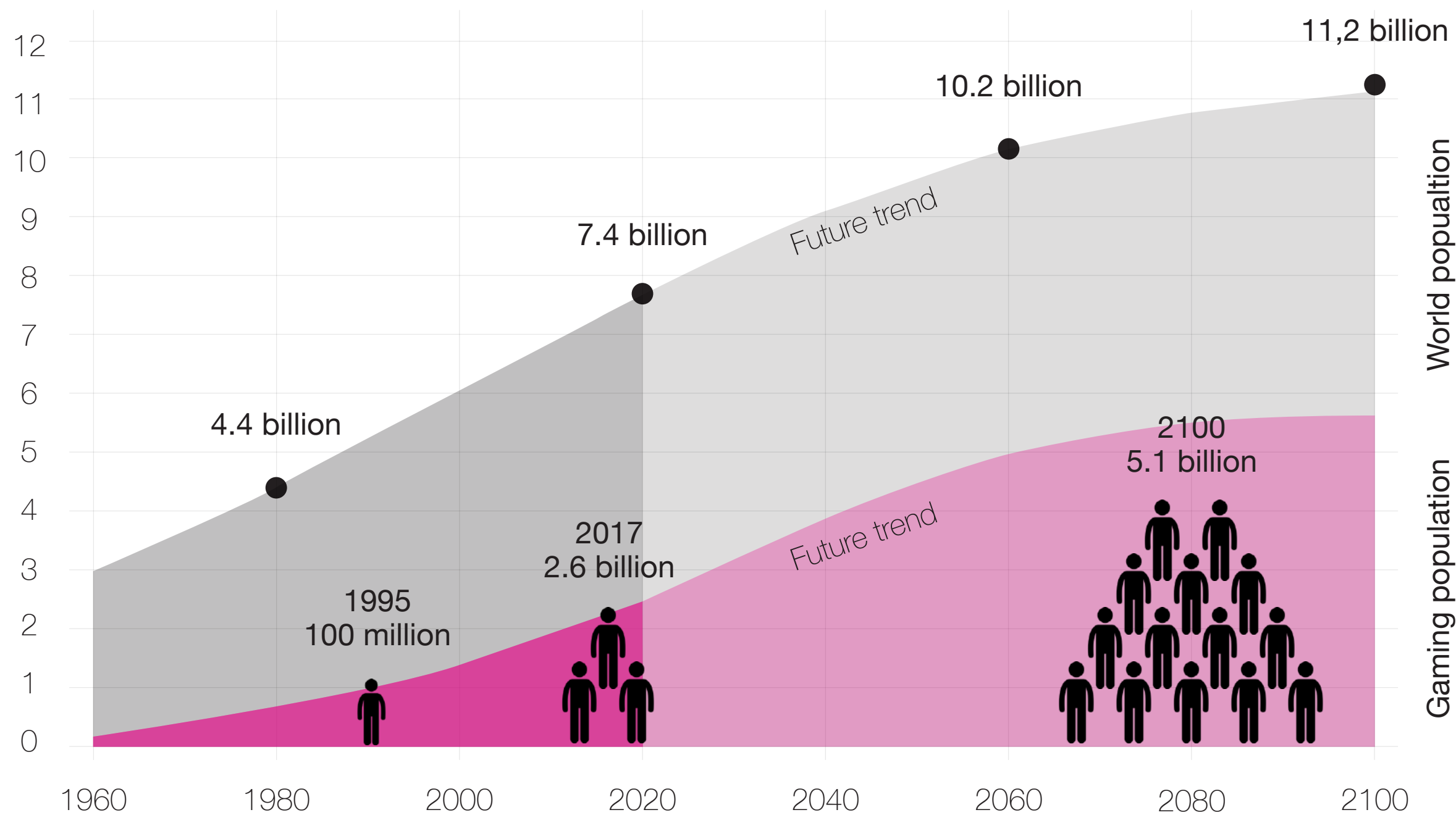
MEDIA CONSUMPTION



(The IFPI, The motion picture Association, Digital entertainment group, Newzoo 2016)

GAMING POPULATION

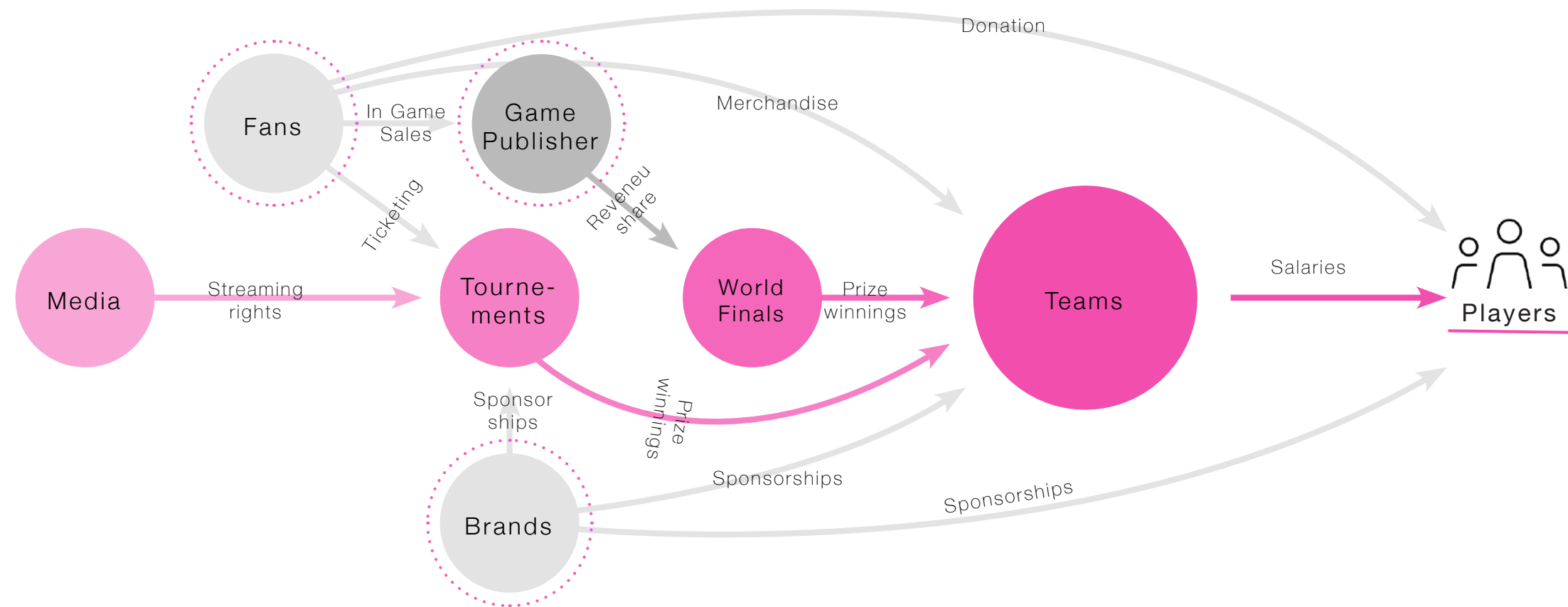
World population and
amount of gamers



(UN medium fertility variant 2018, Electronic arts 1995, Unity 2017)

GAMING

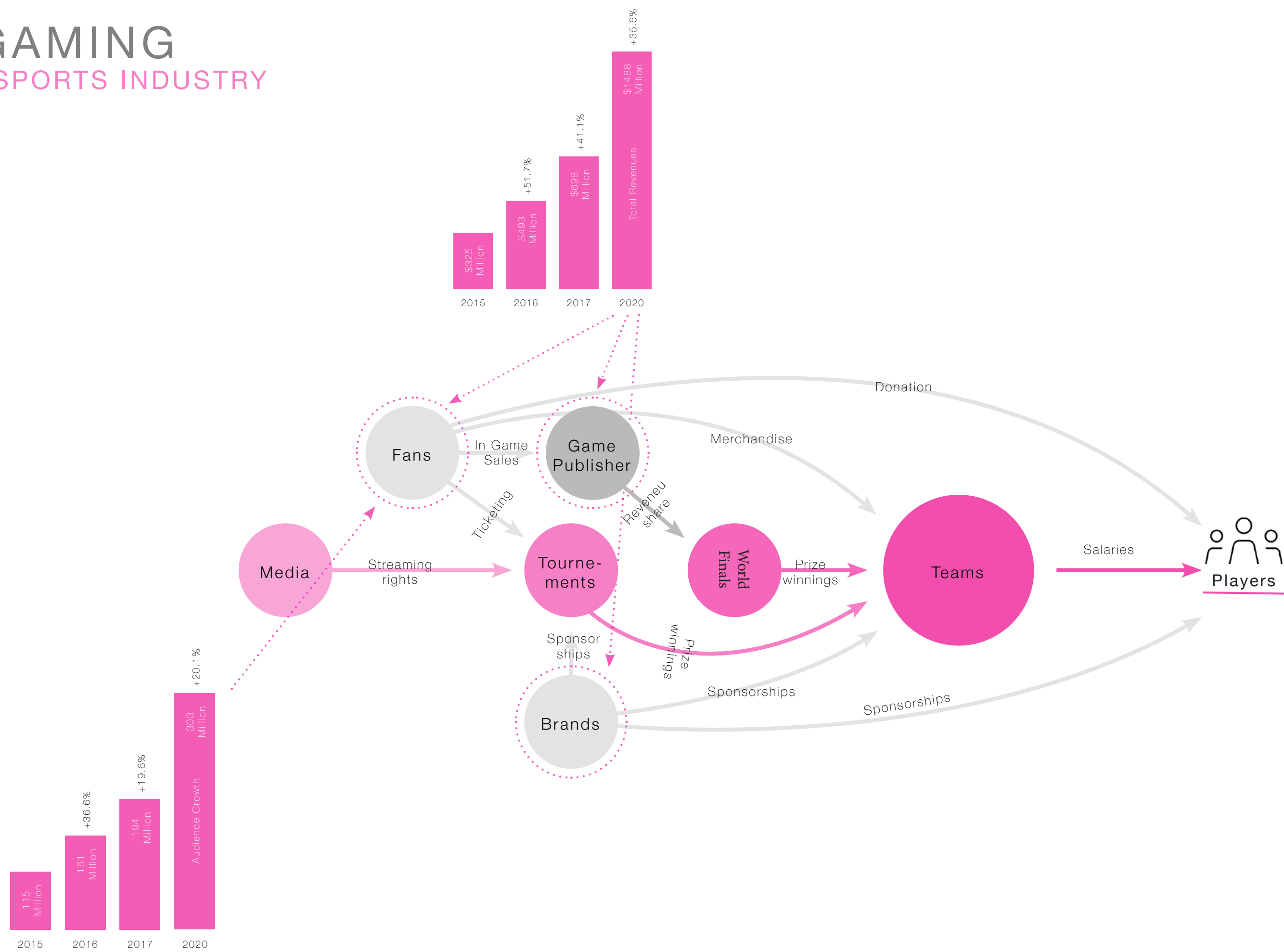
ESPORTS INDUSTRY



(The Nexus, *Future of eSports*. 2015)

GAMING

ESPORTS INDUSTRY



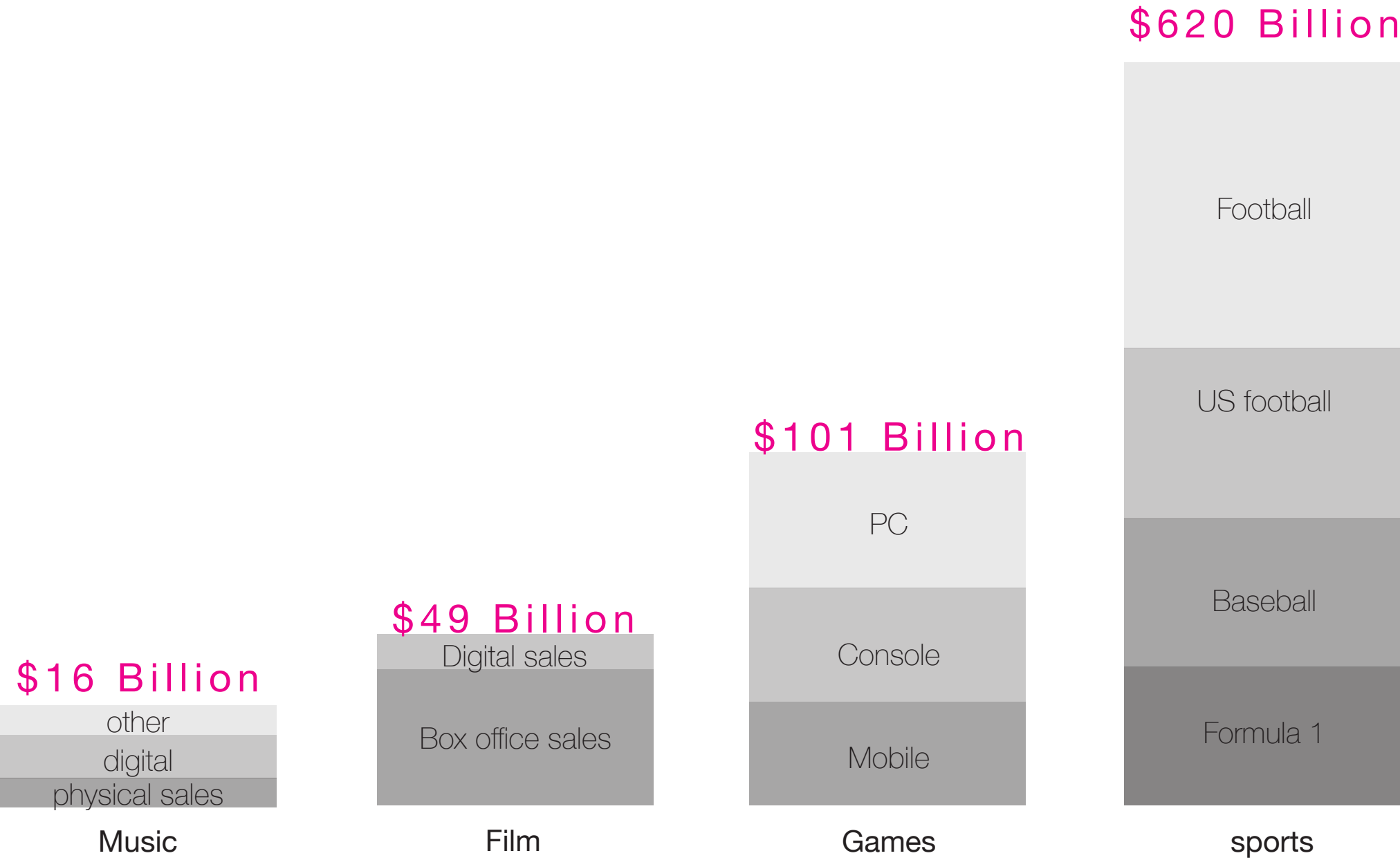
(Newzoo, Global eSports market report. 2017)

(The Nexus, Future of eSports. 2015)

GAMING

IN PERSPECTIVE

Global Media & sports revenues



(The IFPI, The motion picture Association, Digital entertainment group, Newzoo 2016, AT Kearney)

A billboard advertisement for the 2017 Intel World Cyber Games. The billboard features a background image of a city at night with a bright light source on the horizon. On the left, two men are standing with their arms crossed: a young man with glasses wearing a black and red jacket, and a man in a white Real Madrid football jersey. The text 'GAMERS VERSUS ATHLETES' is prominently displayed in large, white, sans-serif capital letters. To the right of this text, it says '10 TEAMS / \$16.500.000 CYBER FOOTBALL WORLD CHAMPIONSHIPS'. Below this, there are logos for 'HYPER', 'Intel', and 'MLG'. At the bottom right, it says 'ESPORTS ARENA' with a logo featuring a stylized 'A' and 'E' in red and blue. The date 'MAY 6-7' is written in large white letters on the left side of the billboard. The billboard is mounted on a metal structure, and the number '004162' is visible on the right side of the structure.

**GAMERS
VERSUS
ATHLETES**

**10 TEAMS / \$16.500.000
CYBER FOOTBALL
WORLD CHAMPIONSHIPS**

MAY 6-7

HYPER **Intel** **MLG**

ESPORTS ARENA

004162

IN 2100, GAMING IS INTEGRATED INTO
EVERYONE'S LIVES AND SOCIETY AT LARGE

HOW WILL FUTURE GAMING TECHNOLOGIES IMPACT THE DESIGN OF A GAMING HUB FOR AMSTEL AREA IN 2100?



HOW WILL **FUTURE GAMING TECHNOLOGIES** IMPACT THE DESIGN OF A **GAMING HUB** FOR **AMSTEL** AREA IN 2100?



1. Which users will make use of the gaming hub?

5. What are the design requirements for Amstel 2100?

2. What are the future developments in gaming?

4. What programme is required for a gaming hub?

3. What are the spatial implication as a result of development in gaming?

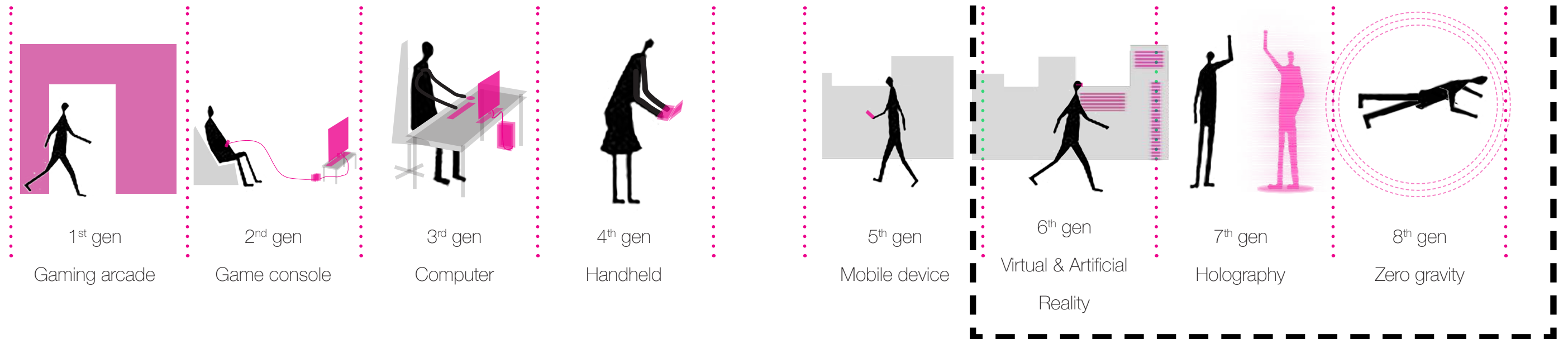
GAME RESEARCH

GAMING TECHNOLOGY

WHAT ARE THE FUTURE DEVELOPMENTS IN GAMING?

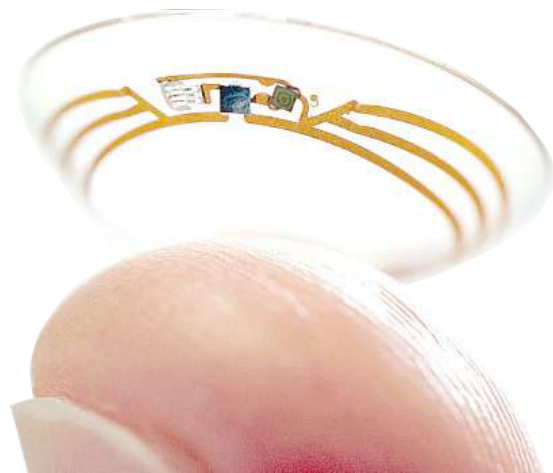


1950 1960 1970 1980 1990 2000 2010 2020 2030 2050 2070 2100



GAMING TECHNOLOGY

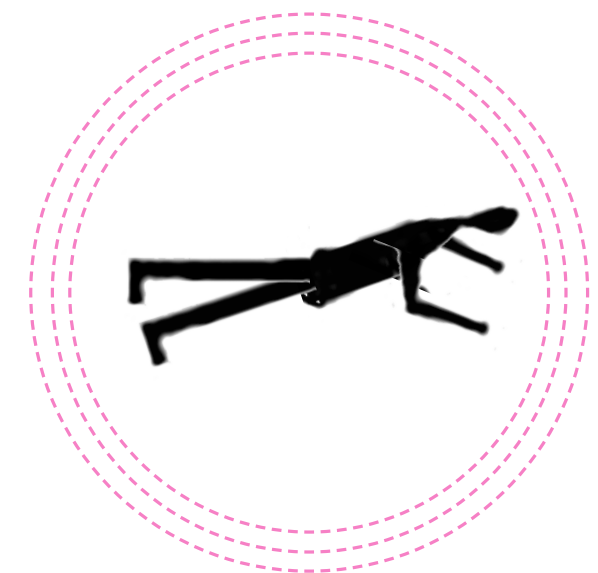
FUTURE GAMING



6th gen
Virtual & Augmented Reality



7th gen
Holography



8th gen
Zero gravity

GAMING TECHNOLOGY

ZERO GRAVITY: LEVITATION TECHNOLOGY



Levitation?



Ferro magnetism
(magnetic levitation)

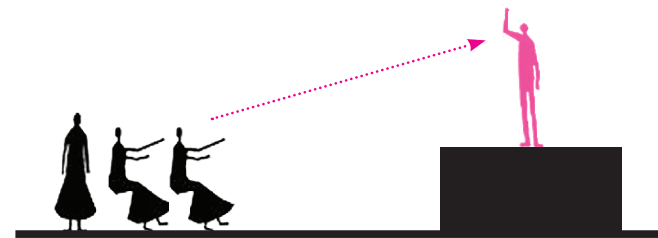


Diamagnetism

SOCIAL AND SPATIAL RELATIONS

WHAT ARE THE SPATIAL IMPLICATIONS AS A
RESULT OF FUTURE TECHNOLOGIES?

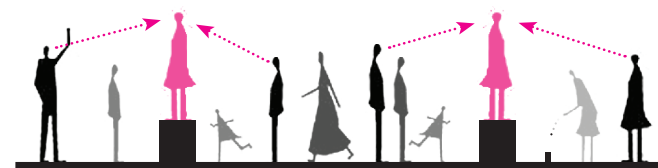
Traditional



End focus

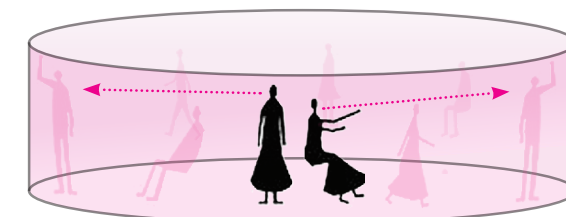


Center focus



Mixed

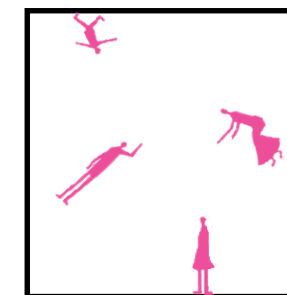
Future



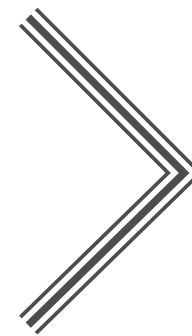
Augmented & Virtual reality
360 view



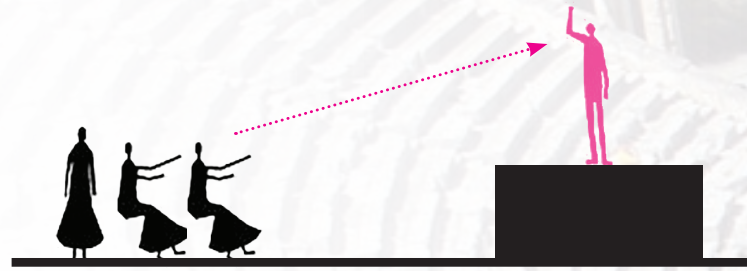
Holography



Zero Gravity



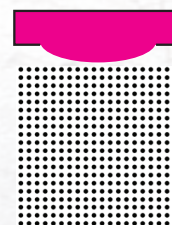
Traditional End focus



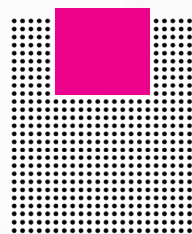
End stage



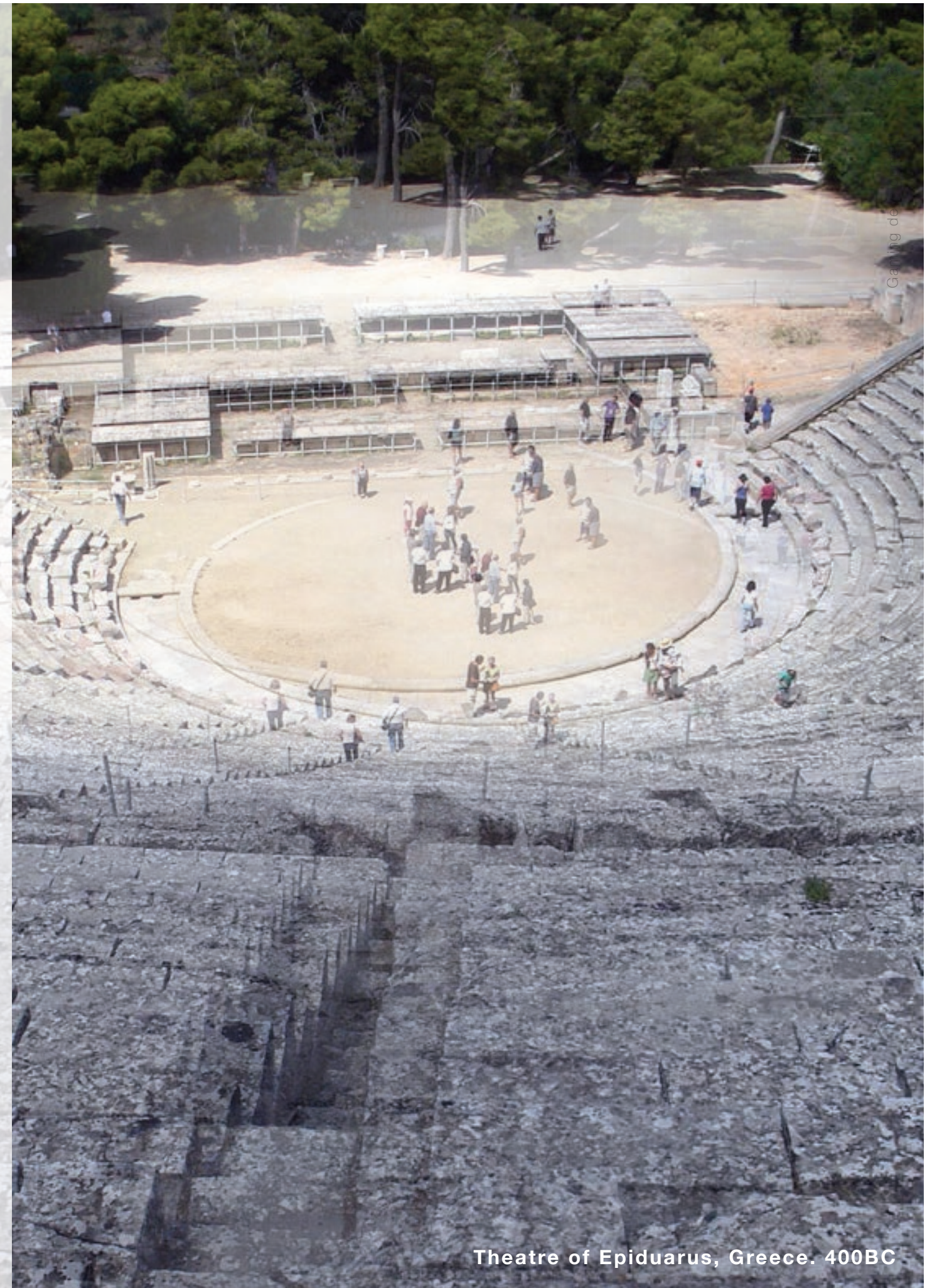
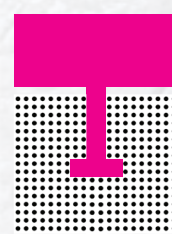
Proscenium stage



Thrust stage



End stage + ring

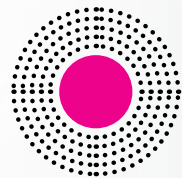


Theatre of Epidaurus, Greece. 400BC

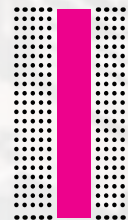
Traditional Center focus



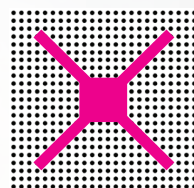
Round stage



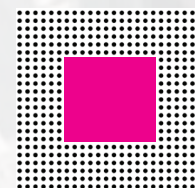
Traverse stage



Cross stage

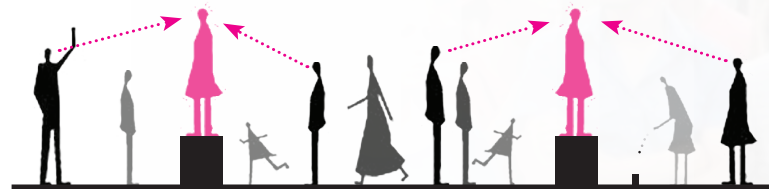


Square stage

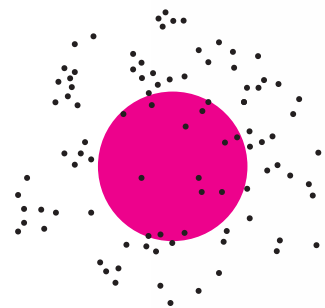


Amphitheater Colosseum, Rome. 80AD

Traditional Mixed stage



Mixed centered



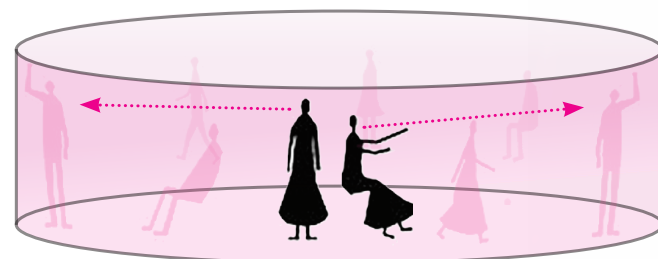
Mixed scattered



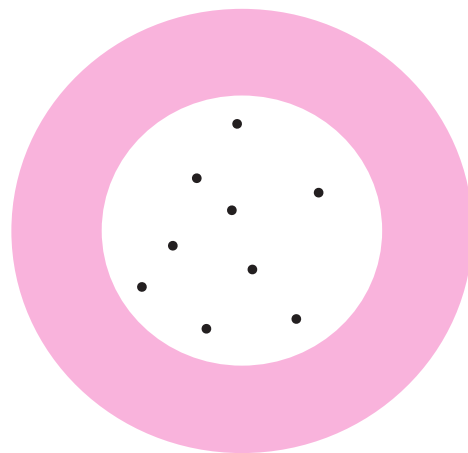
Dam square, Amsterdam. anno 2018

Future AR & VR

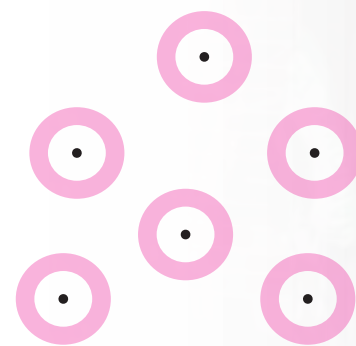
As far as the eye reaches



Communal augmented realities



Individual augmented realities

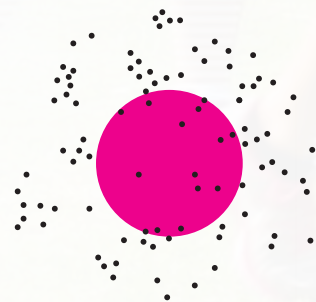


Future Holography

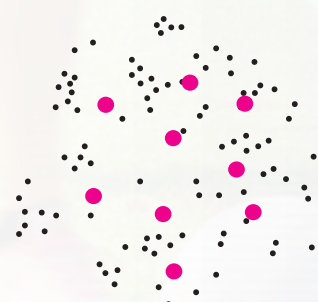
Around building and its
nearby surrounding



Mixed centered



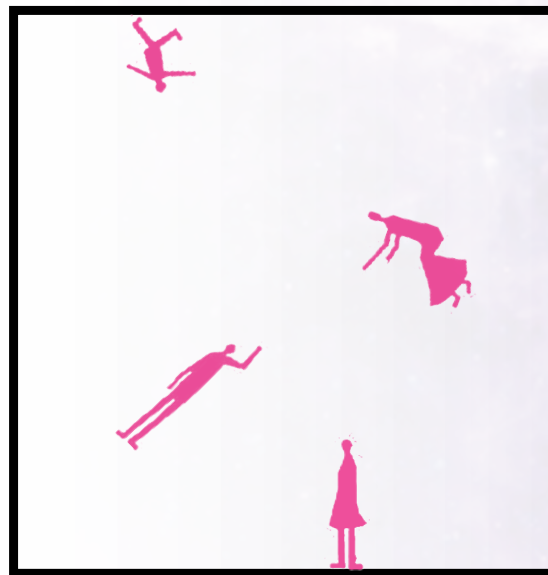
Mixed scattered



Girl footballing with NPC's, Tai Wei Kan 2018

Future Zero Gravity

Room scale



Mixed scattered (3D)



Zero grafitry games, Tai Wei Kan 2018

An aerial photograph of Amsterdam, showing the city's layout with streets, buildings, and water. Overlaid on the map are several geometric shapes: a grey rectangle in the upper left containing a dotted line, a pink rectangle in the lower center containing a dotted line, and a pink diagonal line crossing the map. The word 'AMSTERDAM' is faintly visible in pink, slanted letters across the center. The text 'PROJECT SITE' is prominently displayed in the center in a stylized font.

PROJECT SITE

| INTRO

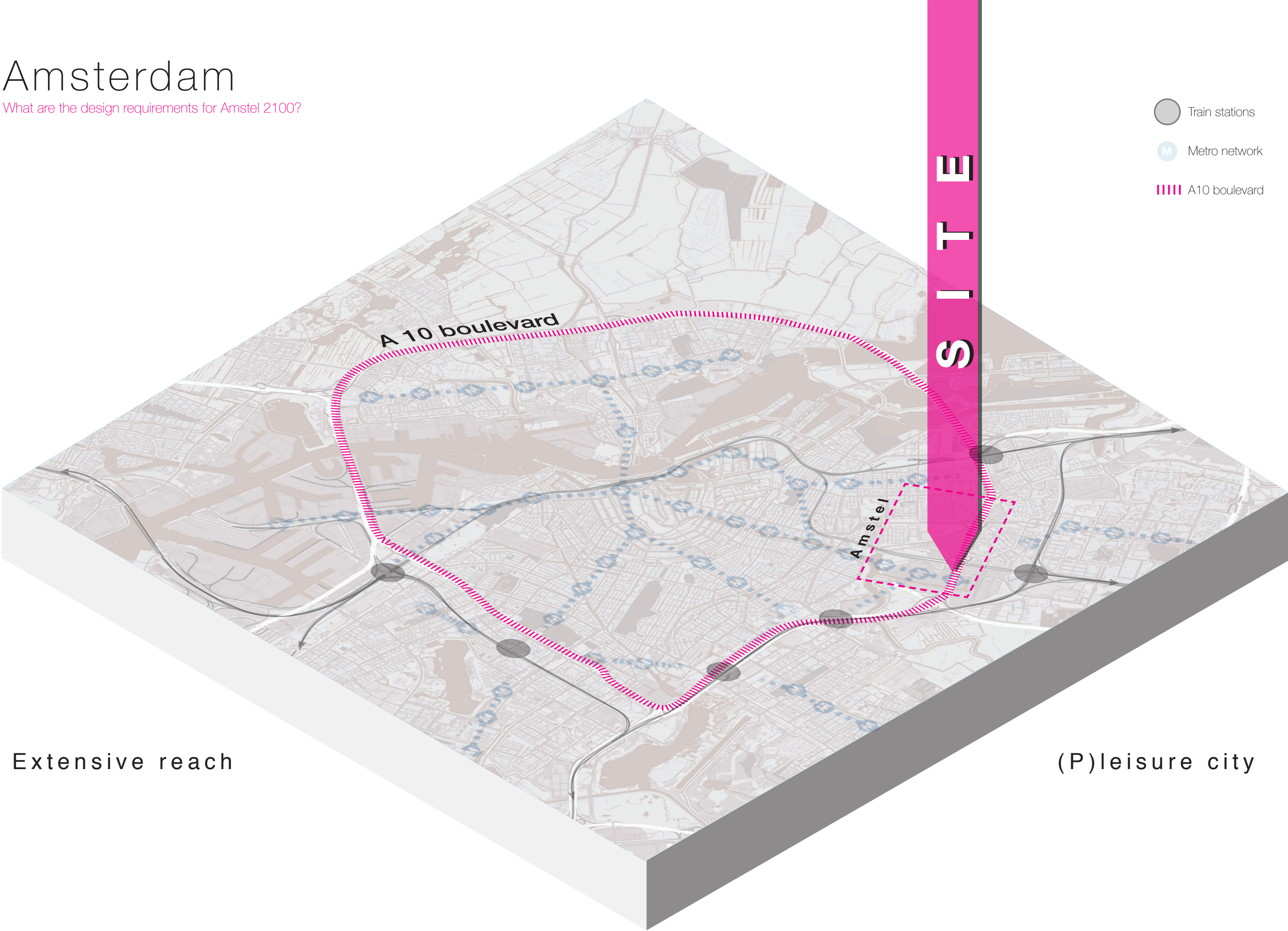
| CONTEXT

| RESEARCH

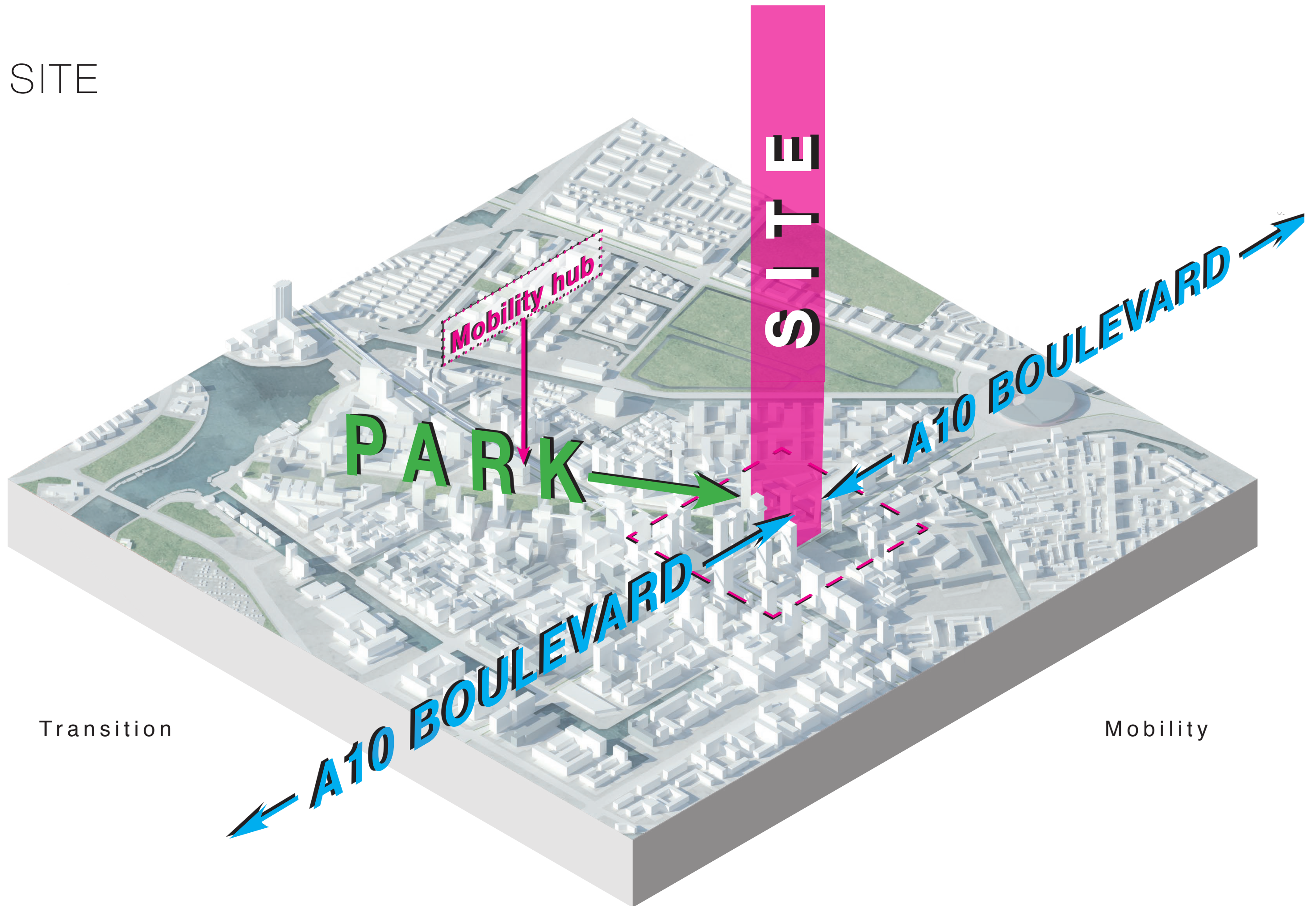
| DESIGN

Amsterdam

What are the design requirements for Amstel 2100?



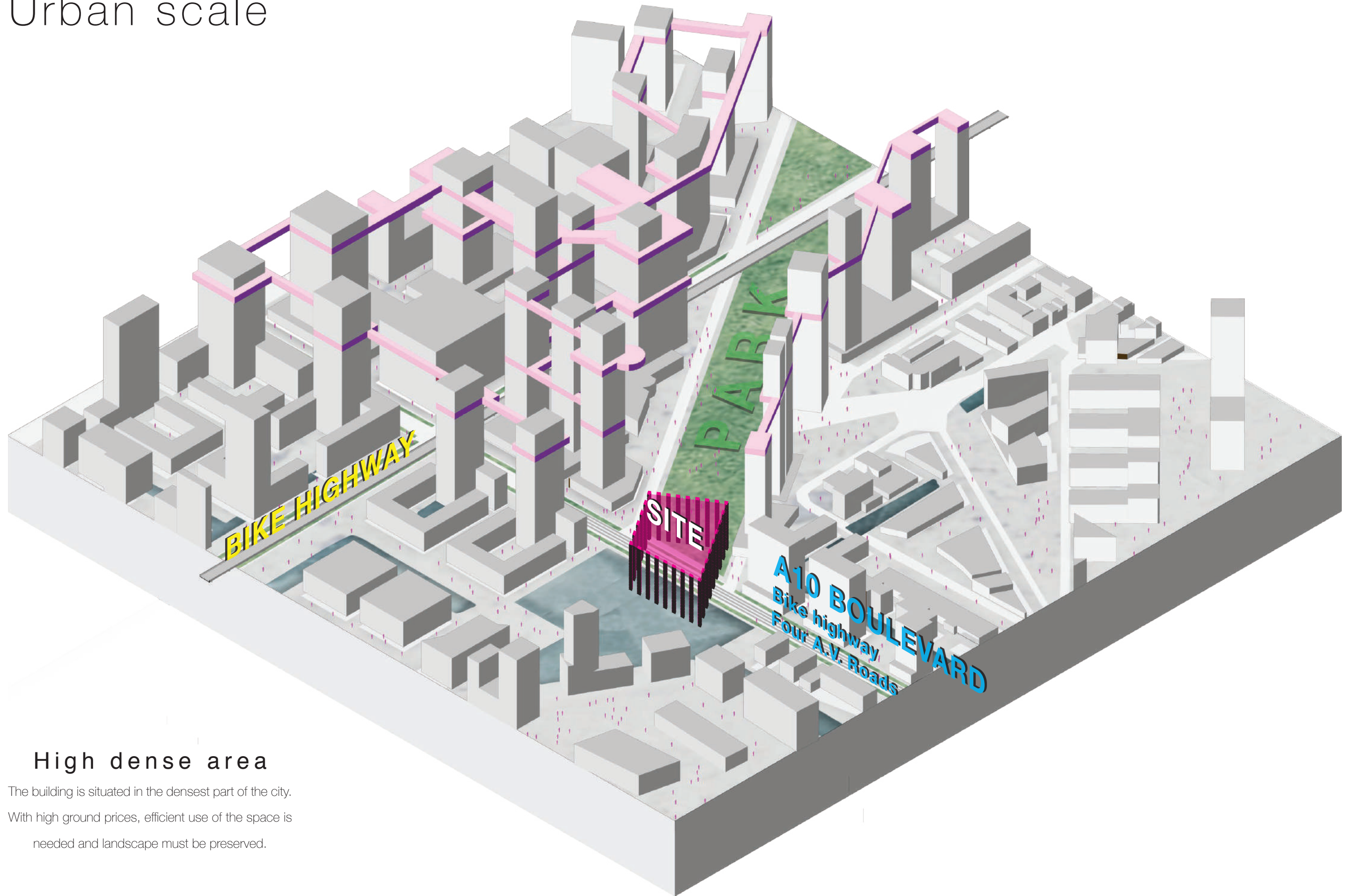
SITE



Transition

Mobility

Urban scale



High dense area

The building is situated in the densest part of the city.
With high ground prices, efficient use of the space is
needed and landscape must be preserved.

FORM GENERATION

A10 boulevard

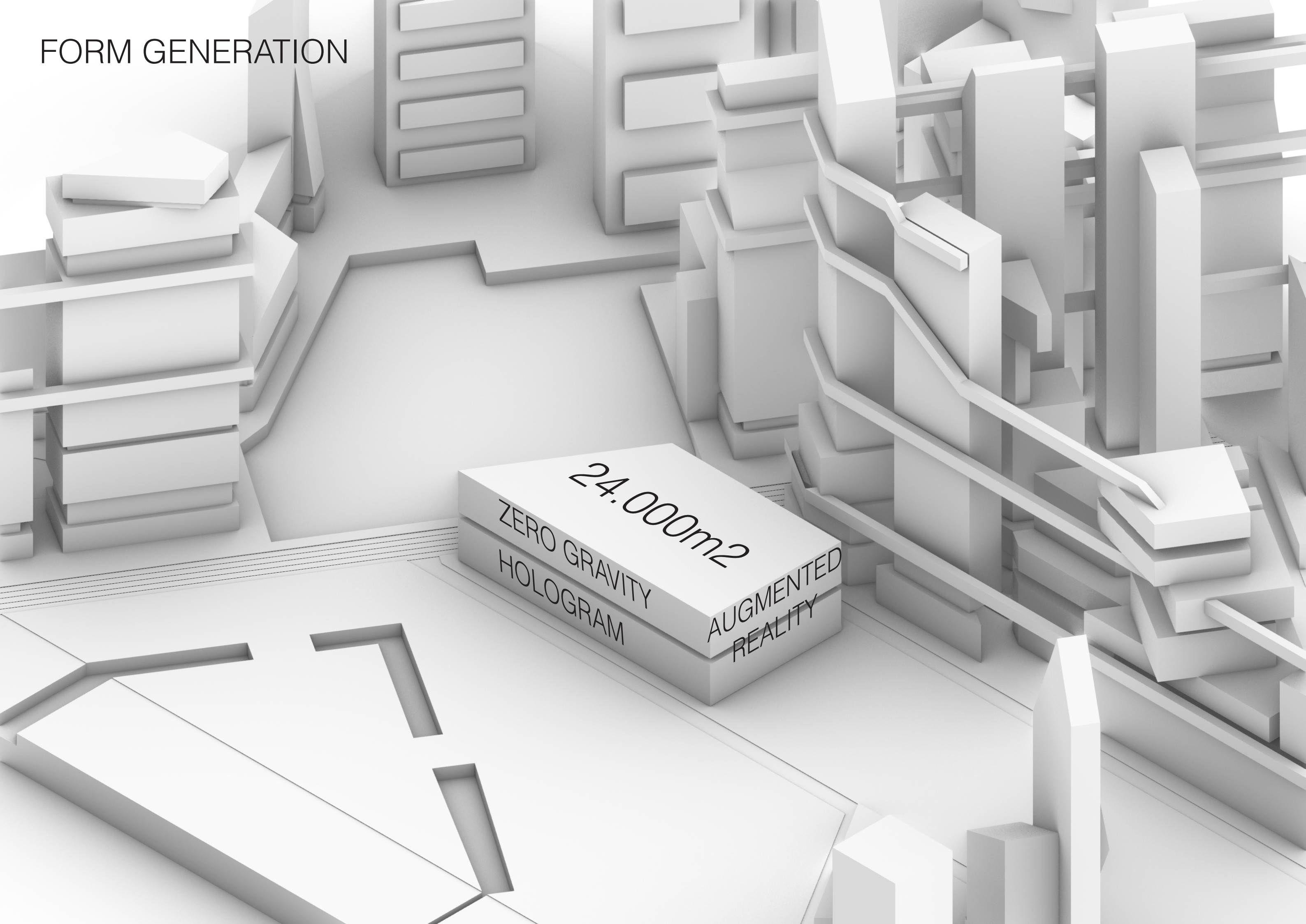
Site

100m

70m

PARK

FORM GENERATION

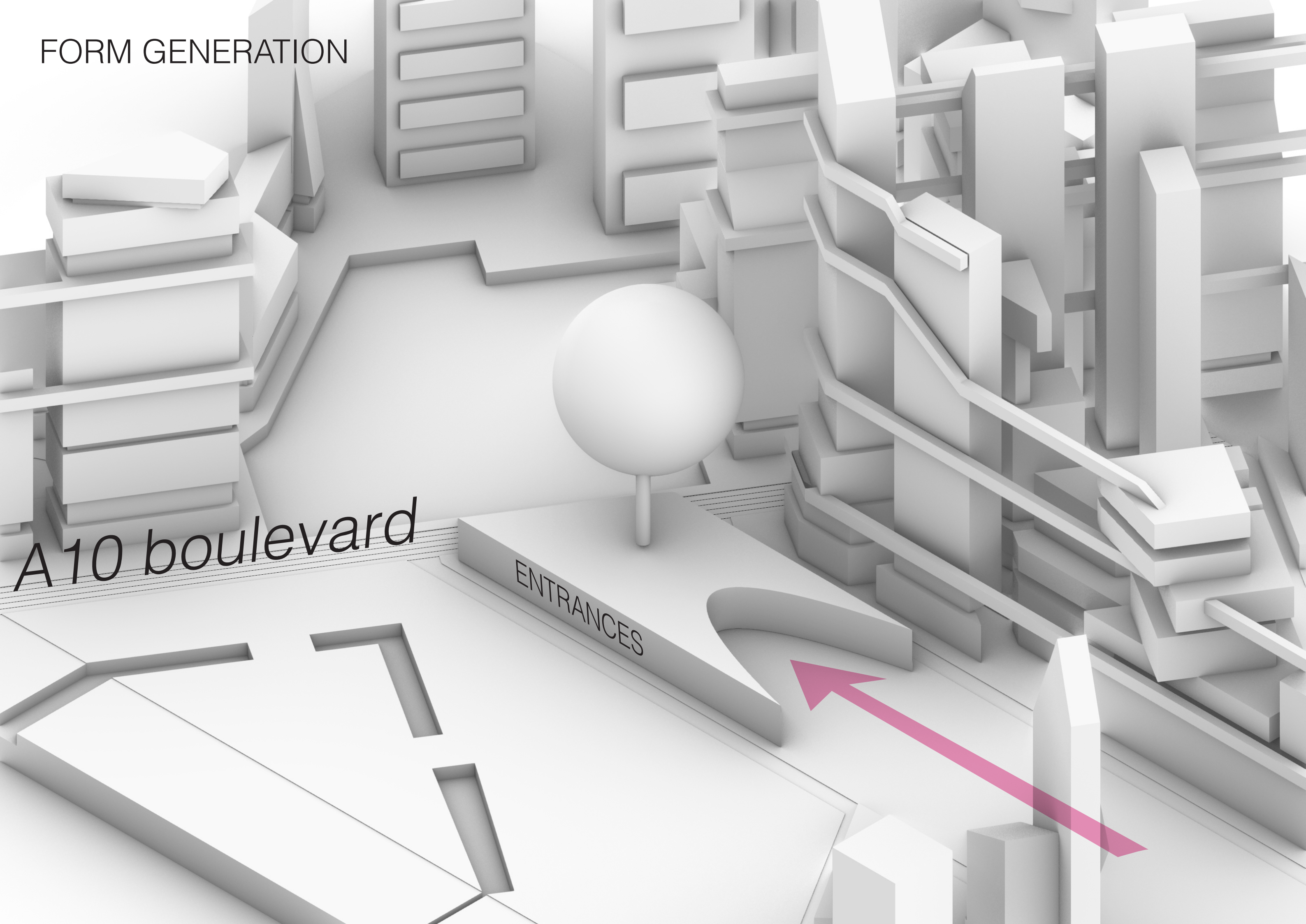


FORM GENERATION

Zero gravity
12.000m²

12.000m²
HOLOGRAM
AUGMENTED
REALITY

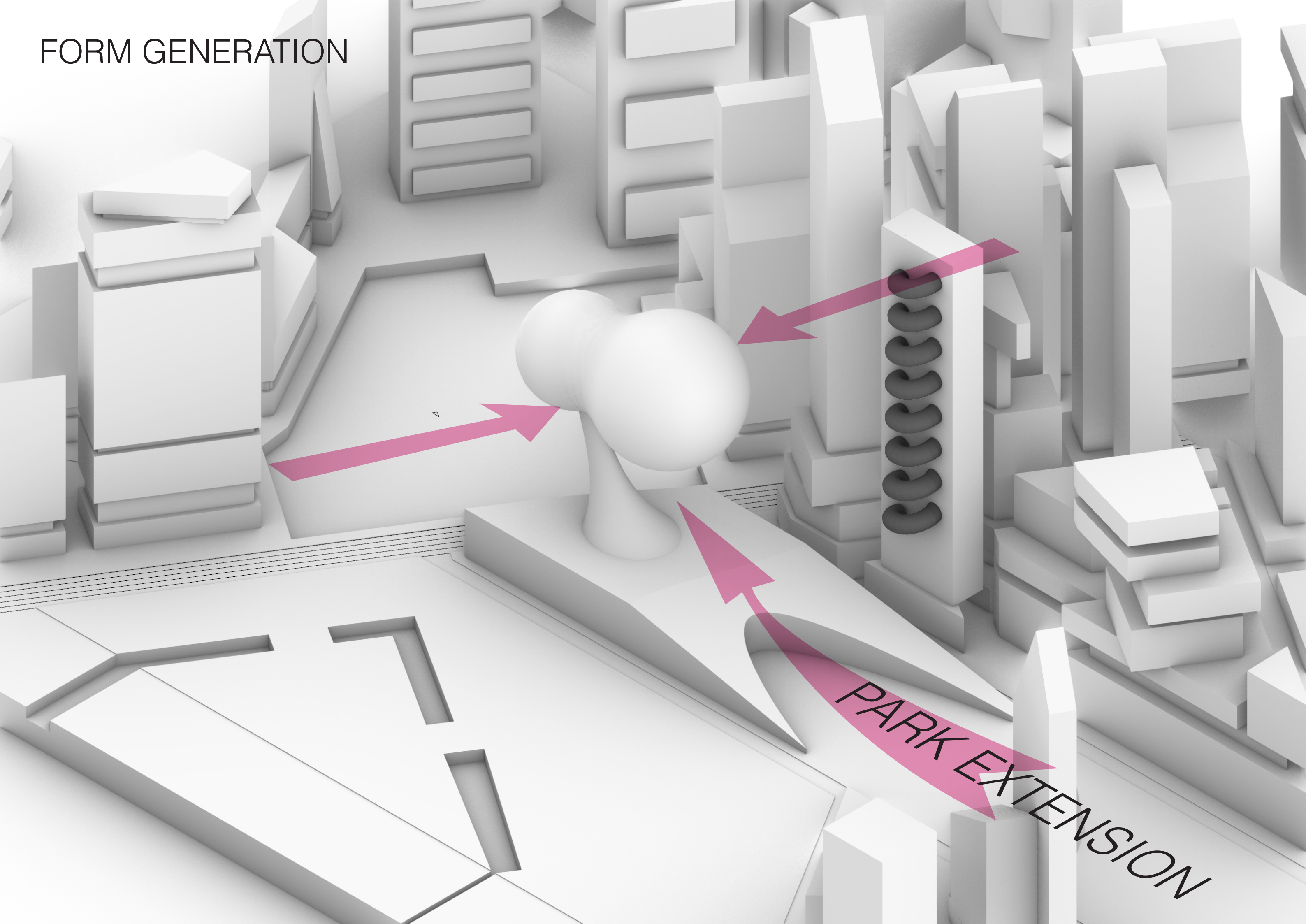
FORM GENERATION



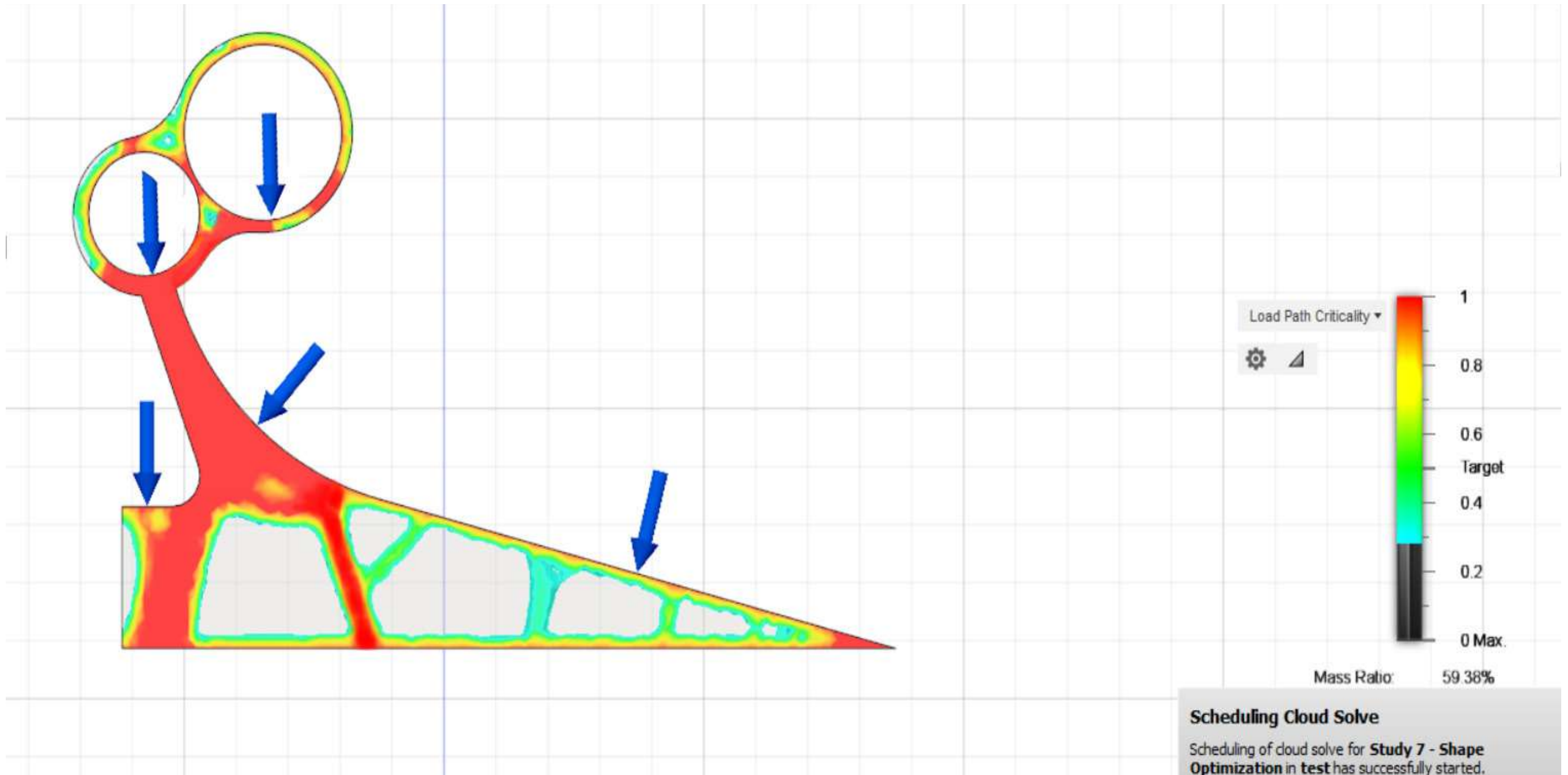
A10 boulevard

ENTRANCES

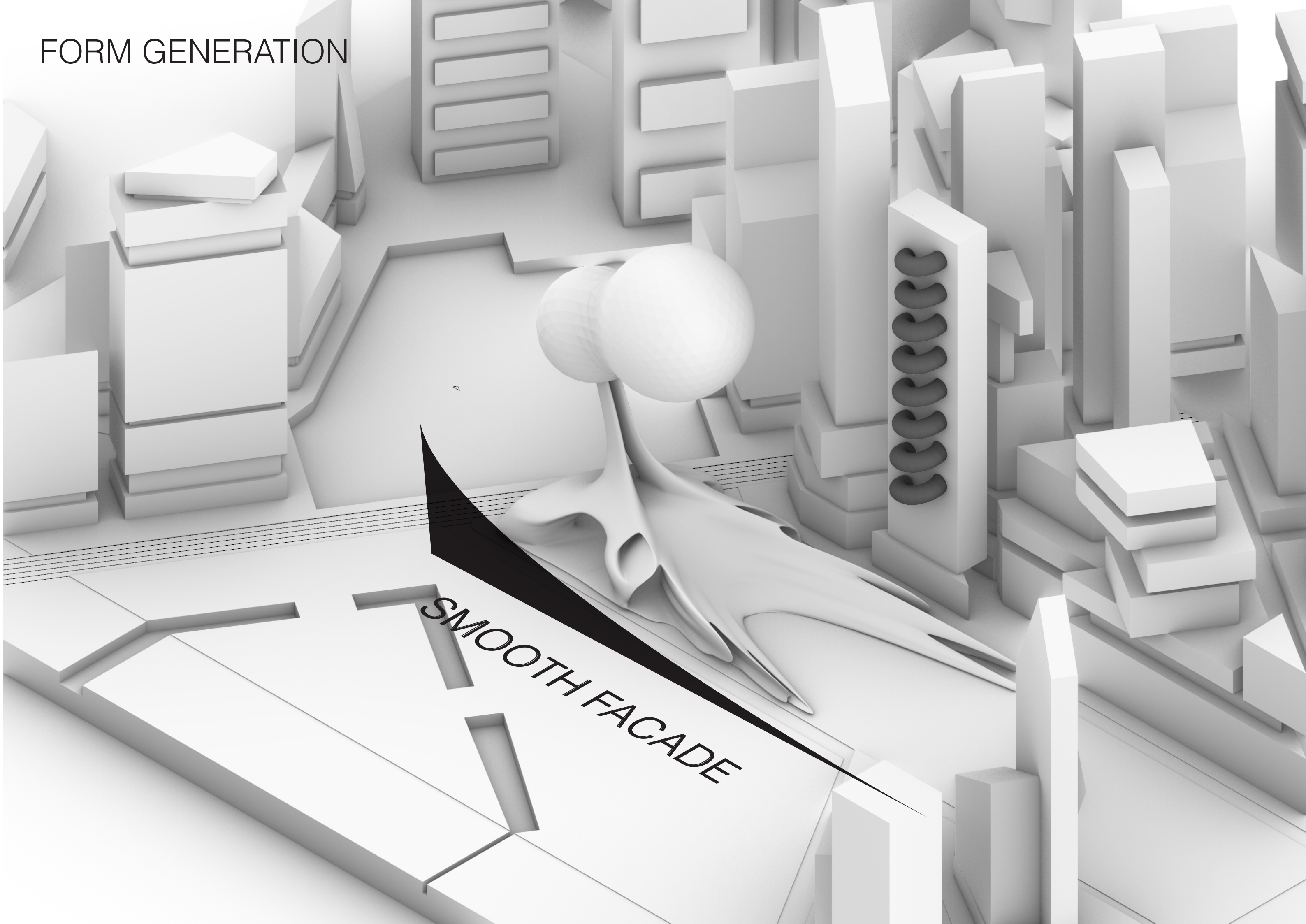
FORM GENERATION



PROGRAMME GENERAL

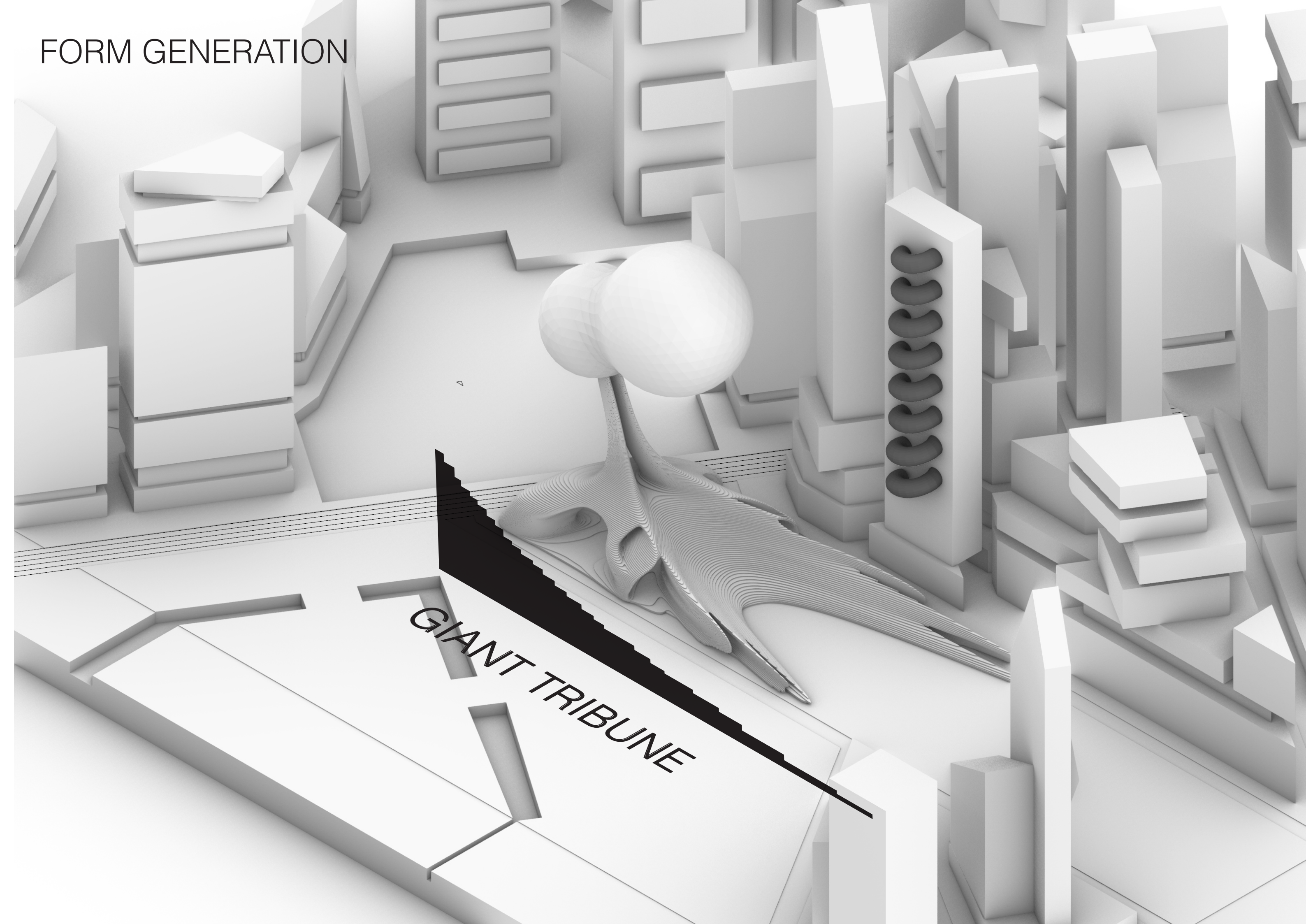


FORM GENERATION

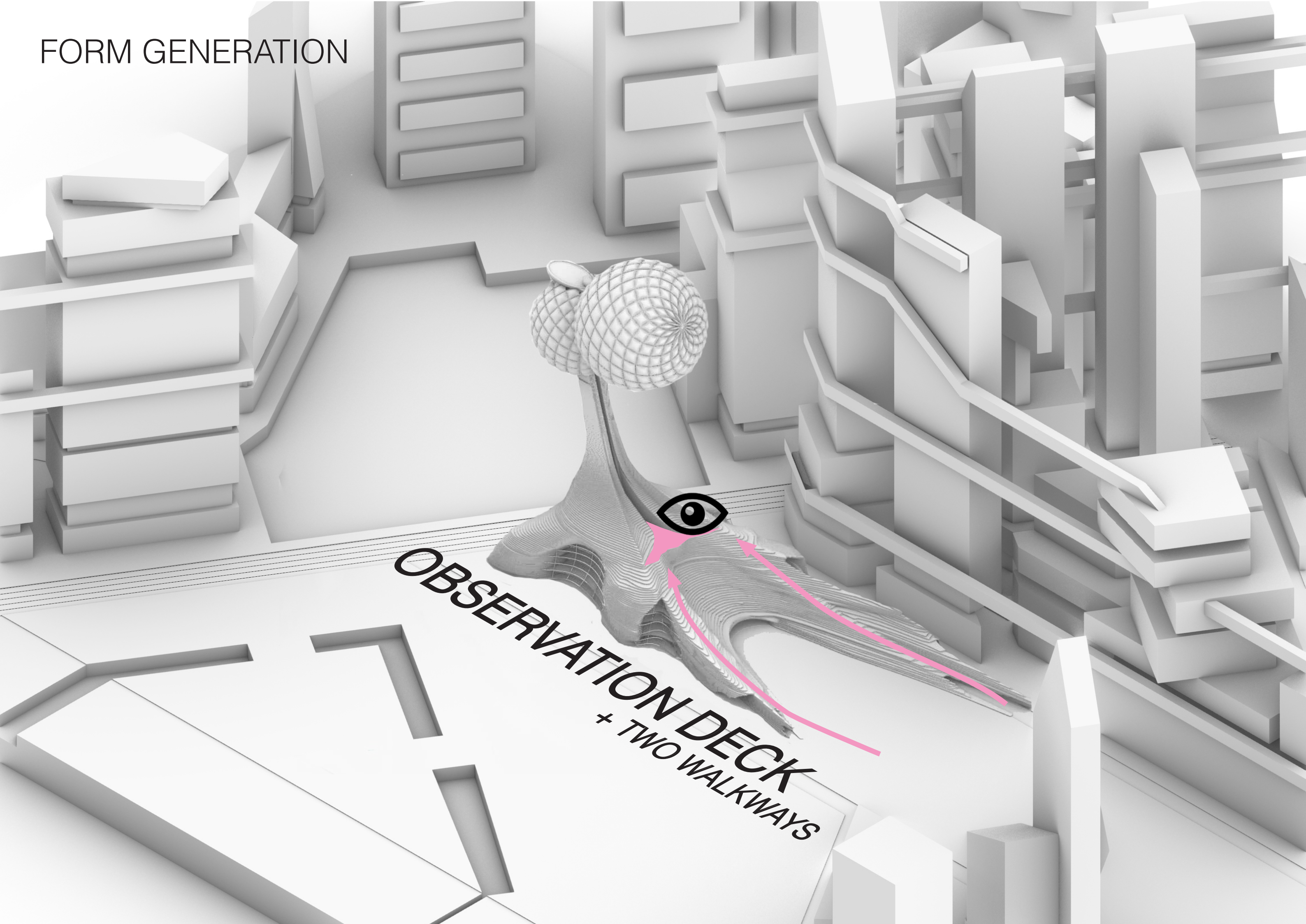


SMOOTH FACADE

FORM GENERATION



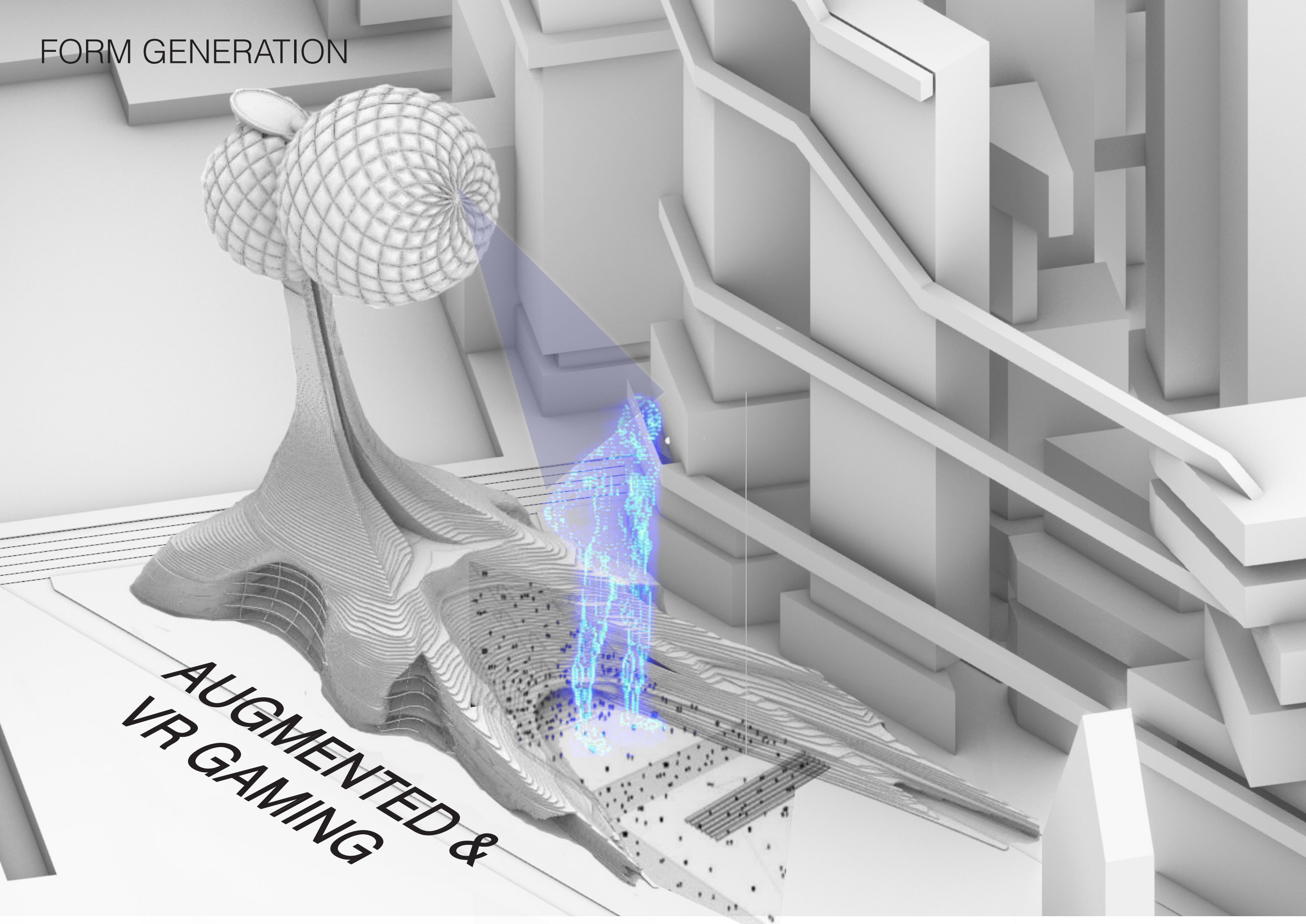
FORM GENERATION



OBSERVATION DECK
+ TWO WALKWAYS

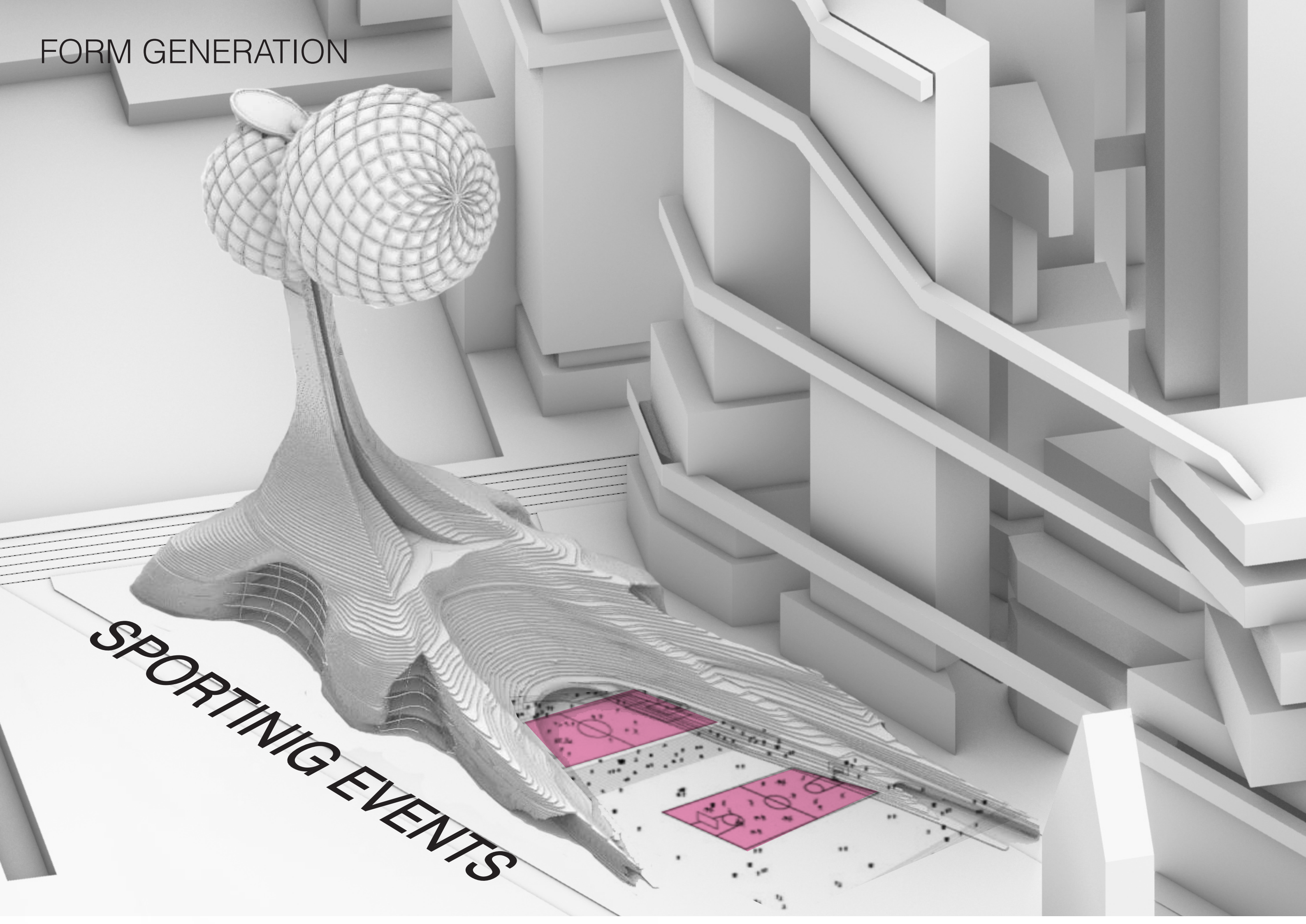
FORM GENERATION

AUGMENTED &
VR GAMING

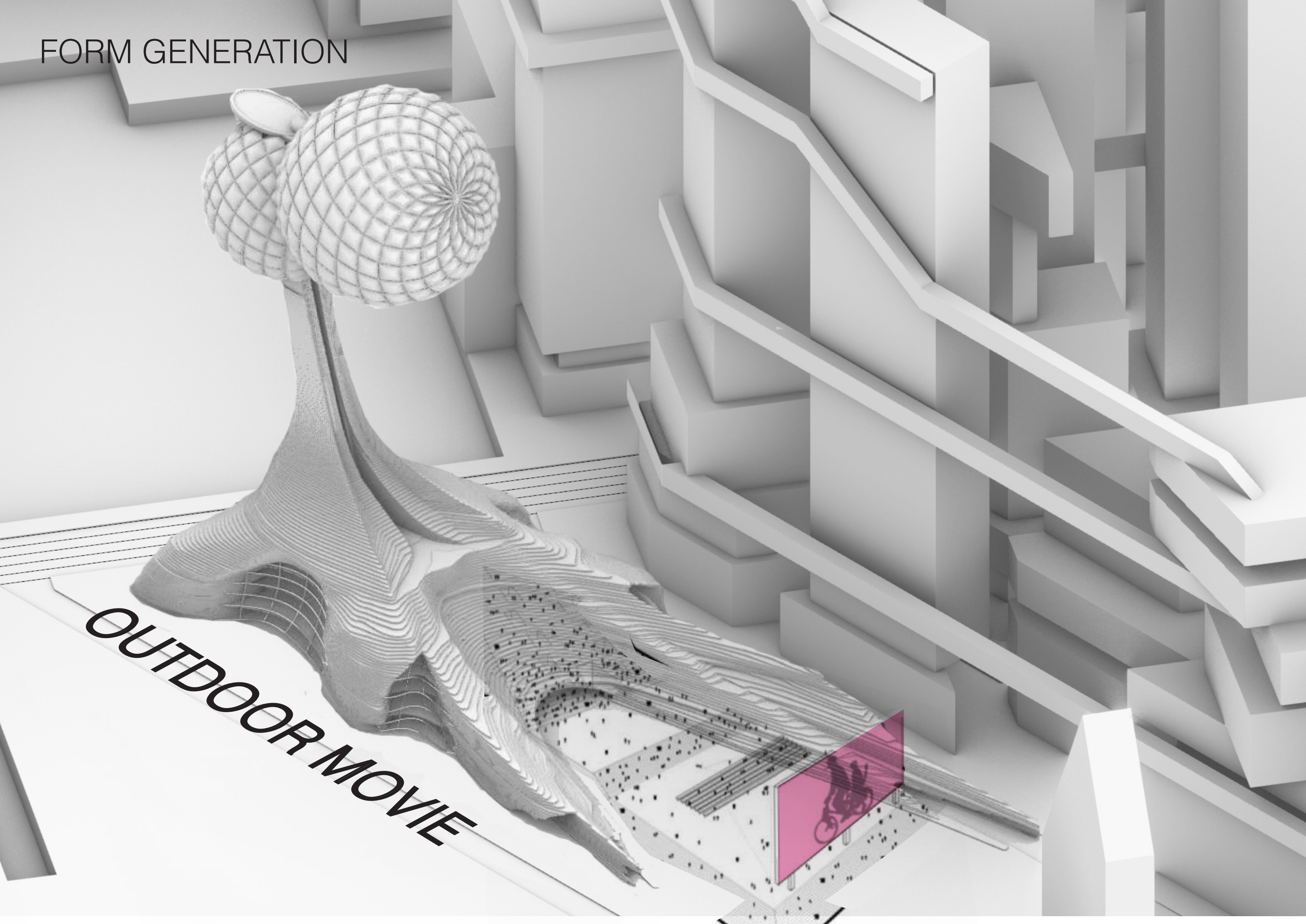


FORM GENERATION

SPORTING EVENTS



FORM GENERATION



OUTDOOR MOVIE

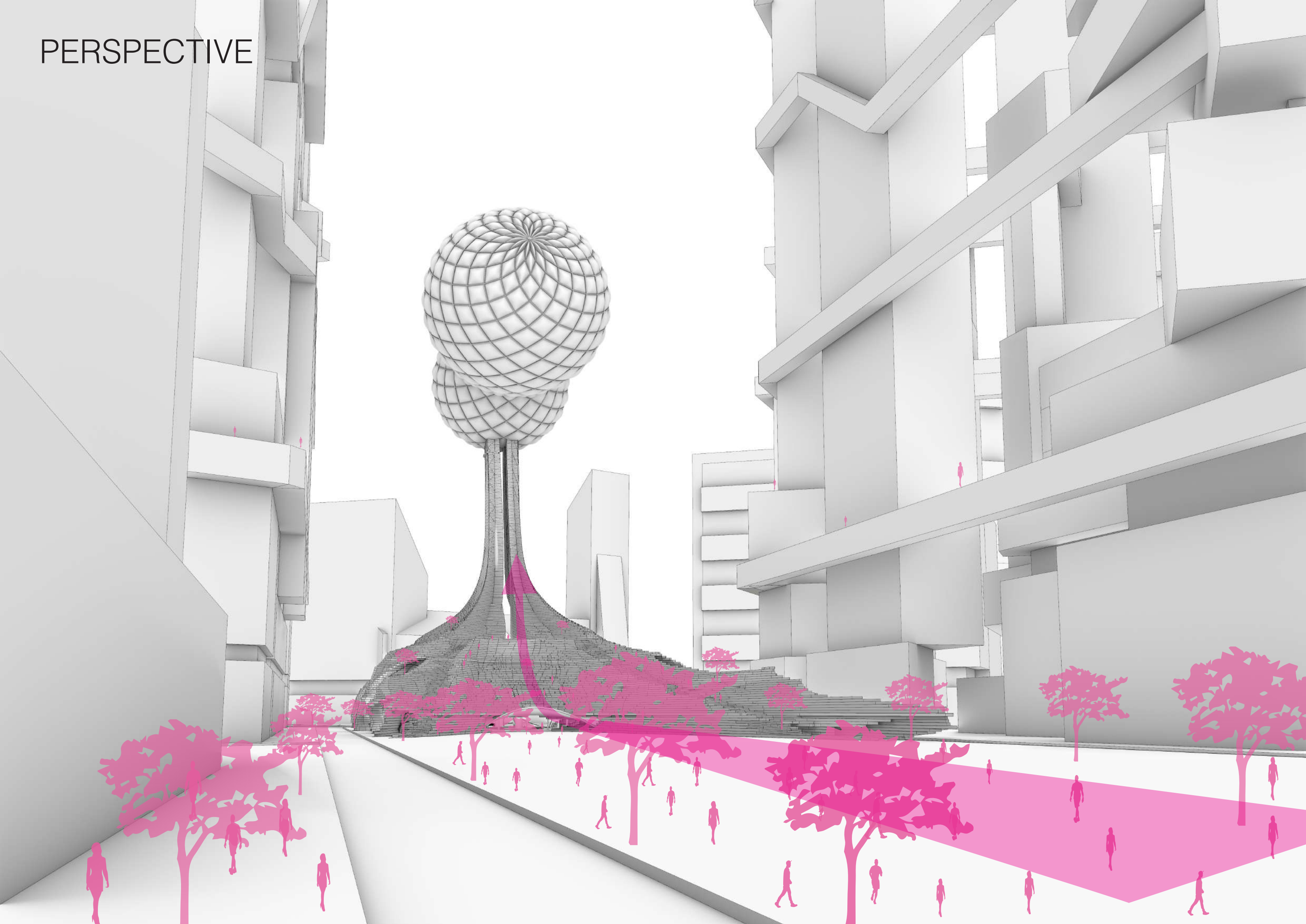
FORM GENERATION



SITEPLAN



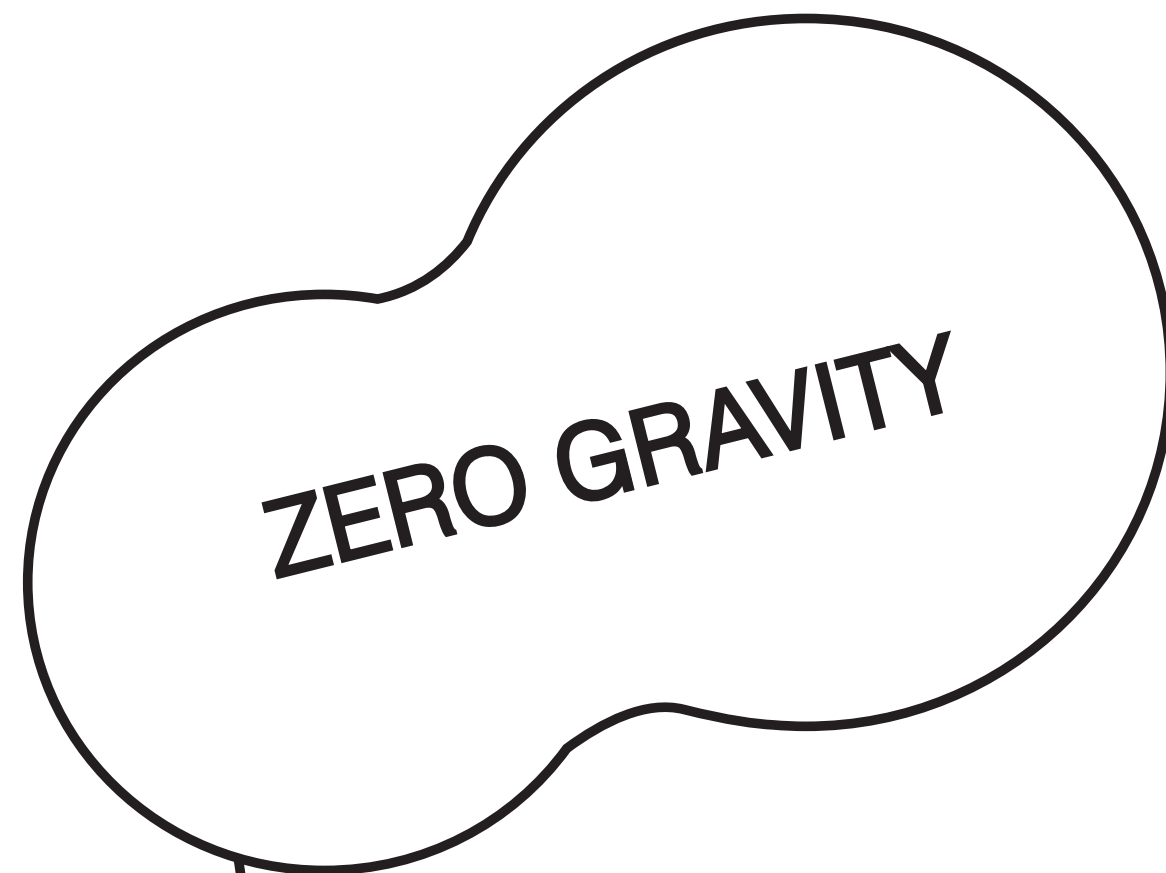
PERSPECTIVE



PERSPECTIVE



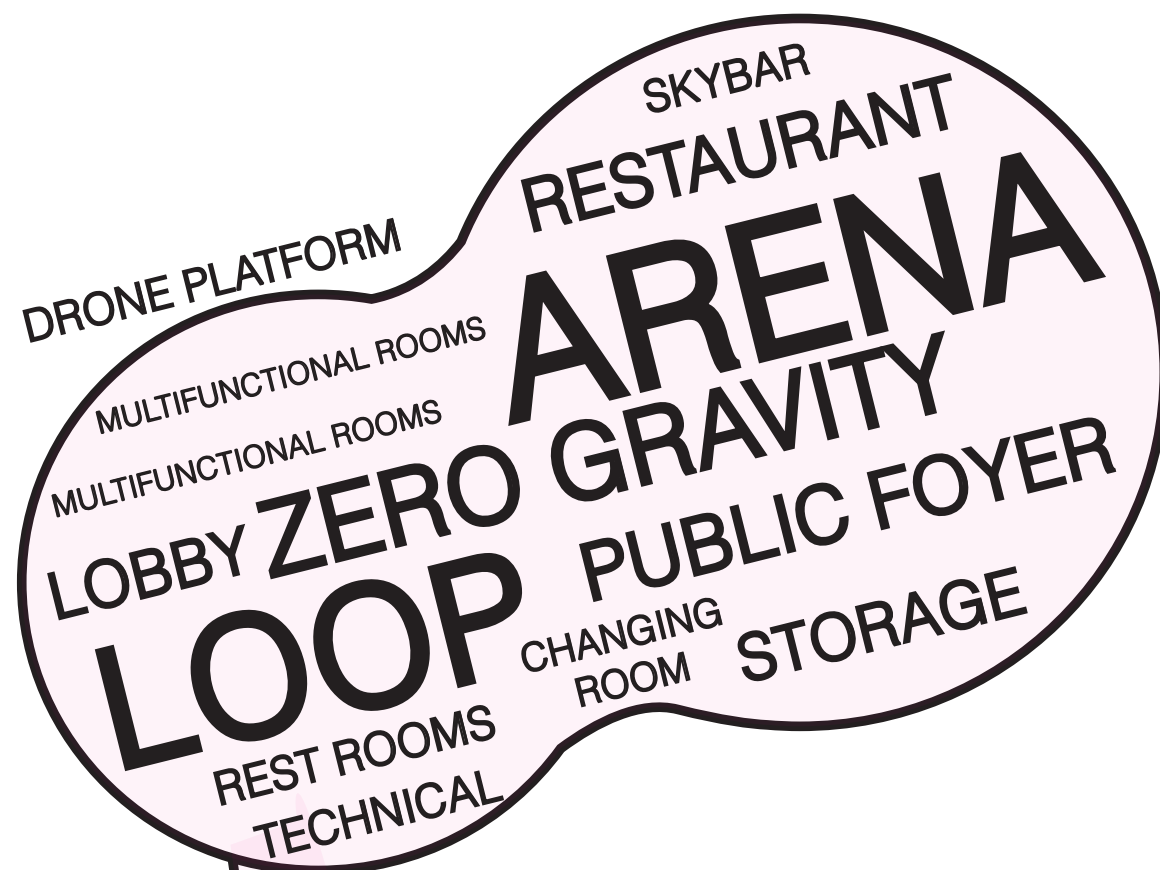
PROGRAMME ROUTING



ZERO GRAVITY

HOLOGRAM

AUGEMENTED REALITY

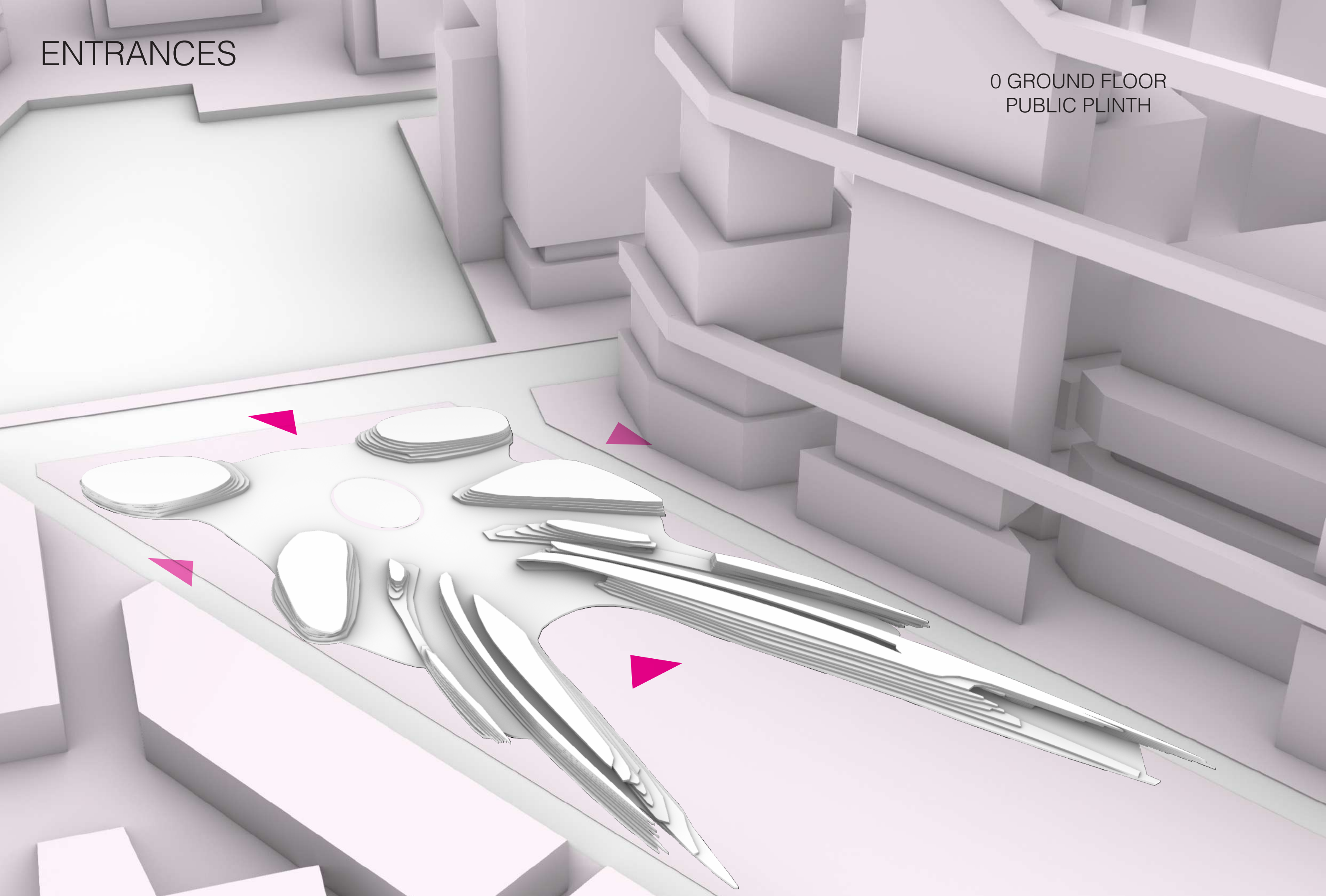


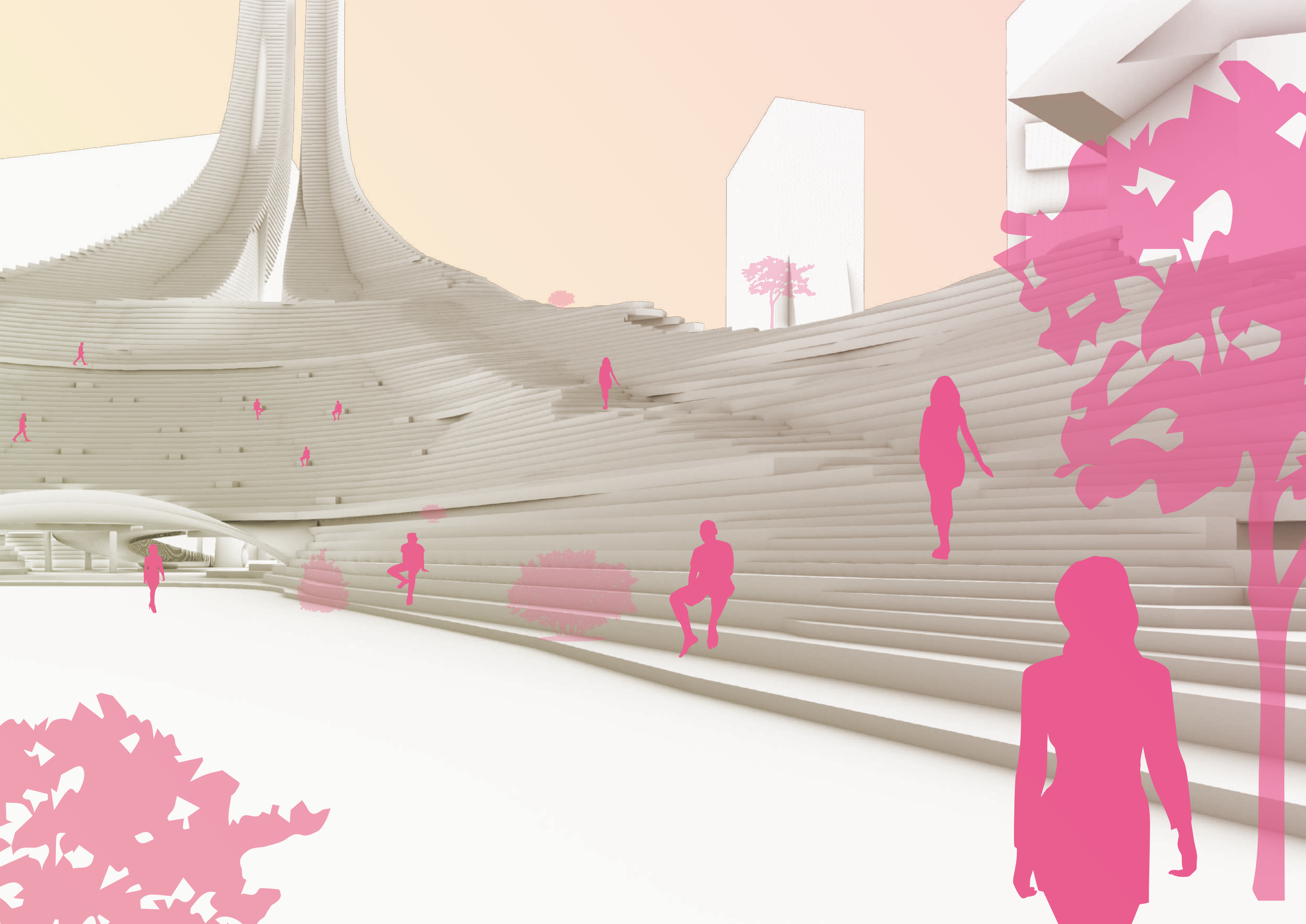
ELEVATOR



ENTRANCES

0 GROUND FLOOR
PUBLIC PLINTH



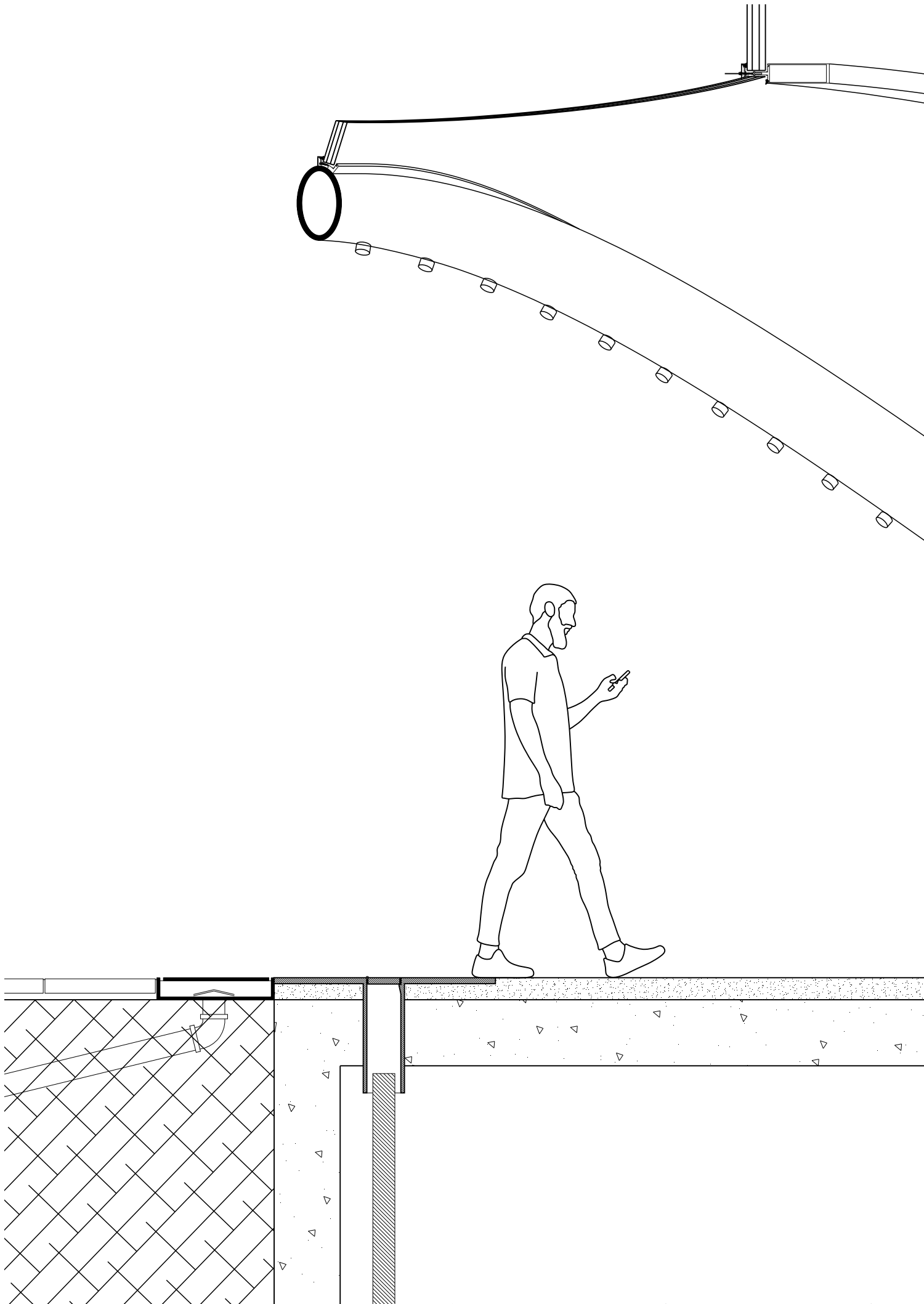




ENTRANCE

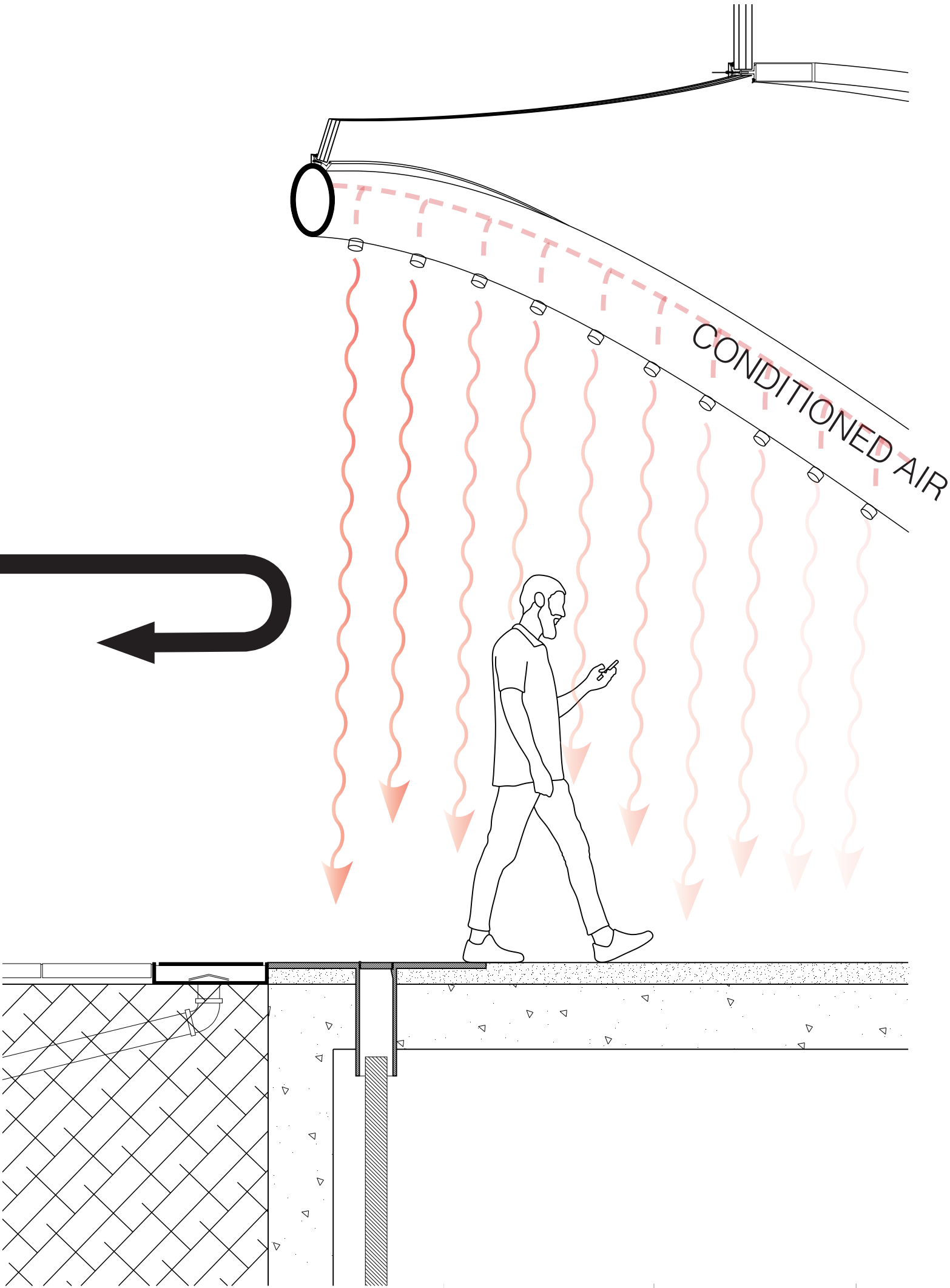
OUTSIDE
15 °C

INSIDE
21 °C



AIR CURTAIN

HEAT
COLD
DUST
POLLUTION



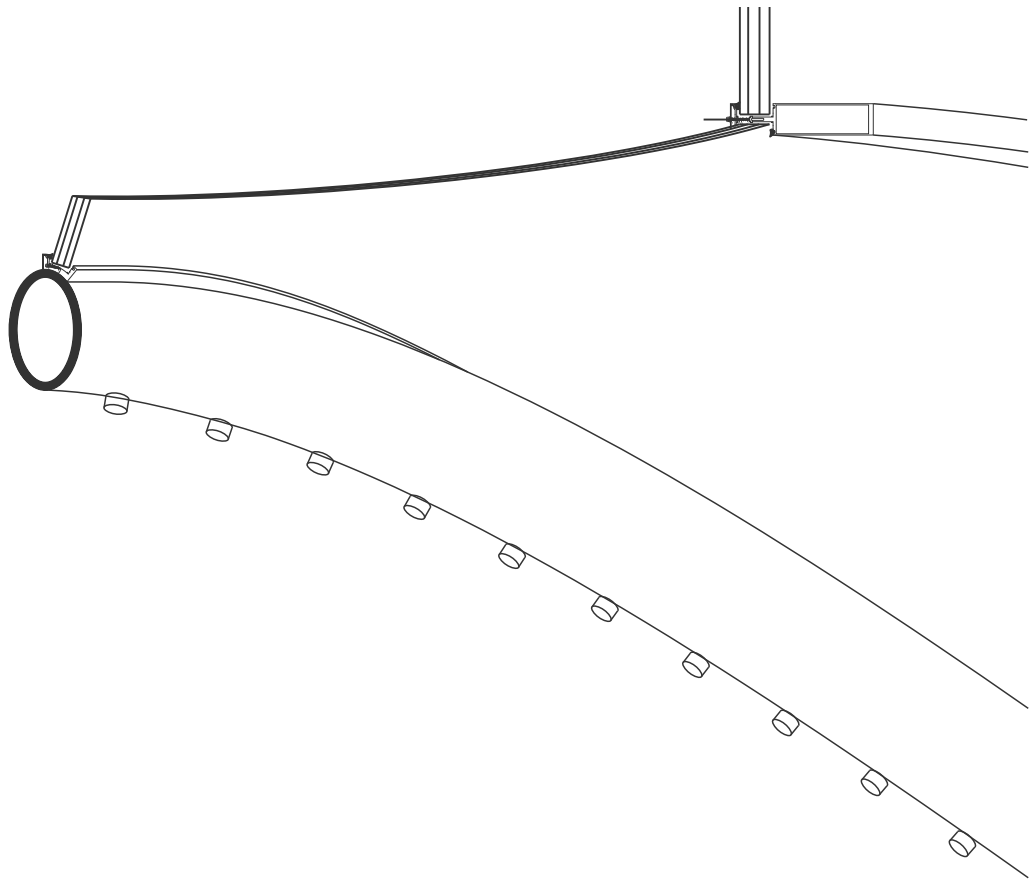
INTRO

CONTEXT

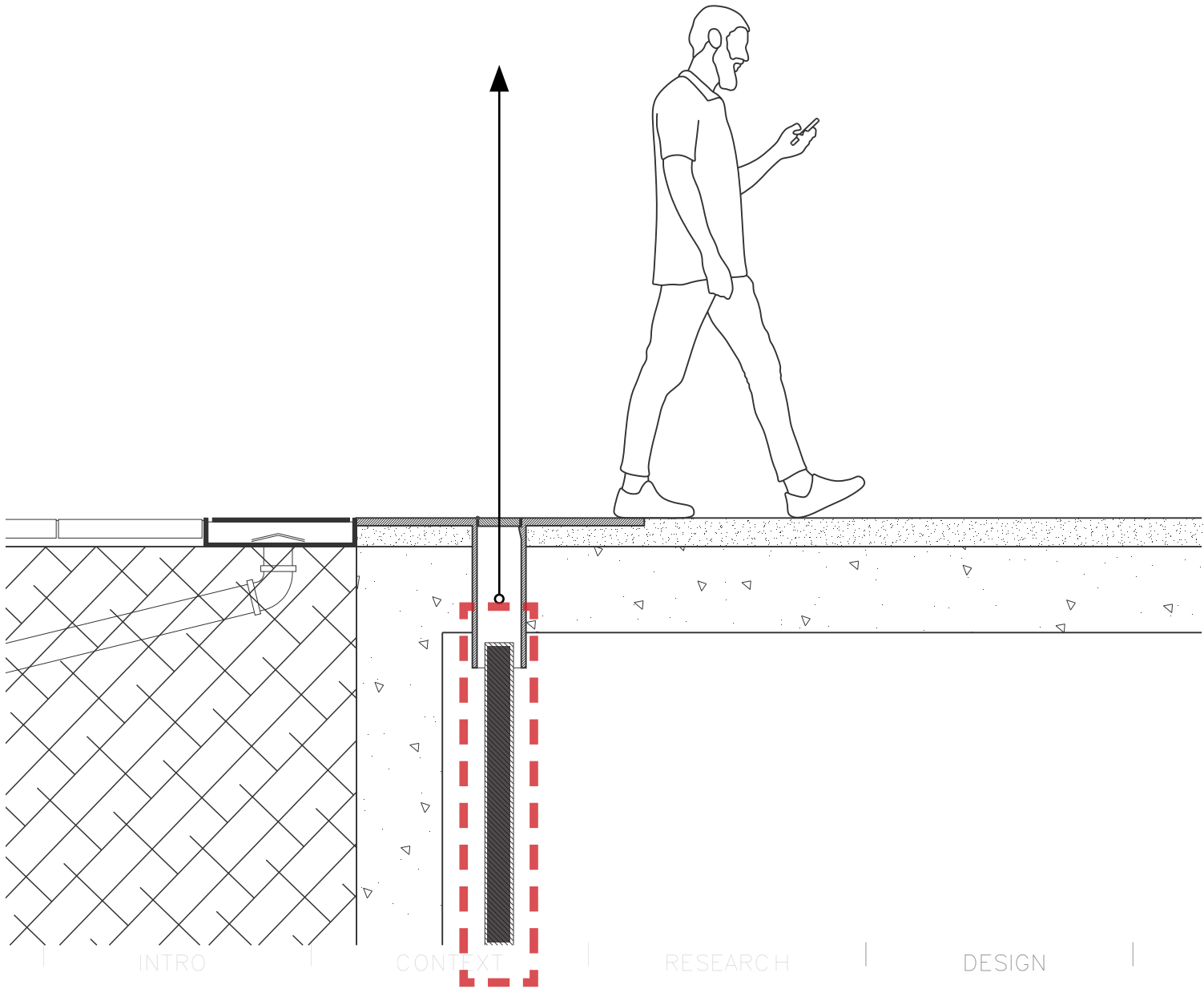
RESEARCH

DESIGN

ENTRANCE



RETRACTABLE FACADE



INTRO

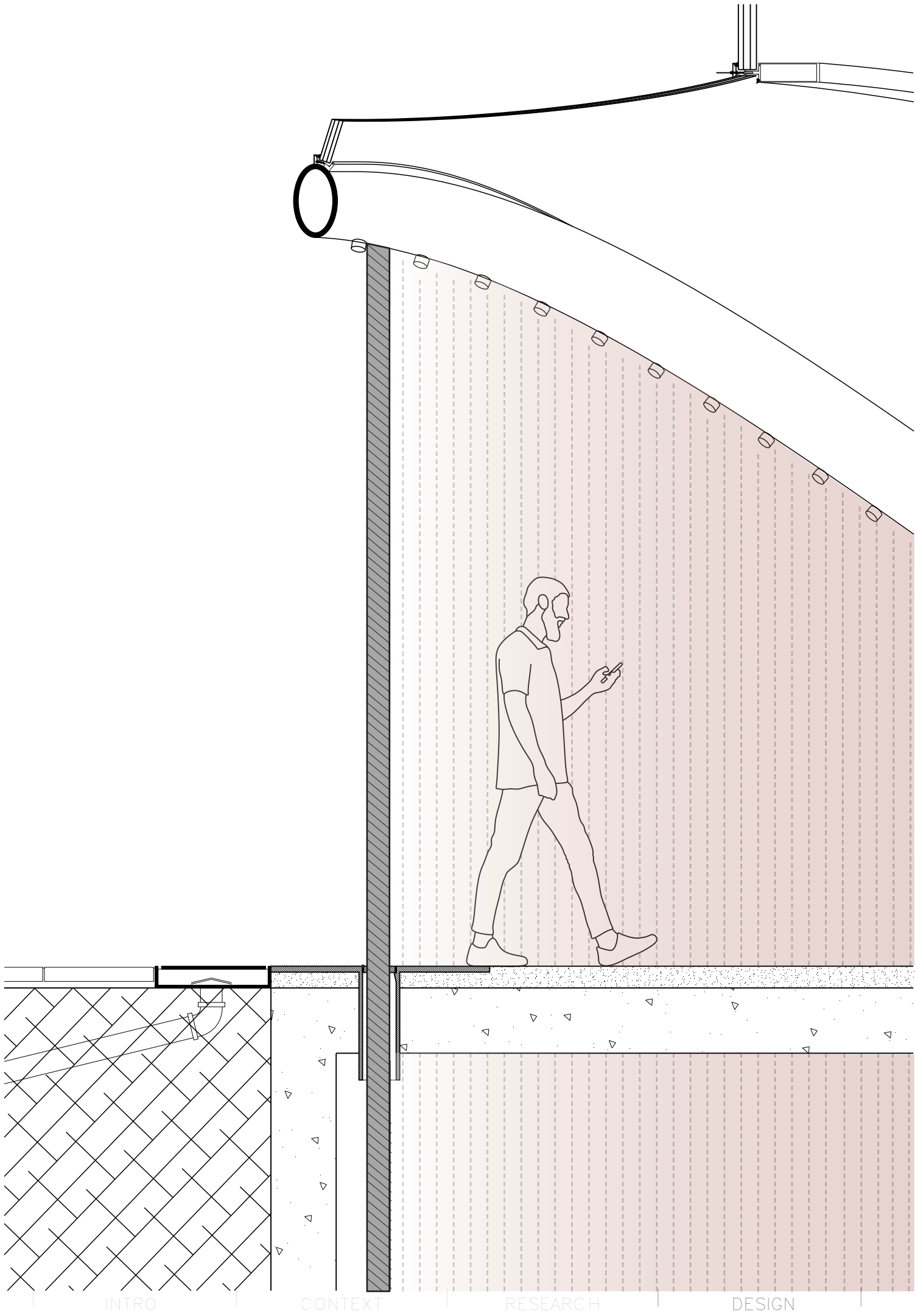
CONTEXT

RESEARCH

DESIGN

ENTRANCE

RETRACTABLE FACADE





CAFE



RESTAURANT



RETAIL

0 GROUND FLOOR
PUBLIC PLINTH

EXHIBITION SPACE

PROGRAMME BOTTOM

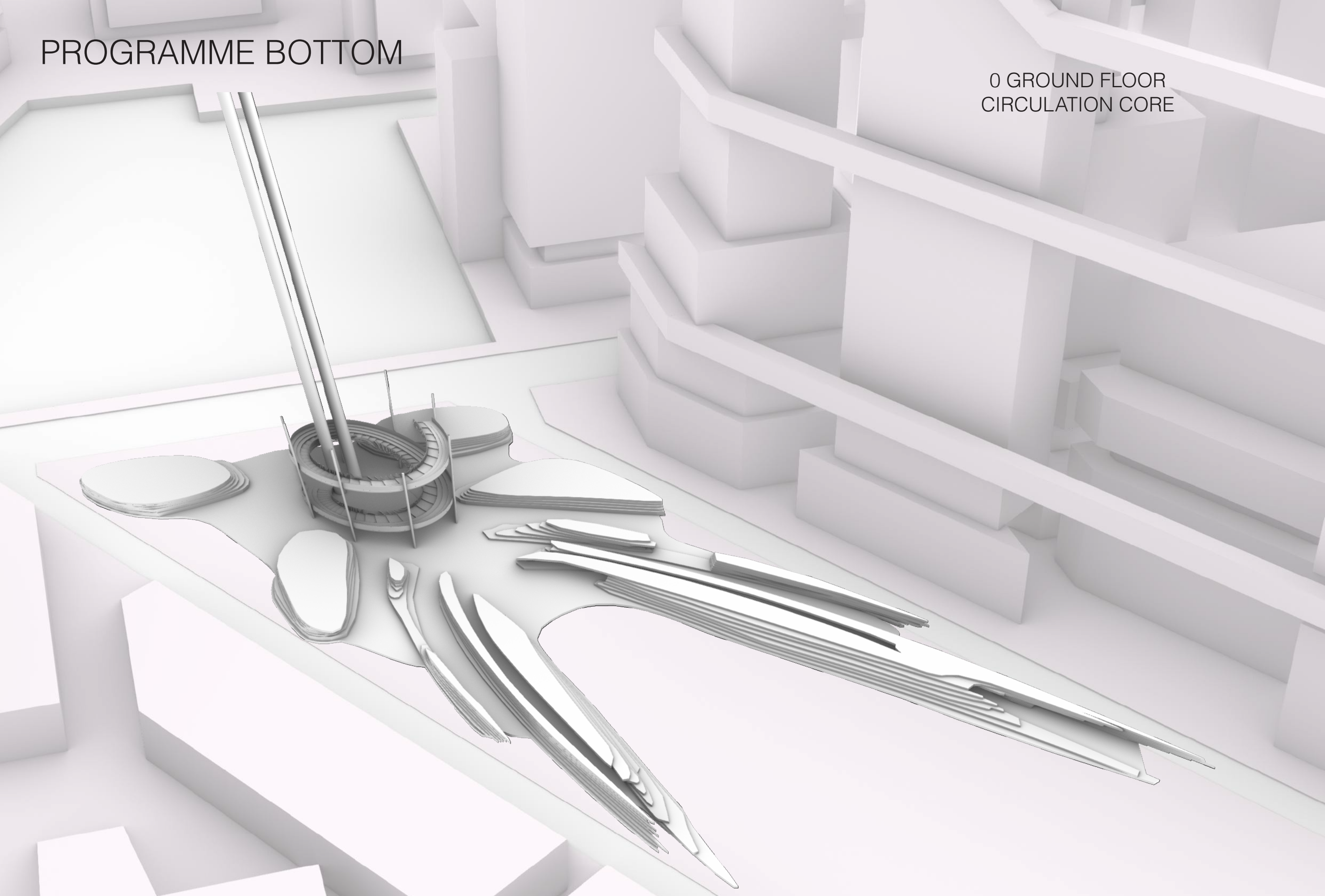
0 GROUND FLOOR
PUBLIC PLINTH

CENTRAL PLAZA



PROGRAMME BOTTOM

0 GROUND FLOOR
CIRCULATION CORE

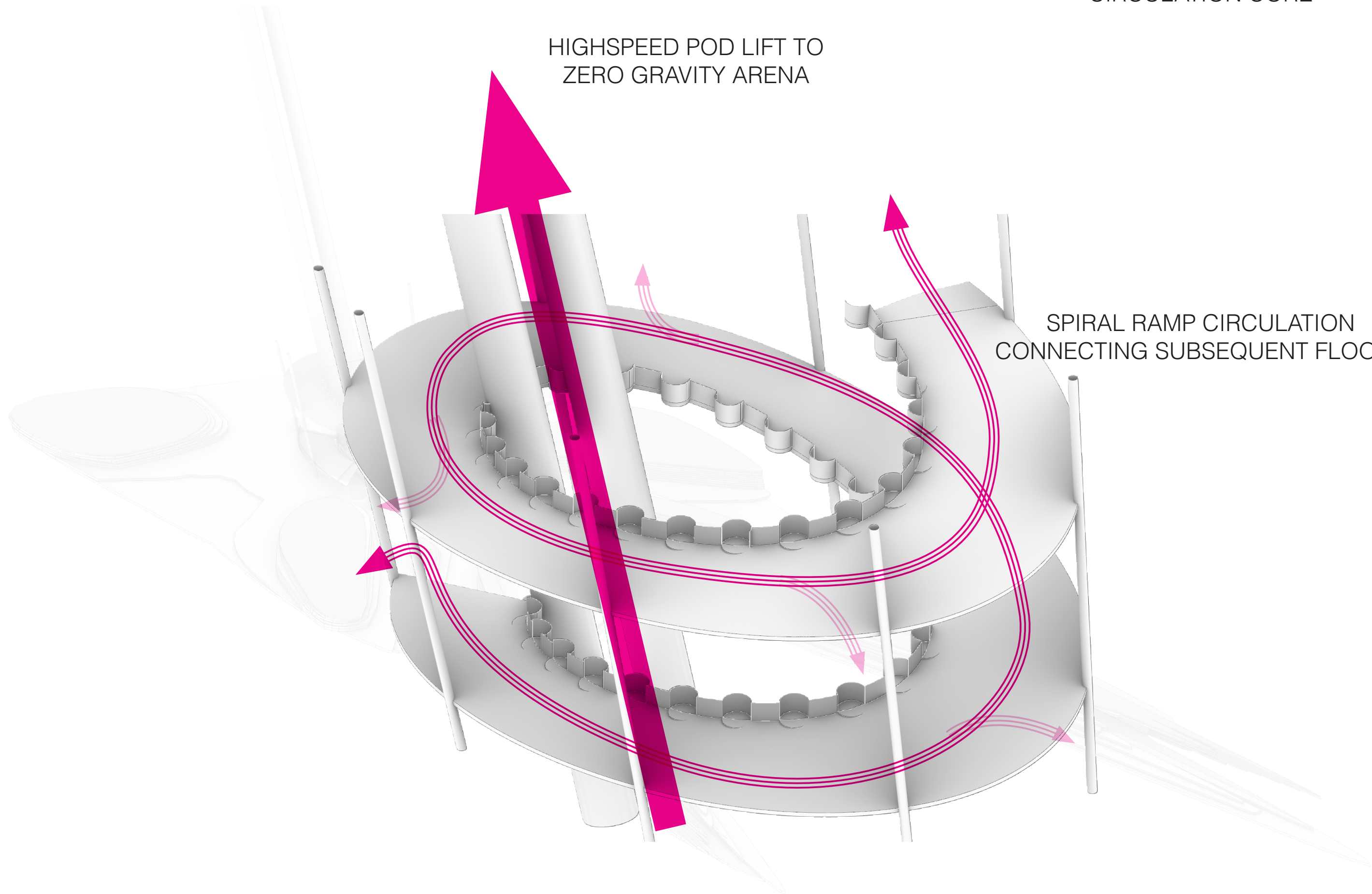


PROGRAMME BOTTOM

0 GROUND FLOOR
CIRCULATION CORE

HIGHSPEED POD LIFT TO
ZERO GRAVITY ARENA

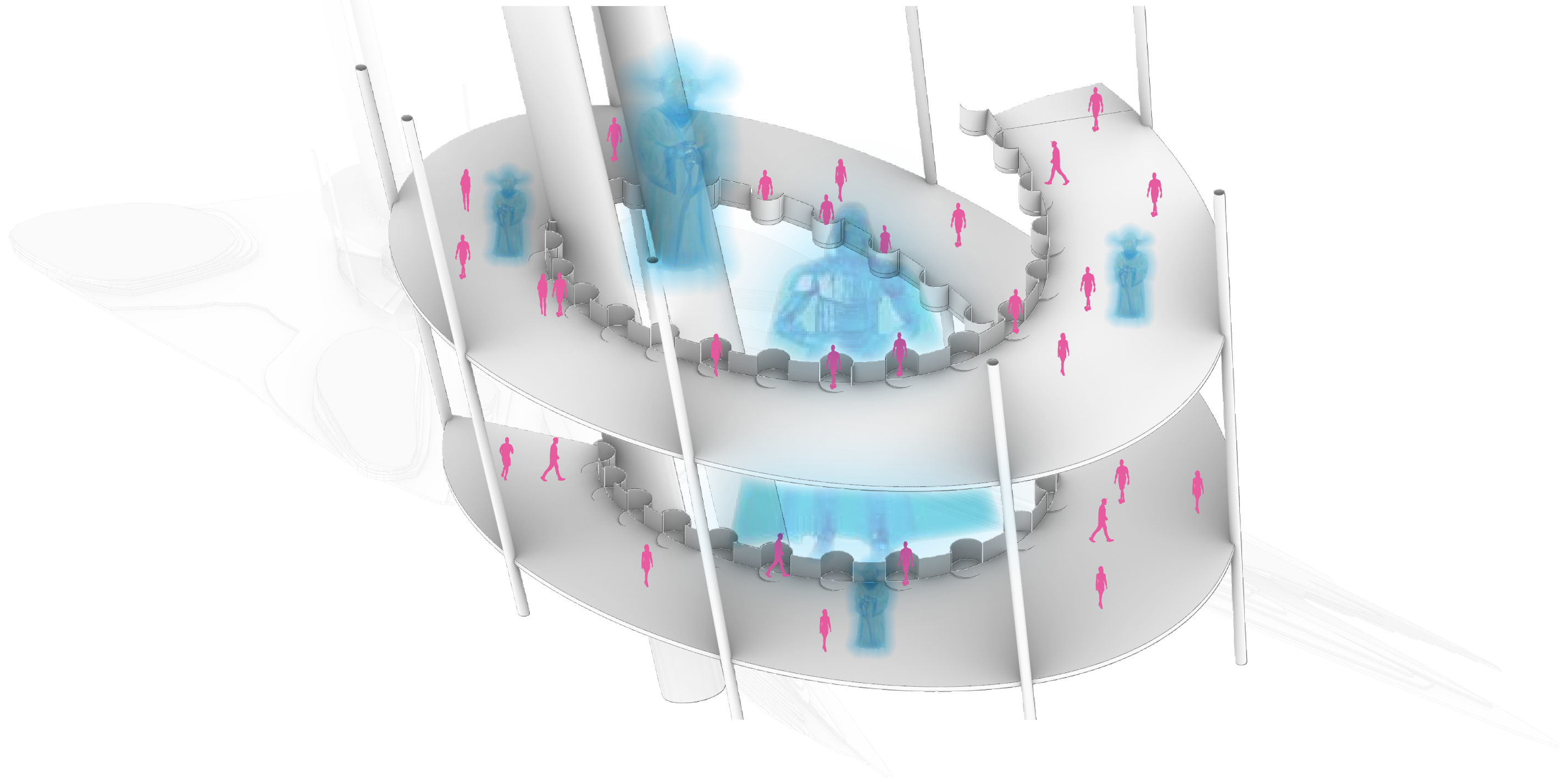
SPIRAL RAMP CIRCULATION
CONNECTING SUBSEQUENT FLOORS



PROGRAMME BOTTOM

VIRTUAL REALITY AND
AUGMENTED REALITY GAMING ARENA

PUBLIC TRAINING MODUS



INTRO

CONTEXT

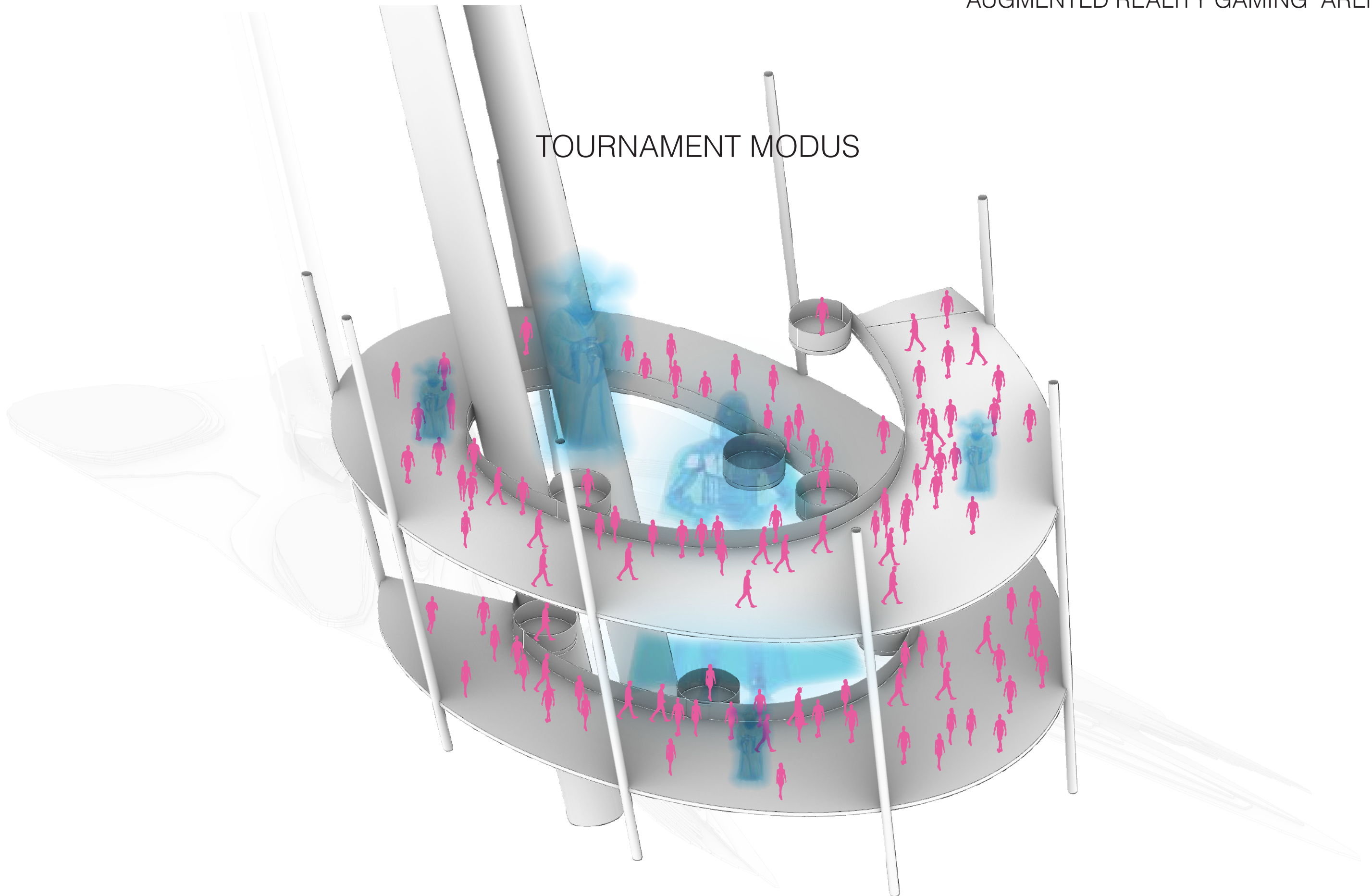
RESEARCH

DESIGN

PROGRAMME BOTTOM

VIRTUAL REALITY AND
AUGMENTED REALITY GAMING ARENA

TOURNAMENT MODUS



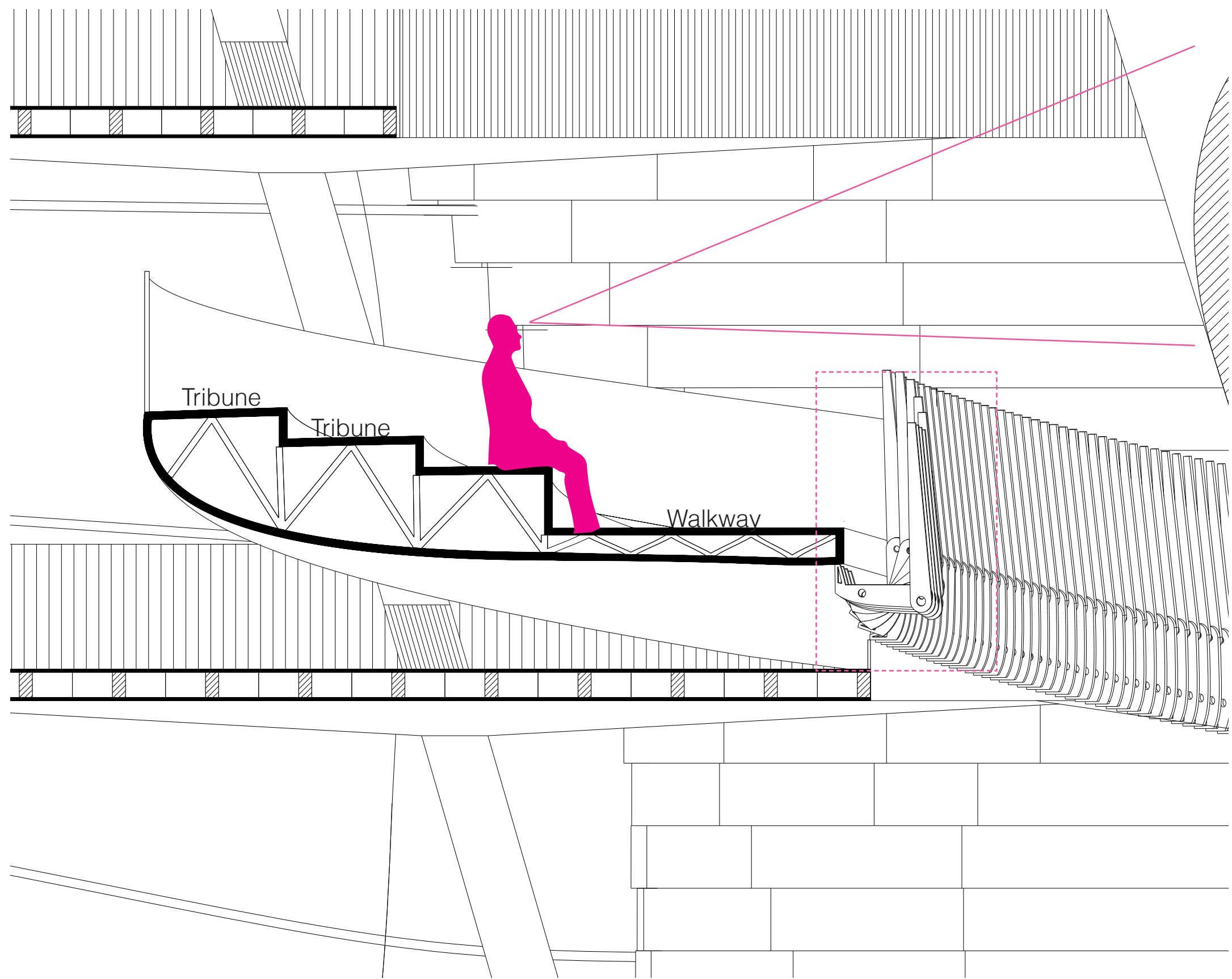
INTRO

CONTEXT

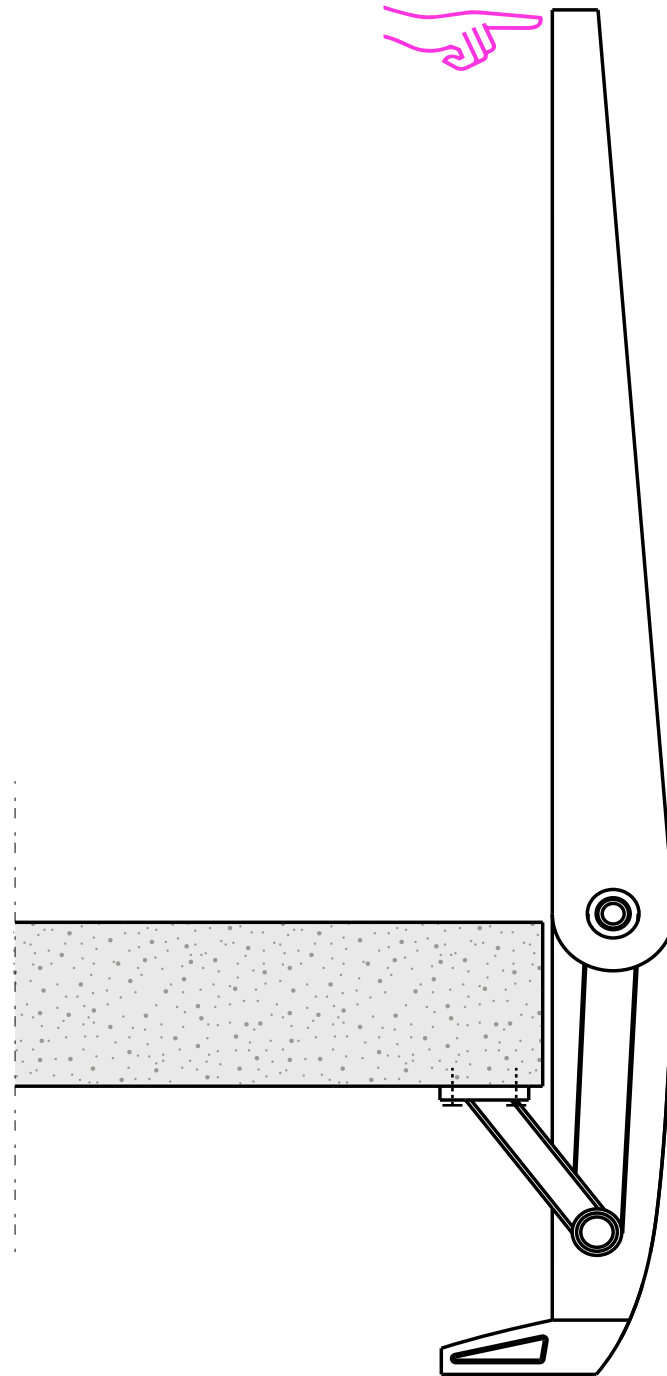
RESEARCH

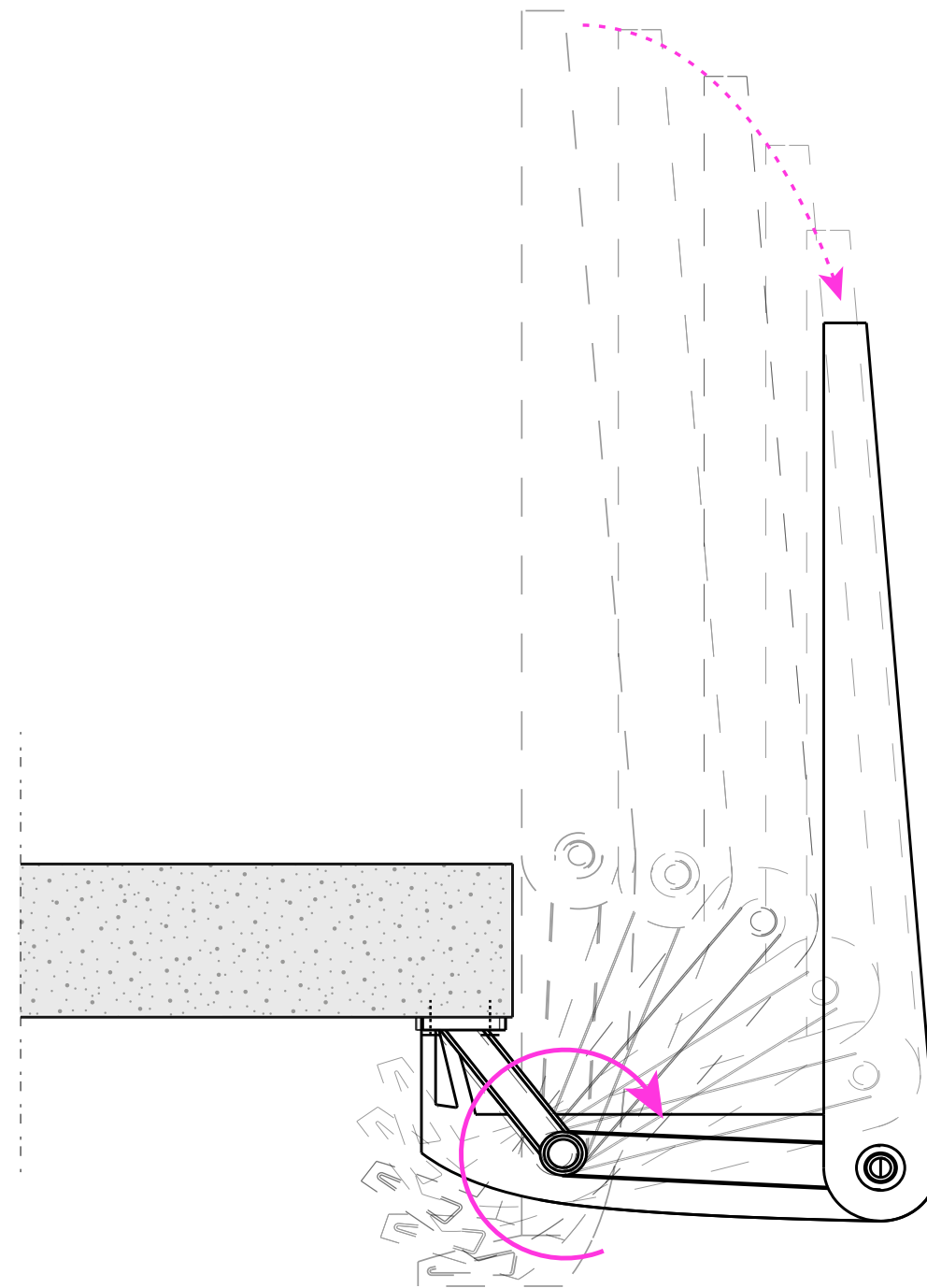
DESIGN

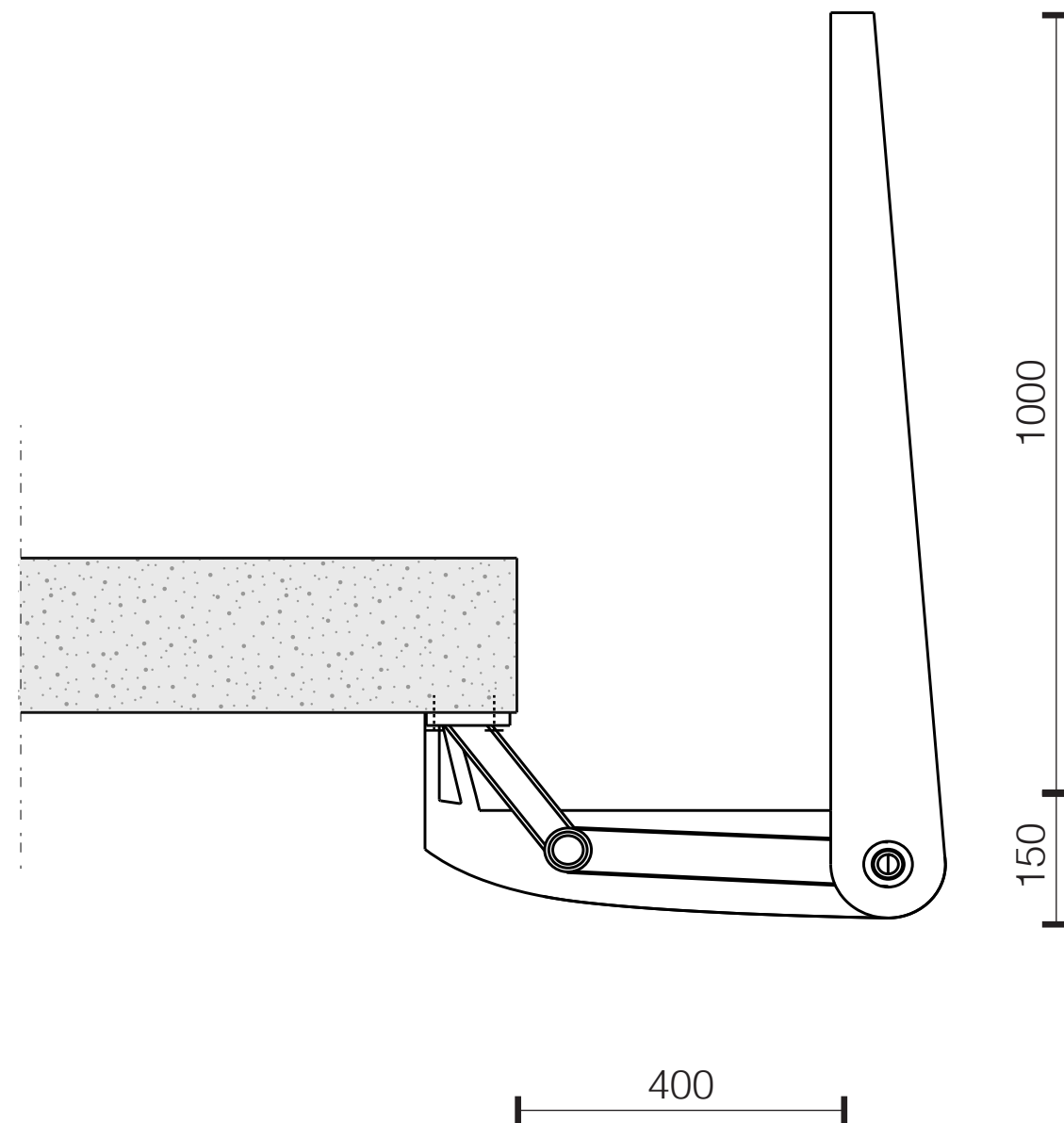
SPIRAL TRIBUNE



POLYMORPHIC BALUSTRADE







1. WOOD COMPOSITE BALUSTRADE

2. STEEL EDGE U-BEAM

3. WOODEN FLOORING

4. STEEL STRUSS SYSTEM

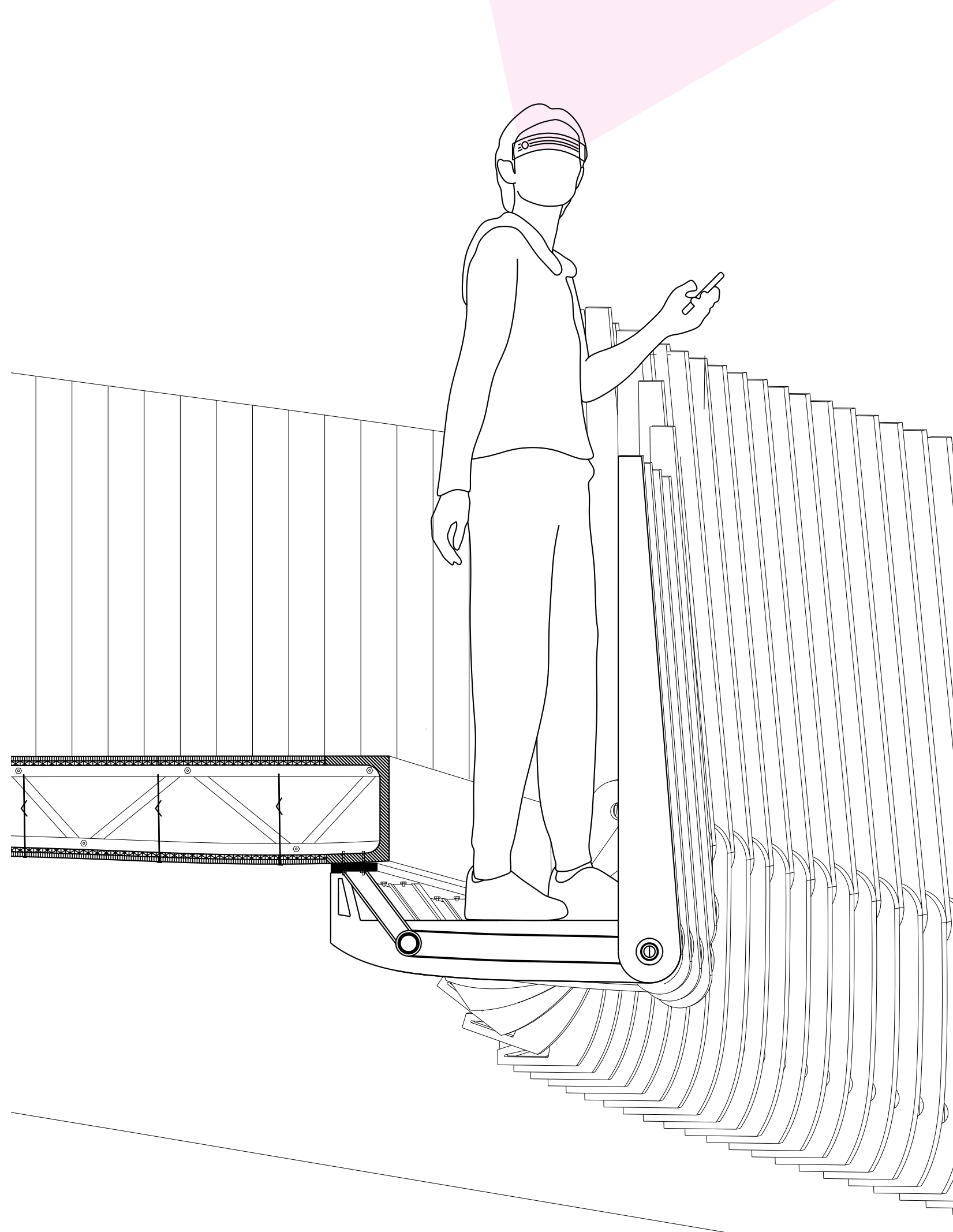
5. PENDEL ANCHOR BOLTED

6. COUNTERWEIGHT

7. PIVOT BEARING

8. ELASTIC TENSION BAND

9 FLEXIBLE PIPE CONNECTION



PROGRAMME BOTTOM

+2 FLOOR
GAMING RELATED PROGRAMME


GAMING RETAIL

WORKSHOP ROOMS

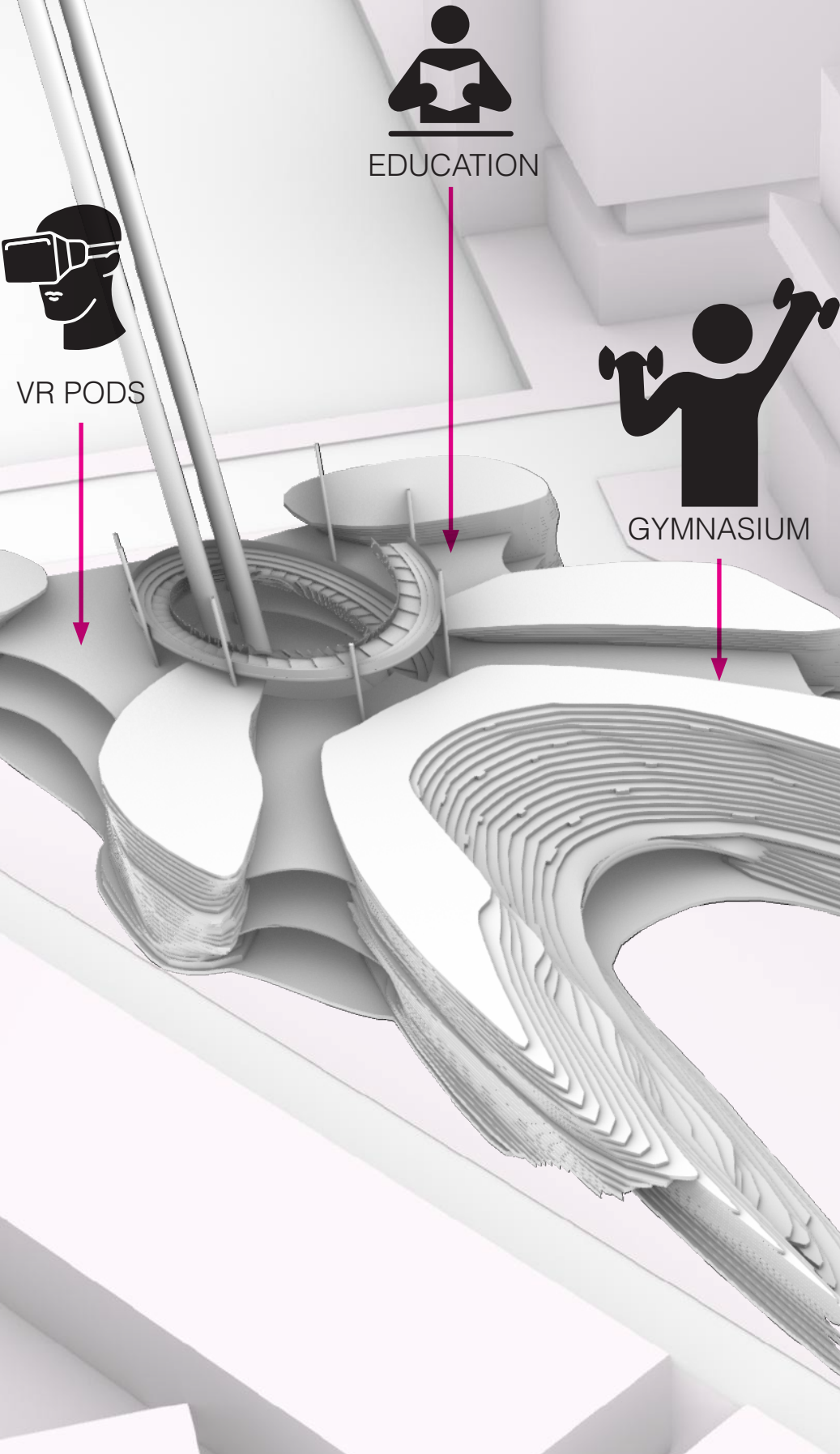

RETRO GAMING ARCADE

RETRO GAMING ARCADE

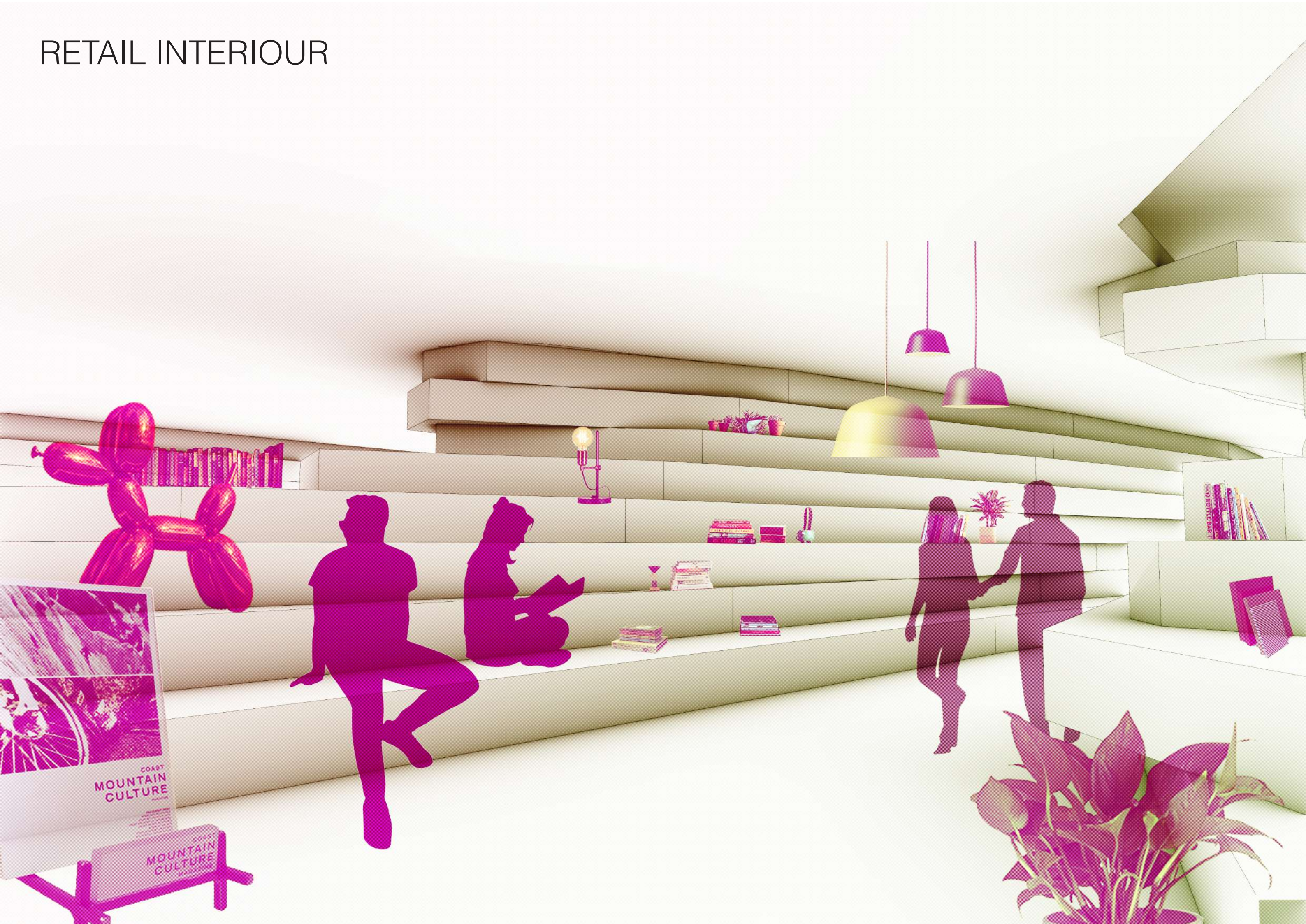


PROGRAMME BOTTOM

+3 FLOOR
GAMING RELATED PROGRAMME



RETAIL INTERIOUR

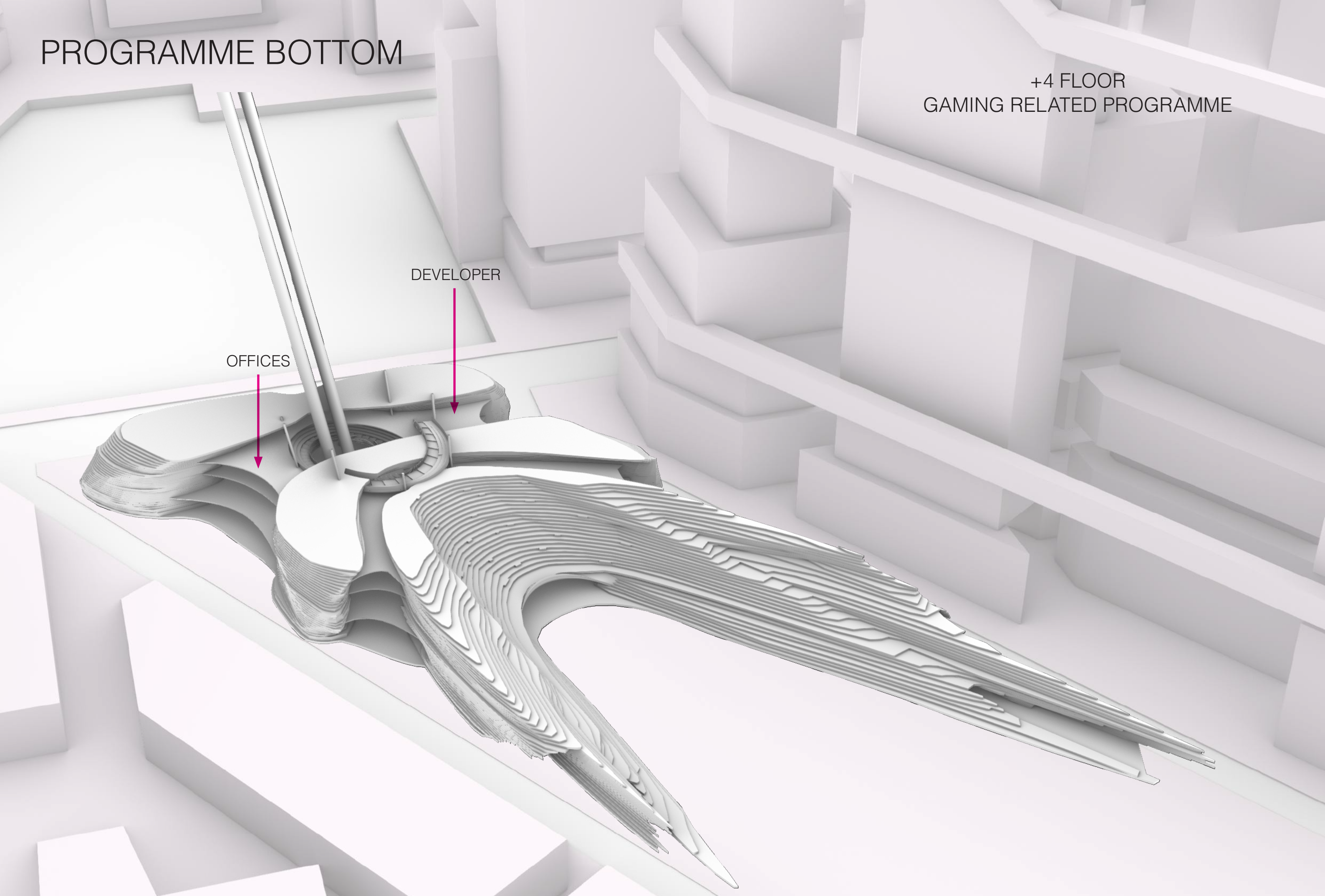


PROGRAMME BOTTOM

+4 FLOOR
GAMING RELATED PROGRAMME

DEVELOPER

OFFICES



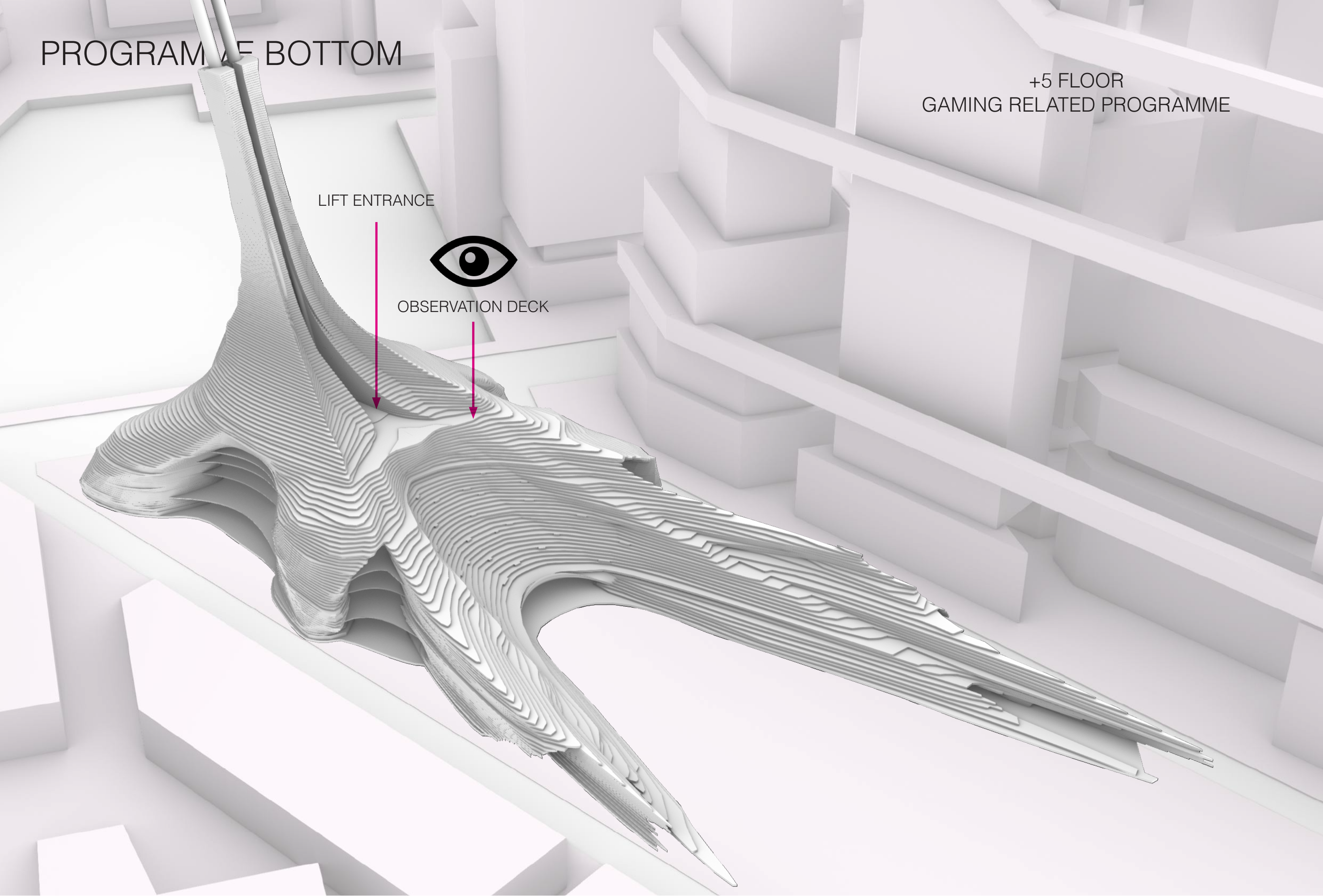
PROGRAMME BOTTOM

+5 FLOOR
GAMING RELATED PROGRAMME

LIFT ENTRANCE



OBSERVATION DECK







PROGRAMME TOP

+101800 FLOOR +4
360 PANORAMA SKYBAR

+95400 FLOOR +3
CONTROL CENTER, RESTAURANT

+83400 FLOOR +2
DRONE PLATFORM, GAMING PLATFORM

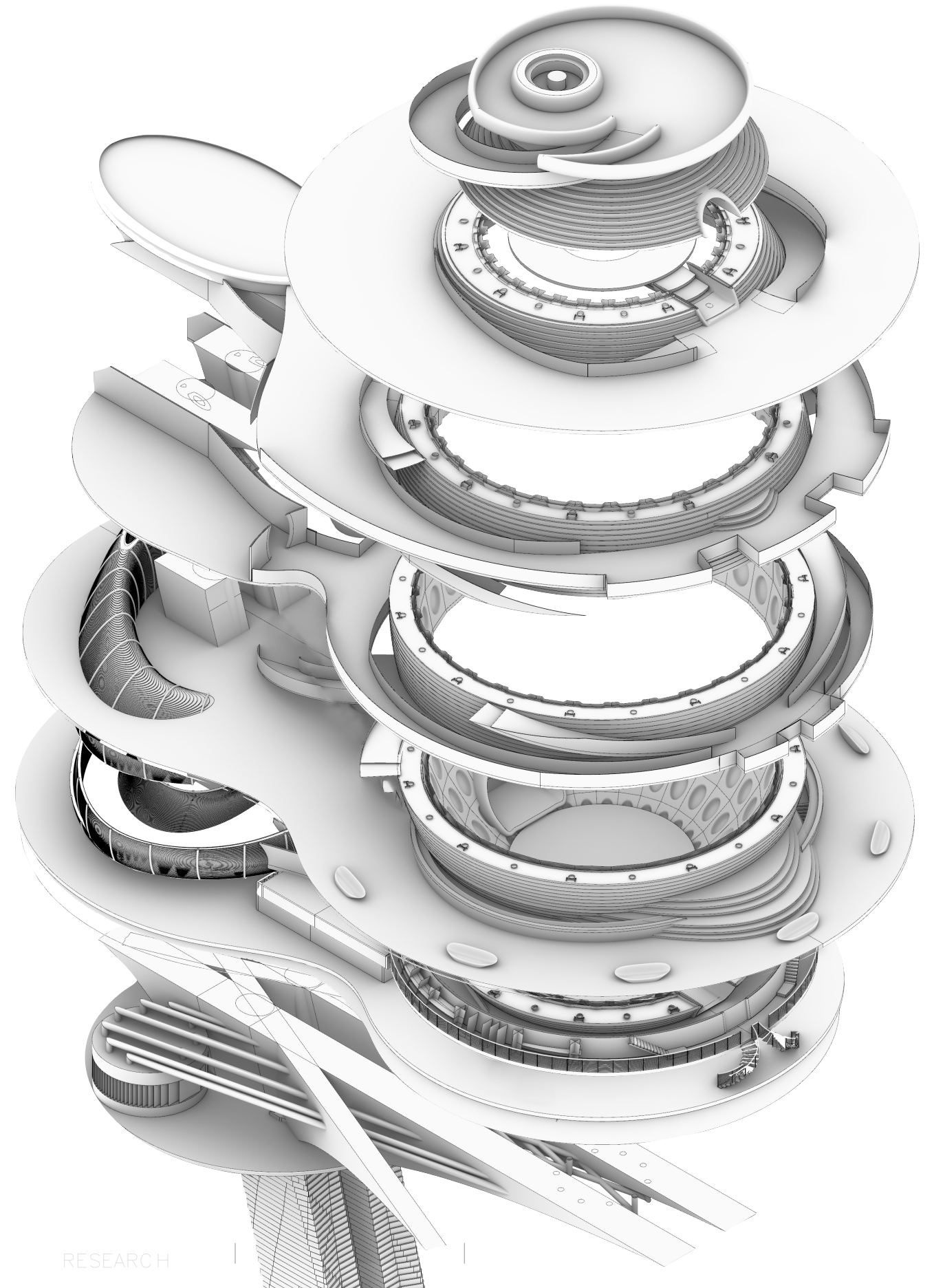
+77400 FLOOR +1
GAMING PLATFORM, 2X ROOMS
(TRAINING, WORKSHOP, MEETING, ECT.)

+71400 MAIN LOBBY 0
BEVERAGE & FOOD COUNTER,
PUBLIC CIRCULATION

+65400 BASEMENT - 0.5
ZERO GRAVITY ENTRANCES & RESTING AREA

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC



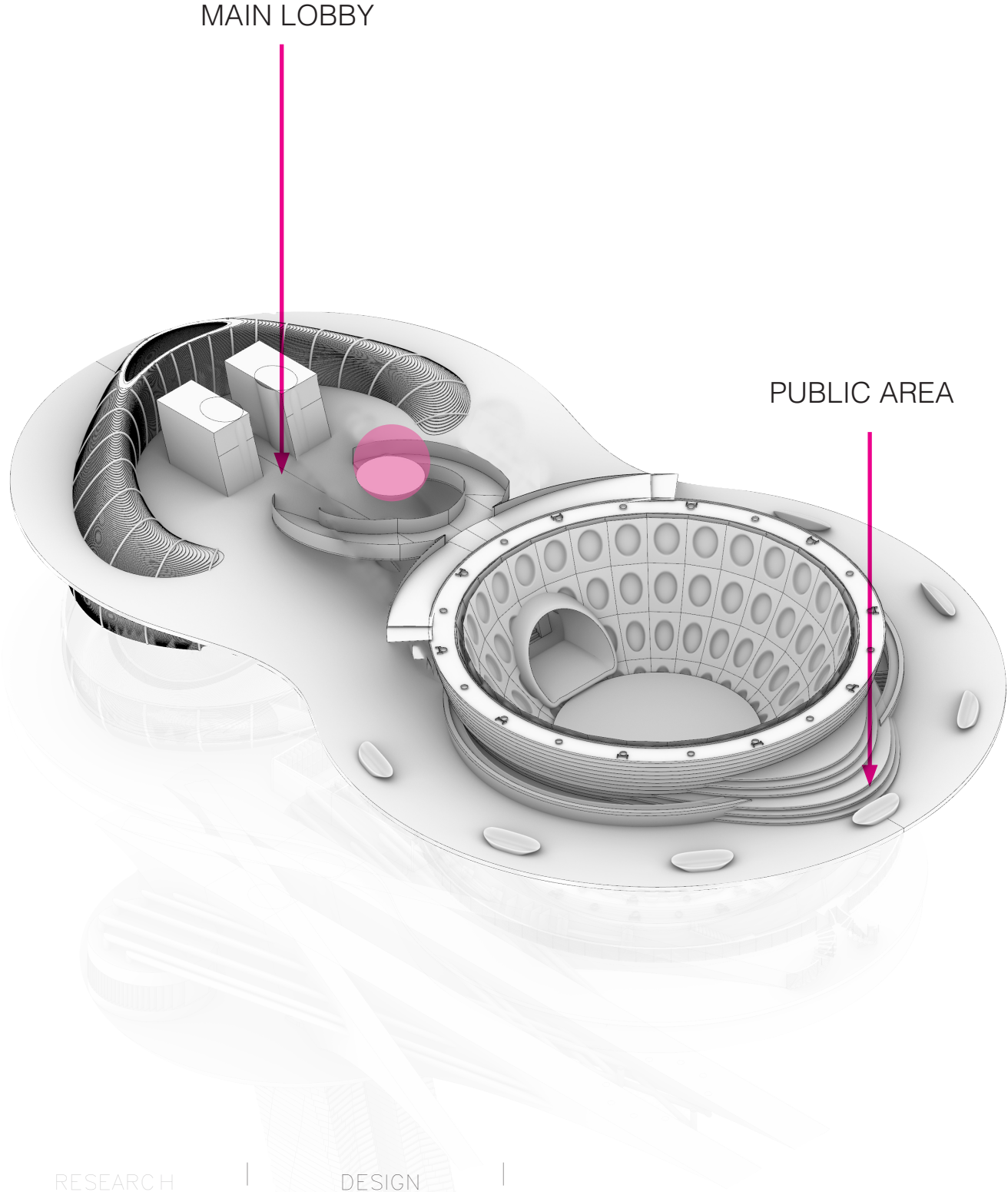
PROGRAMME TOP

+71400 MAIN LOBBY 0
BEVERAGE & FOOD COUNTER,
PUBLIC CIRCULATION

+65400 BASEMENT - 0.5
ZERO GRAVITY ENTRANCES & RESTING AREA

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC



ZERO GRAVITY

BATTLE TOURNEMENT REGISTER
9TH JULY TOTAL PRIZE POOL
10.000\$

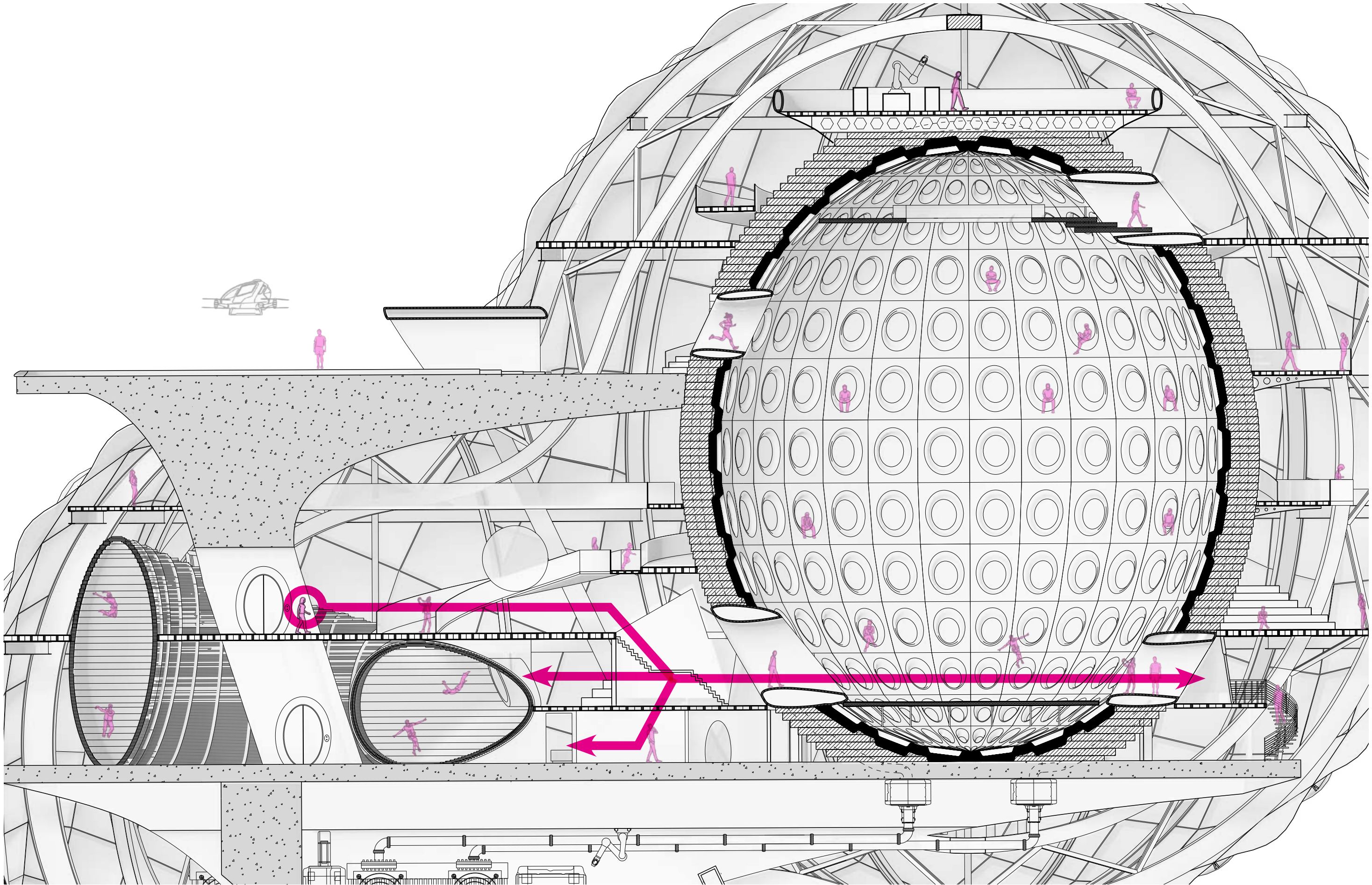


ZERO GRAVITY

BATTLE TOURNAMENT REGISTER
9TH JULY TOTAL PRIZE POOL
10.000\$

ROUTING TOP

SLOW TRACK = SPIRAL RAMP



PROGRAMME TOP

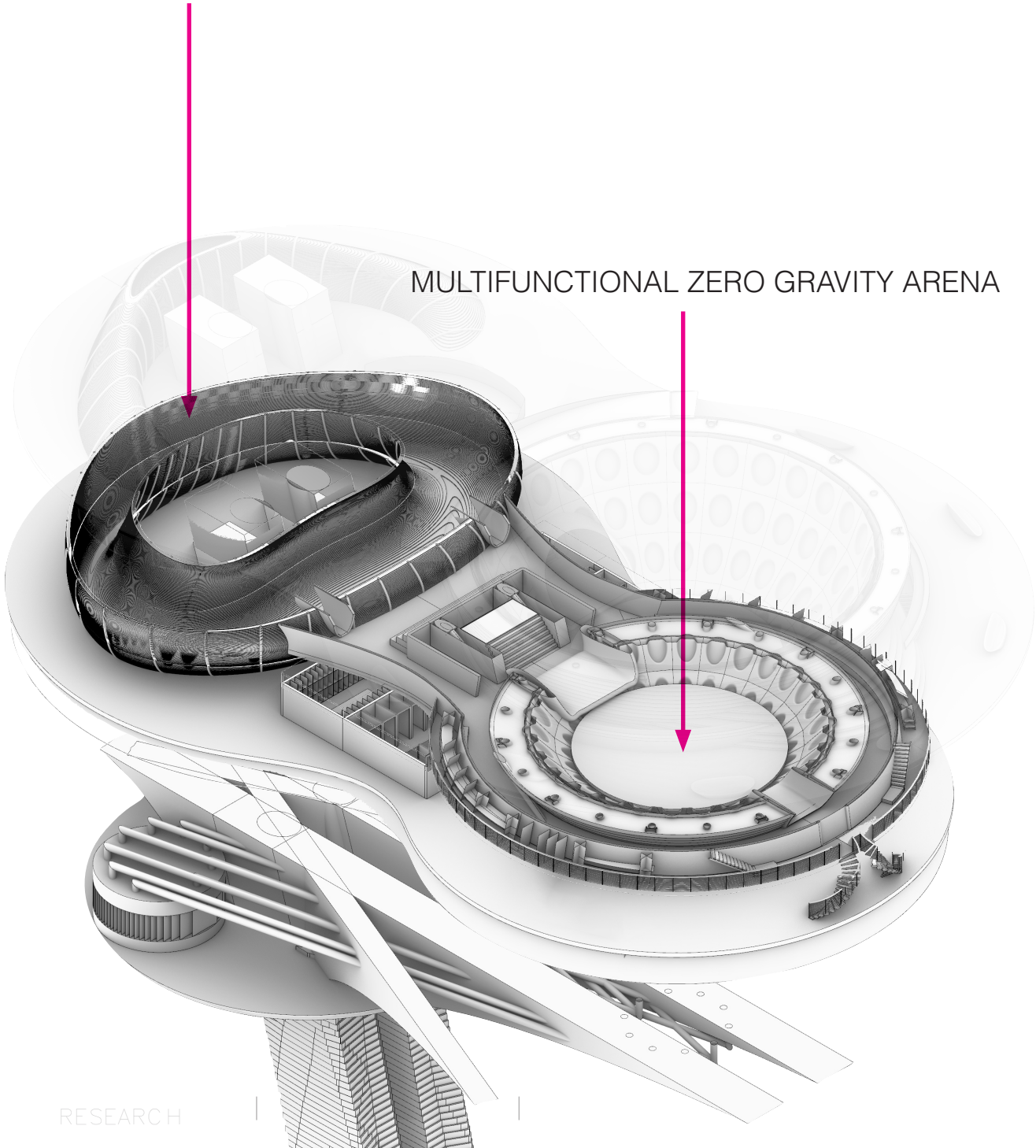
+65400 BASEMENT - 0.5
ZERO GRAVITY ENTRANCES & RESTING AREA

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC

INFINITE ZERO GRAFVITY LOOP ∞

MULTIFUNCTIONAL ZERO GRAVITY ARENA



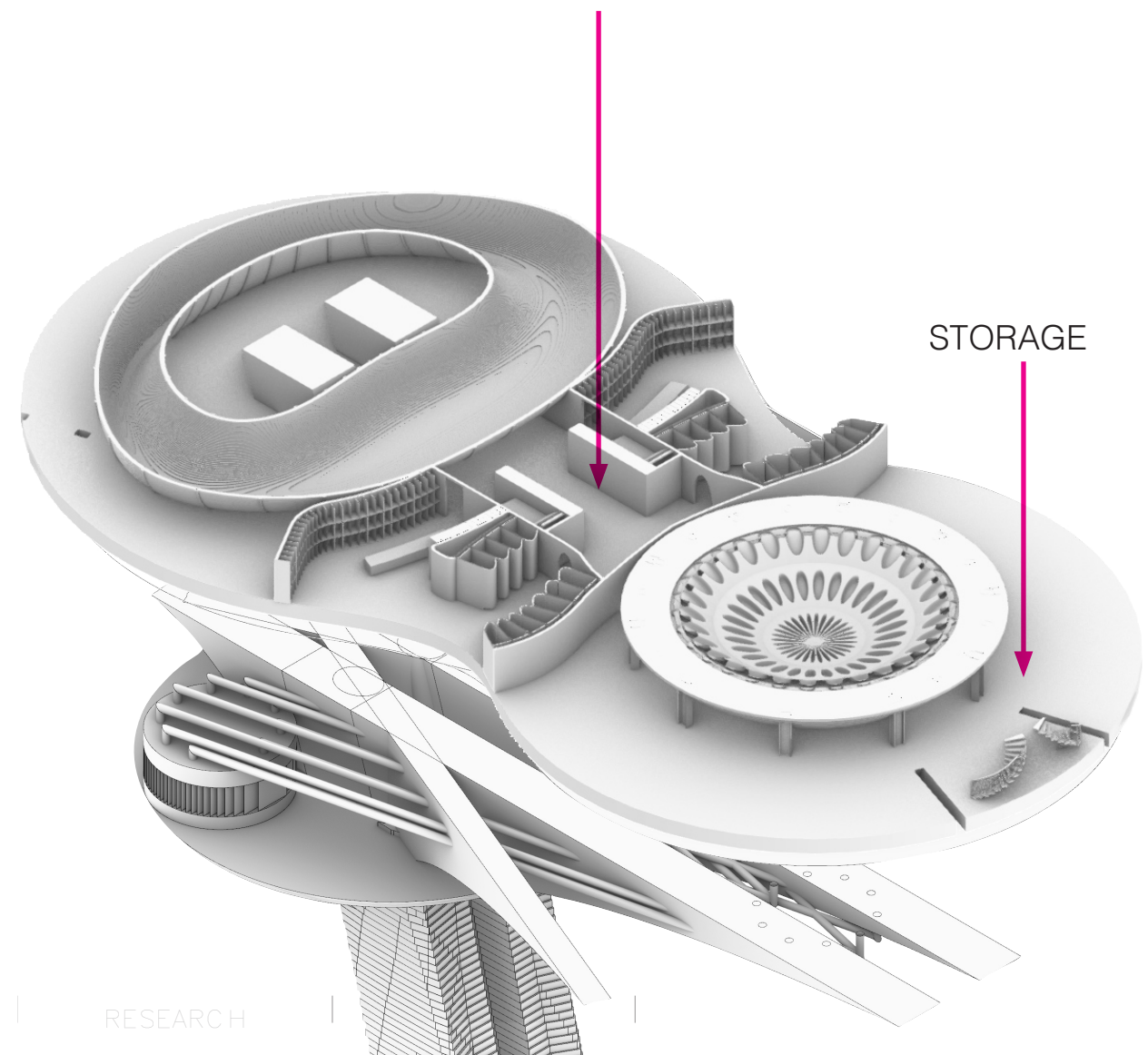
PROGRAMME TOP

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC

CHANGING ROOMS & TOILETS

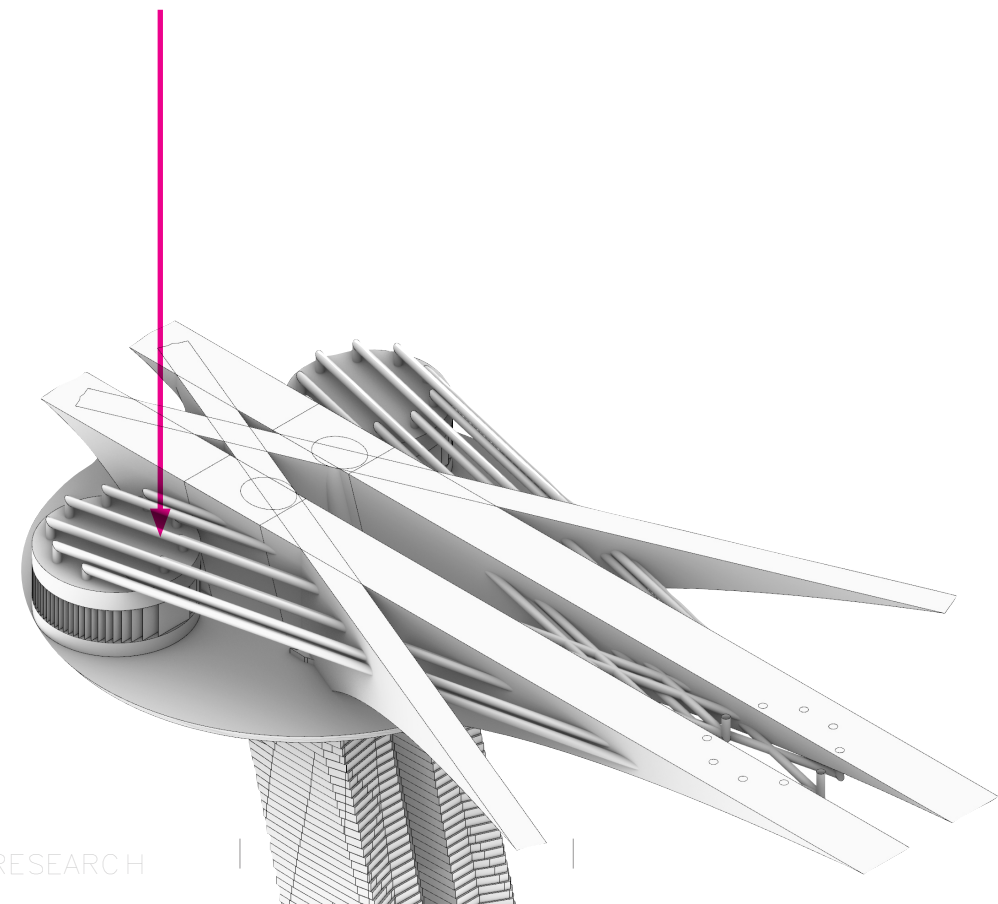
STORAGE



PROGRAMME TOP

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC

PELTIER MACHINE & HEAT EXCHANGER



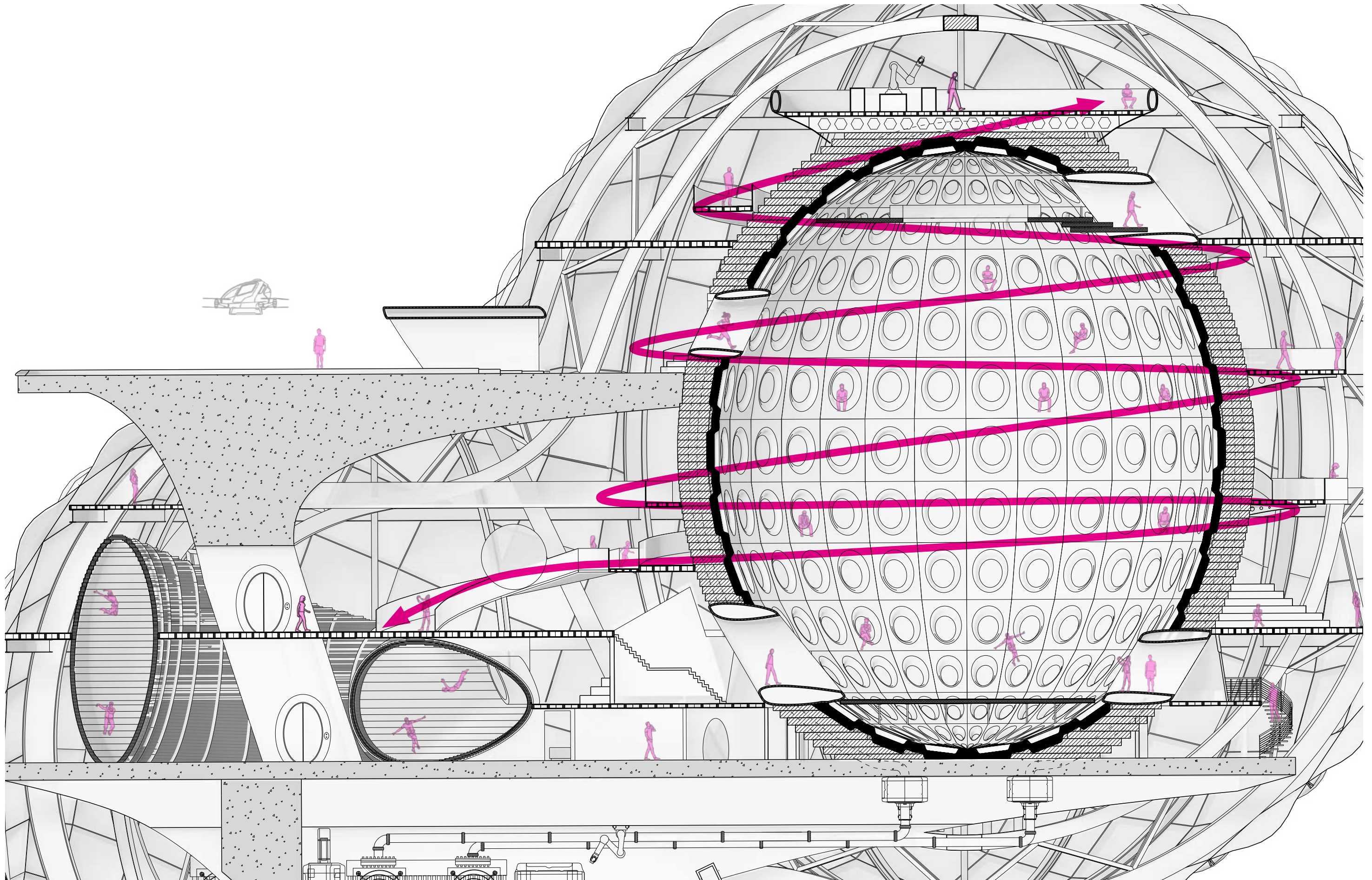
INTRO

CONTEXT

RESEARCH

ROUTING TOP

SLOW TRACK = SPIRAL RAMP



PROGRAMME TOP

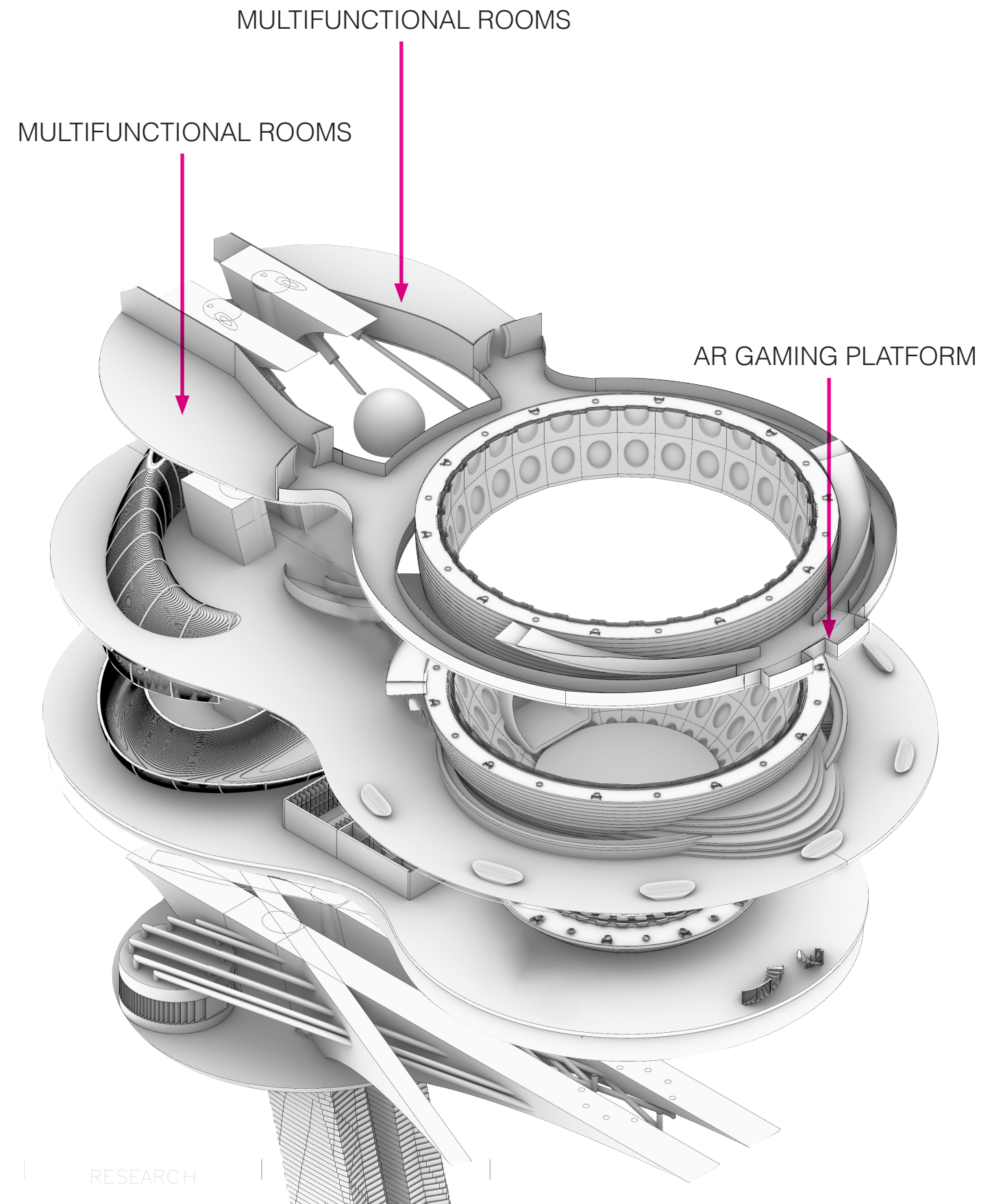
+77400 FLOOR+1
GAMING PLATFORM, 2X ROOMS
(TRAINING, WORKSHOP, MEETING, ECT.)

+71400 MAIN LOBBY 0
BEVERAGE & FOOD COUNTER,
PUBLIC CIRCULATION

+65400 BASEMENT - 0.5
ZERO GRAVITY ENTRANCES & RESTING AREA

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC



PROGRAMME TOP

+83400 FLOOR +2
DRONE PLATFORM, GAMING PLATFORM

+77400 FLOOR +1
GAMING PLATFORM, 2X ROOMS
(TRAINING, WORKSHOP, MEETING, ECT.)

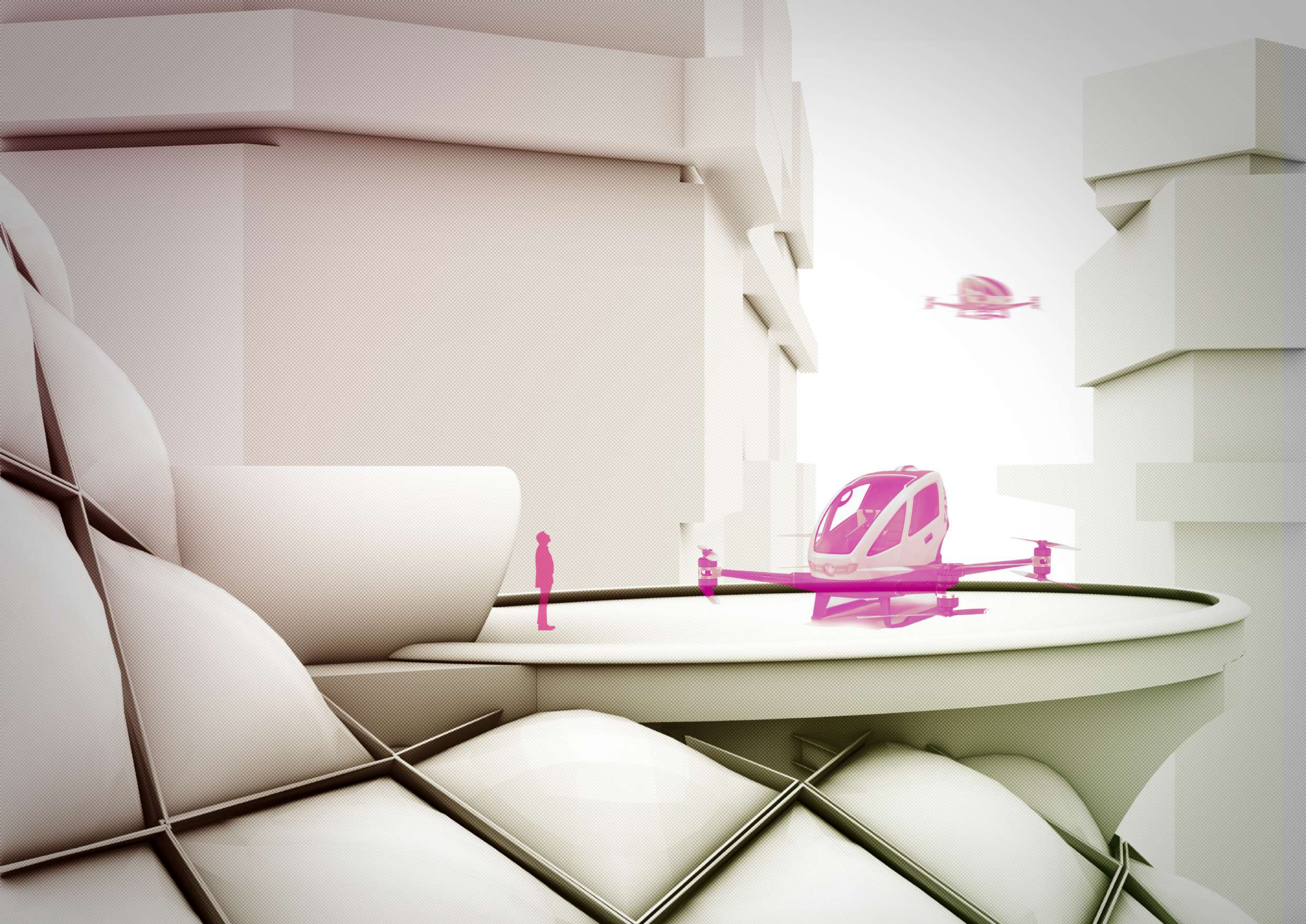
+71400 MAIN LOBBY 0
BEVERAGE & FOOD COUNTER,
PUBLIC CIRCULATION

+65400 BASEMENT - 0.5
ZERO GRAVITY ENTRANCES & RESTING AREA

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC





PROGRAMME TOP

+95400 FLOOR +3
CONTROL CENTER, RESTAURANT

+83400 FLOOR +2
DRONE PLATFORM, GAMING PLATFORM

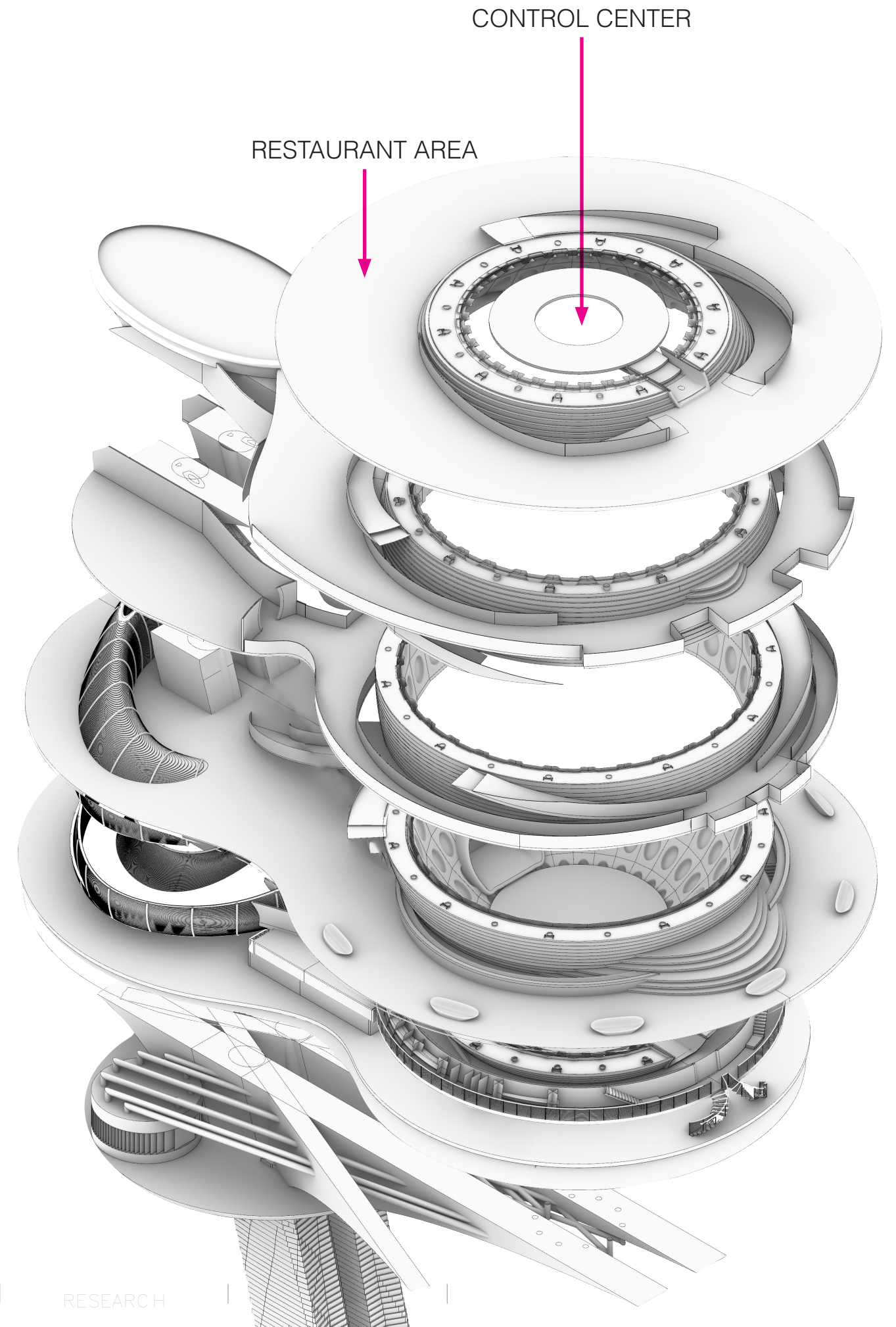
+77400 FLOOR +1
GAMING PLATFORM, 2X ROOMS
(TRAINING, WORKSHOP, MEETING, ECT.)

+71400 MAIN LOBBY 0
BEVERAGE & FOOD COUNTER,
PUBLIC CIRCULATION

+65400 BASEMENT - 0.5
ZERO GRAVITY ENTRANCES & RESTING AREA

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC





PROGRAMME TOP

+101800 FLOOR +4
360 PANORAMA SKYBAR

+95400 FLOOR +3
CONTROL CENTER, RESTAURANT

+83400 FLOOR +2
DRONE PLATFORM, GAMING PLATFORM

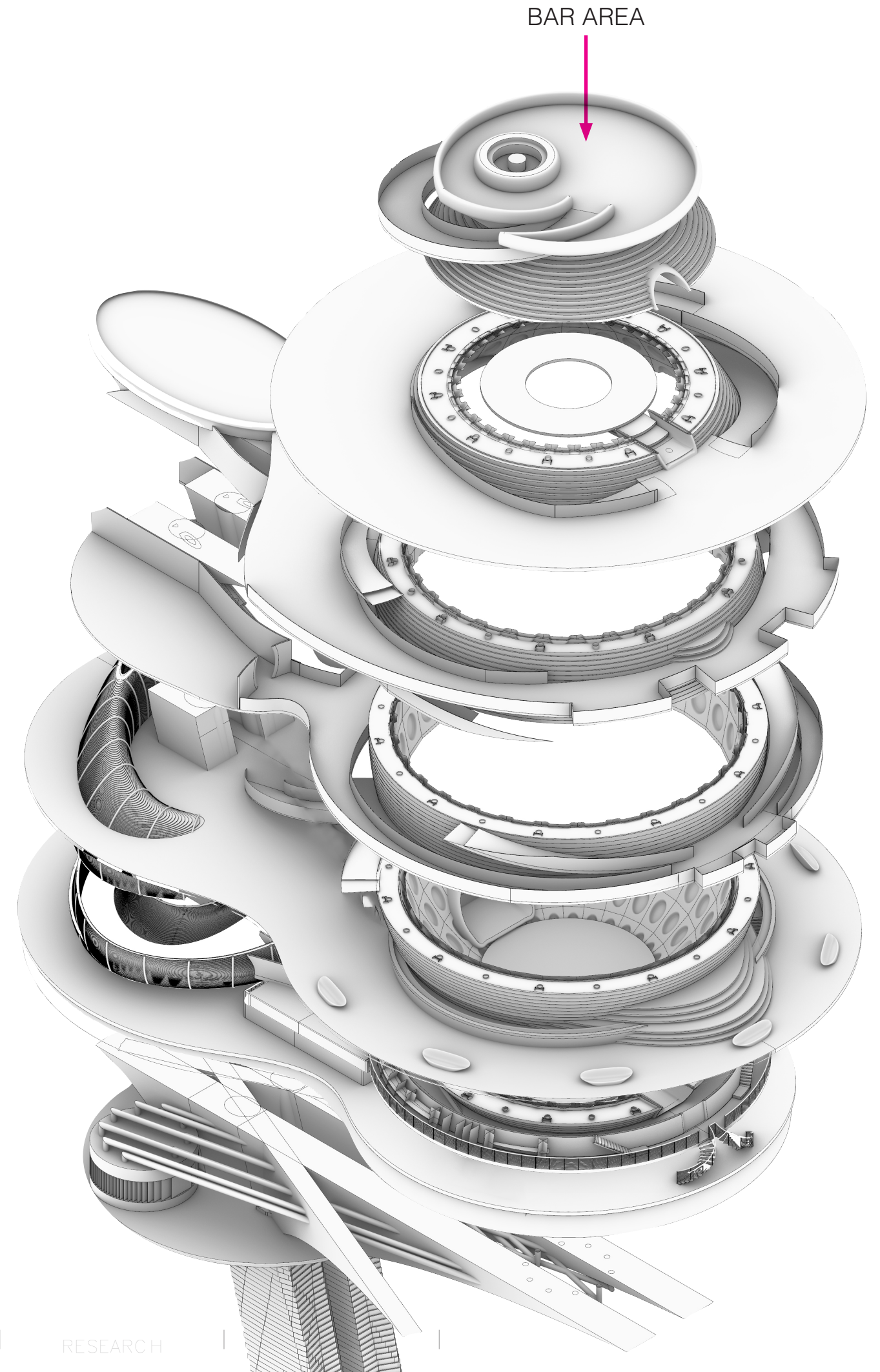
+77400 FLOOR +1
GAMING PLATFORM, 2X ROOMS
(TRAINING, WORKSHOP, MEETING, ECT.)

+71400 MAIN LOBBY 0
BEVERAGE & FOOD COUNTER,
PUBLIC CIRCULATION

+65400 BASEMENT - 0.5
ZERO GRAVITY ENTRANCES & RESTING AREA

+65400 BASEMENT -1
LOCKERS, TOILET ZERO,
GRAVITY MACHINE, STORGE

+61800 BASEMENT -2
TECHNICAL SPACE, PELTIER MACHINE,
HEAT EXCHANGE, HVAC

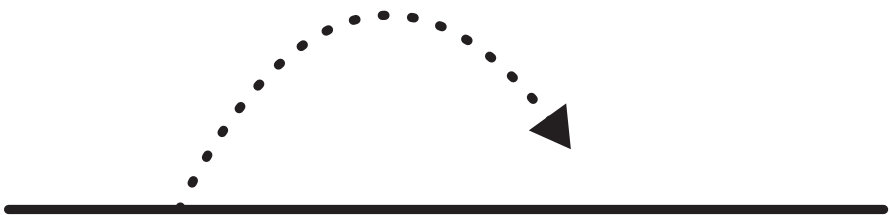




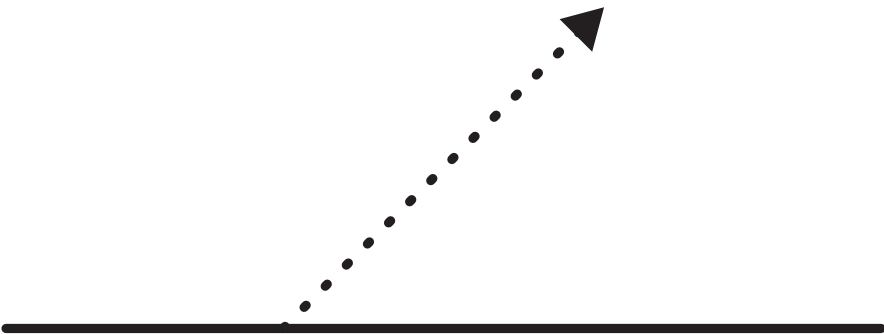
SERO GRAVITY GAMING

ZERO GRAVITY GAMING

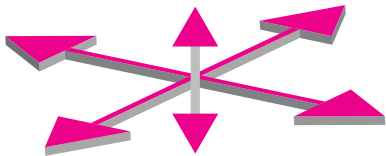
EARTH'S GRAVITY



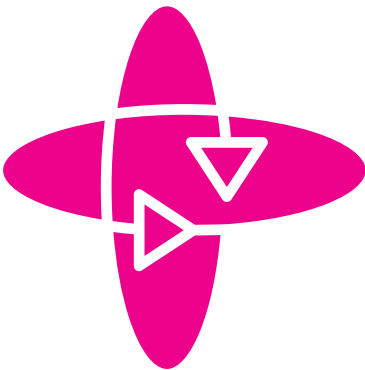
ZERO GRAVITY ENVIRONMENT



3 AXIS MOVEMENT XYZ



360 DIRECTION OF MOVEMENT



ZERO GRAVITY GAMING

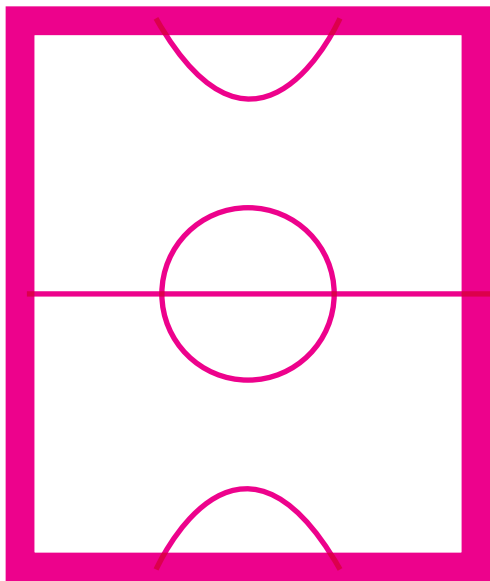
STRAIGHT LINE / LONGRANGE
SPORTS



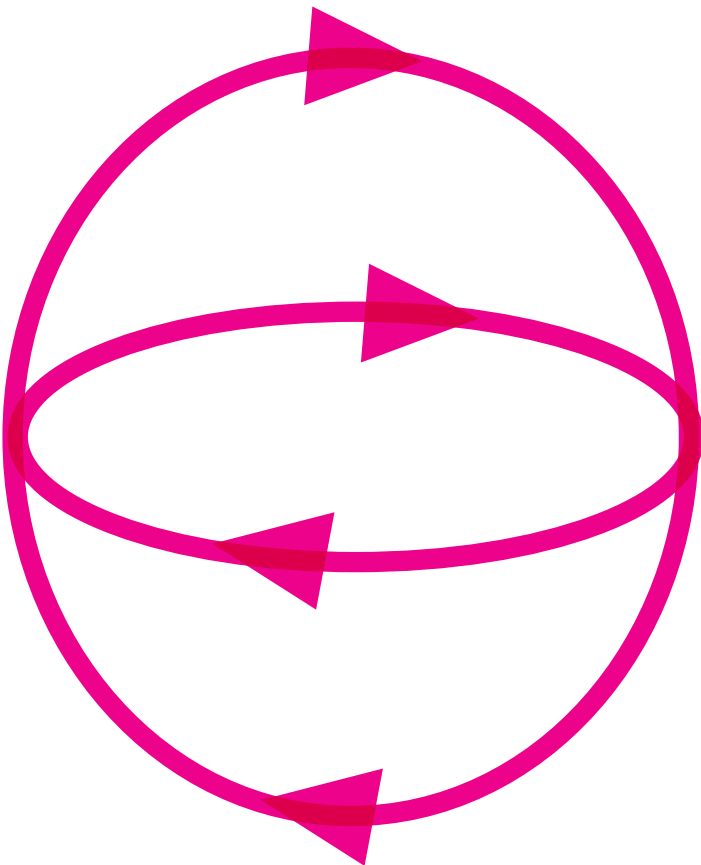
∞ LOOP

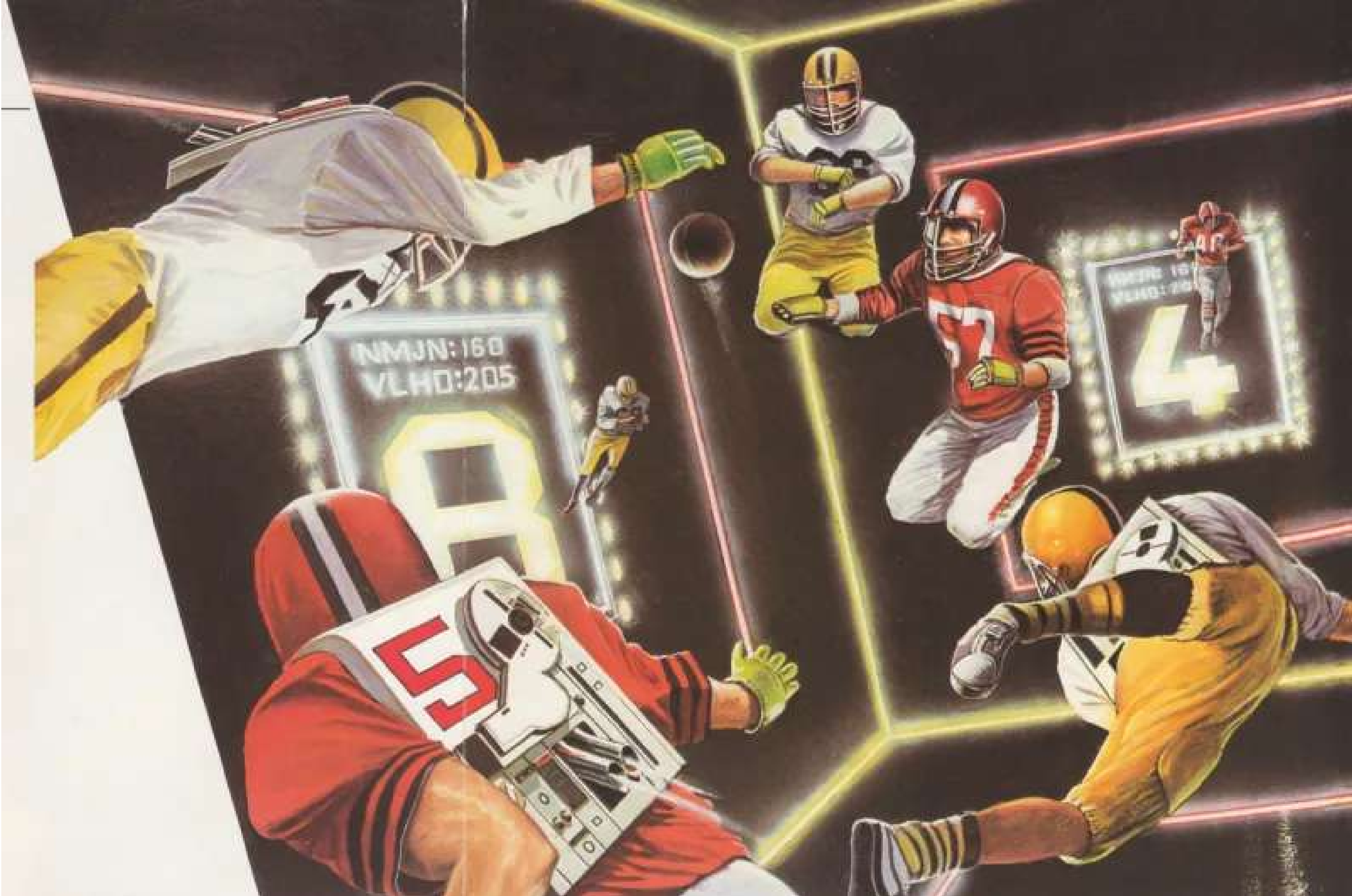


SQUARE ARENA



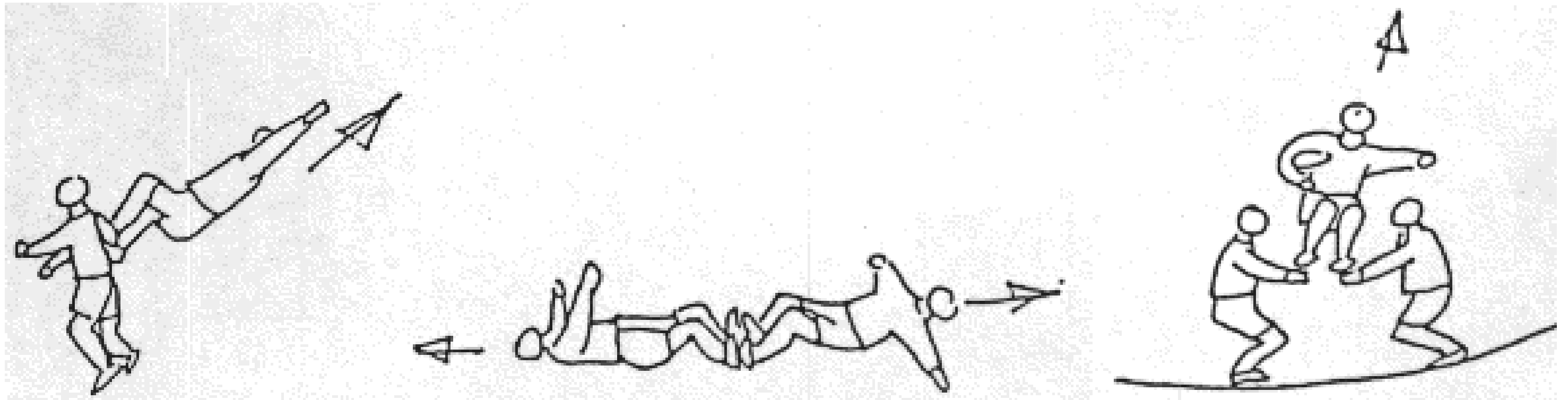
360 SPHERE



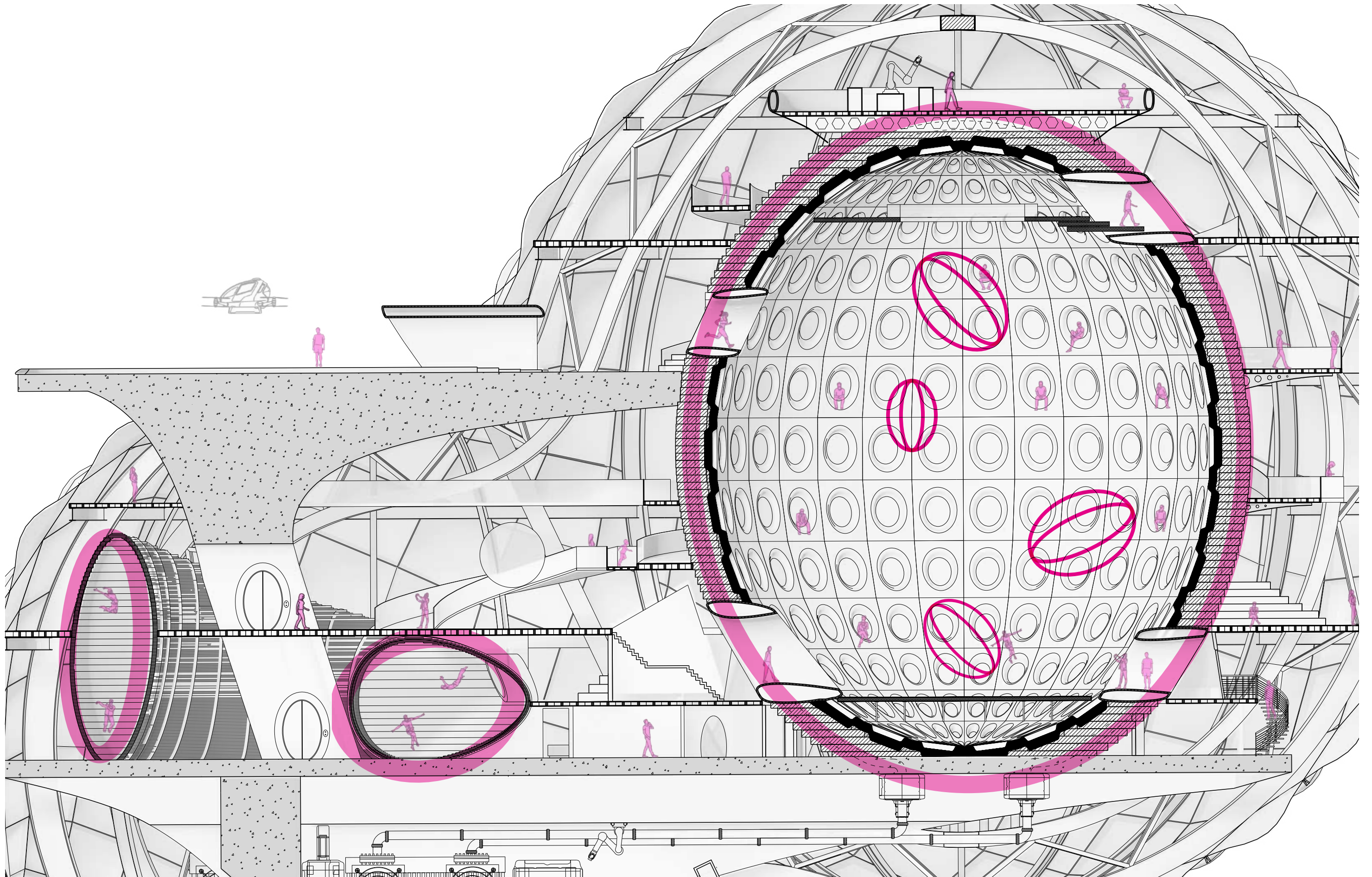


SCHOOL WORK AND PLAY, (1981)
NEIL ARDLEY

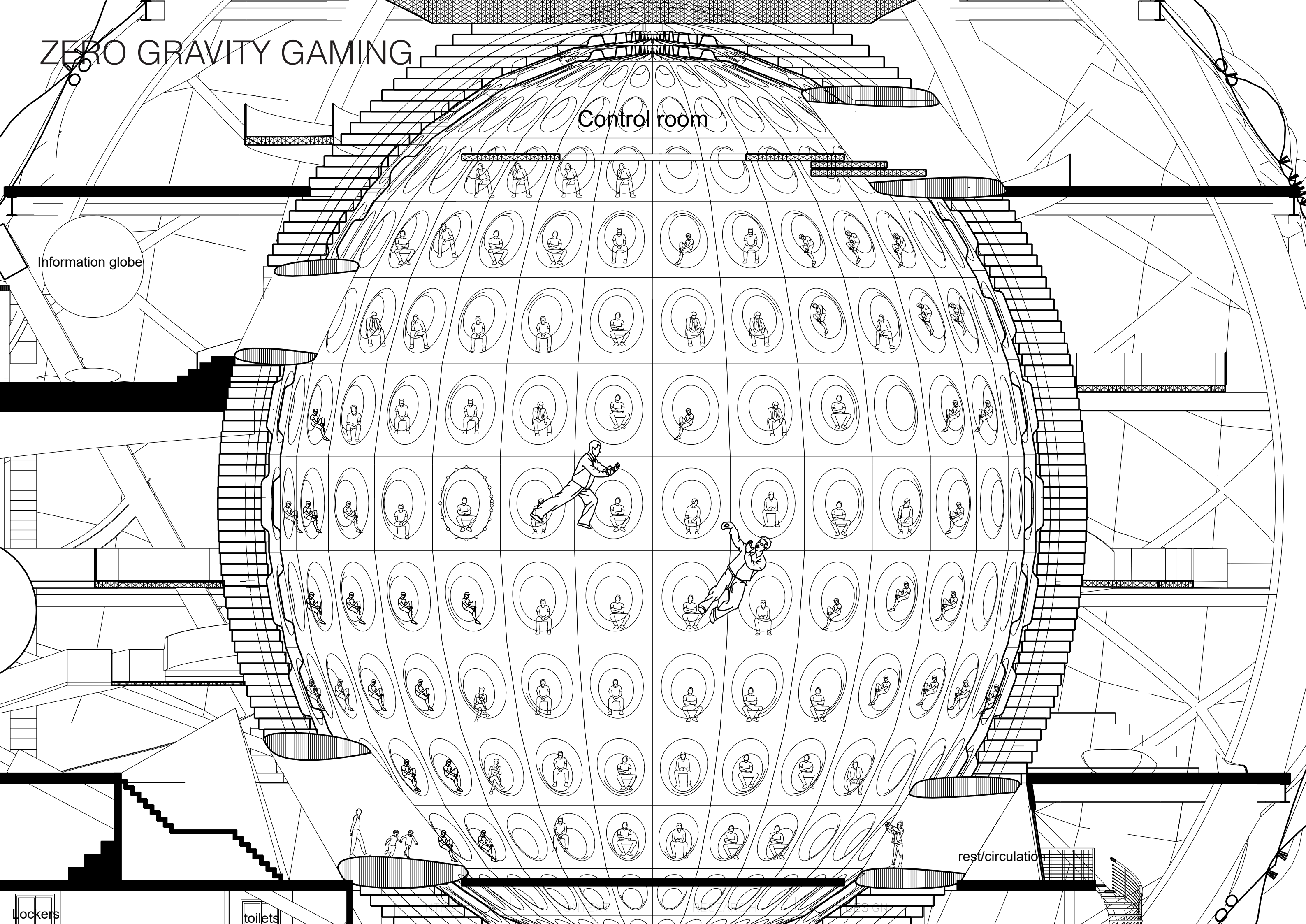
NEW TACTICS & RULES



ZERO GRAVITY GAMING



ZERO GRAVITY GAMING



Control room

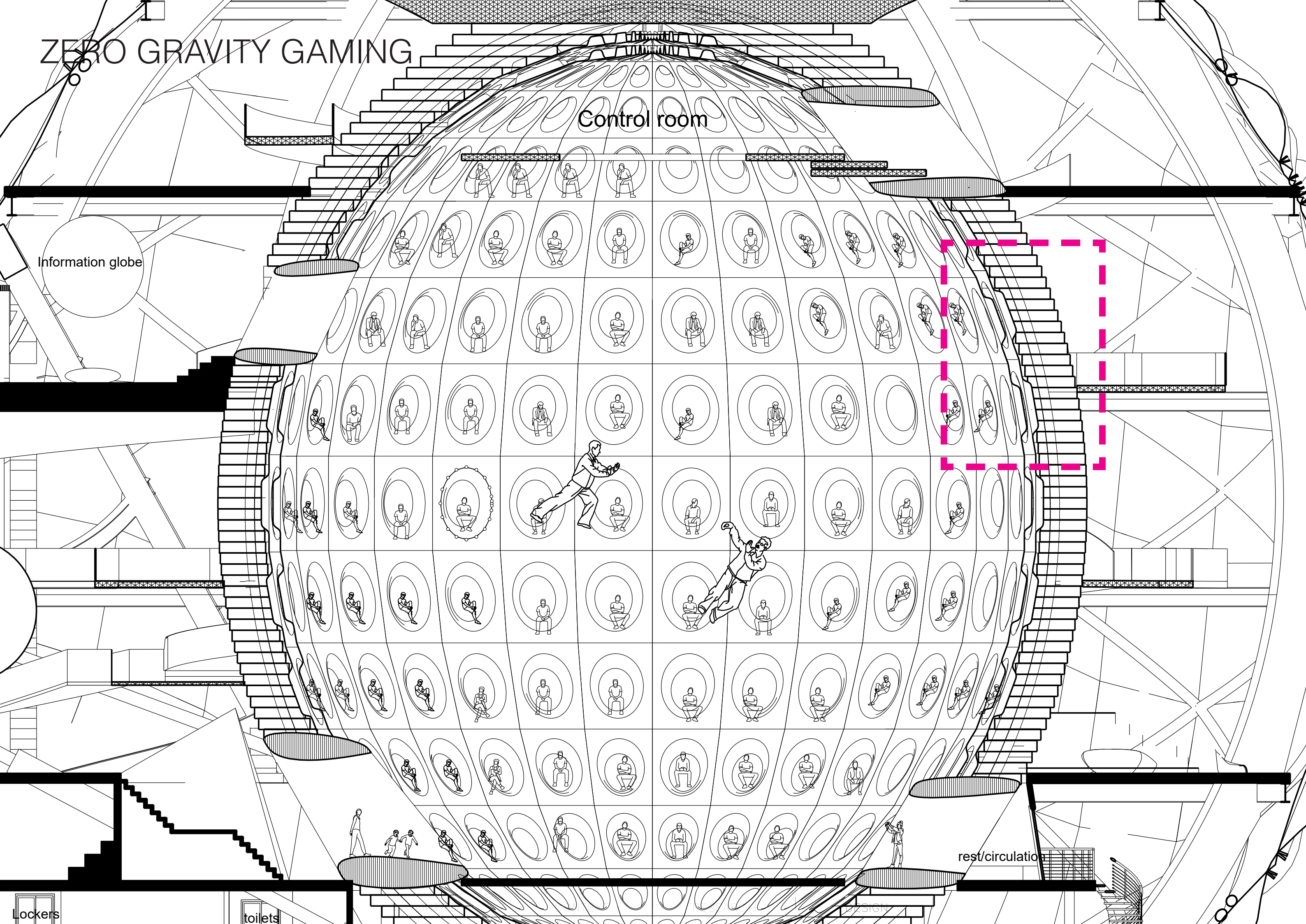
Information globe

rest/circulation

Lockers

toilets

ZERO GRAVITY GAMING



Control room

Information globe

rest/circulation

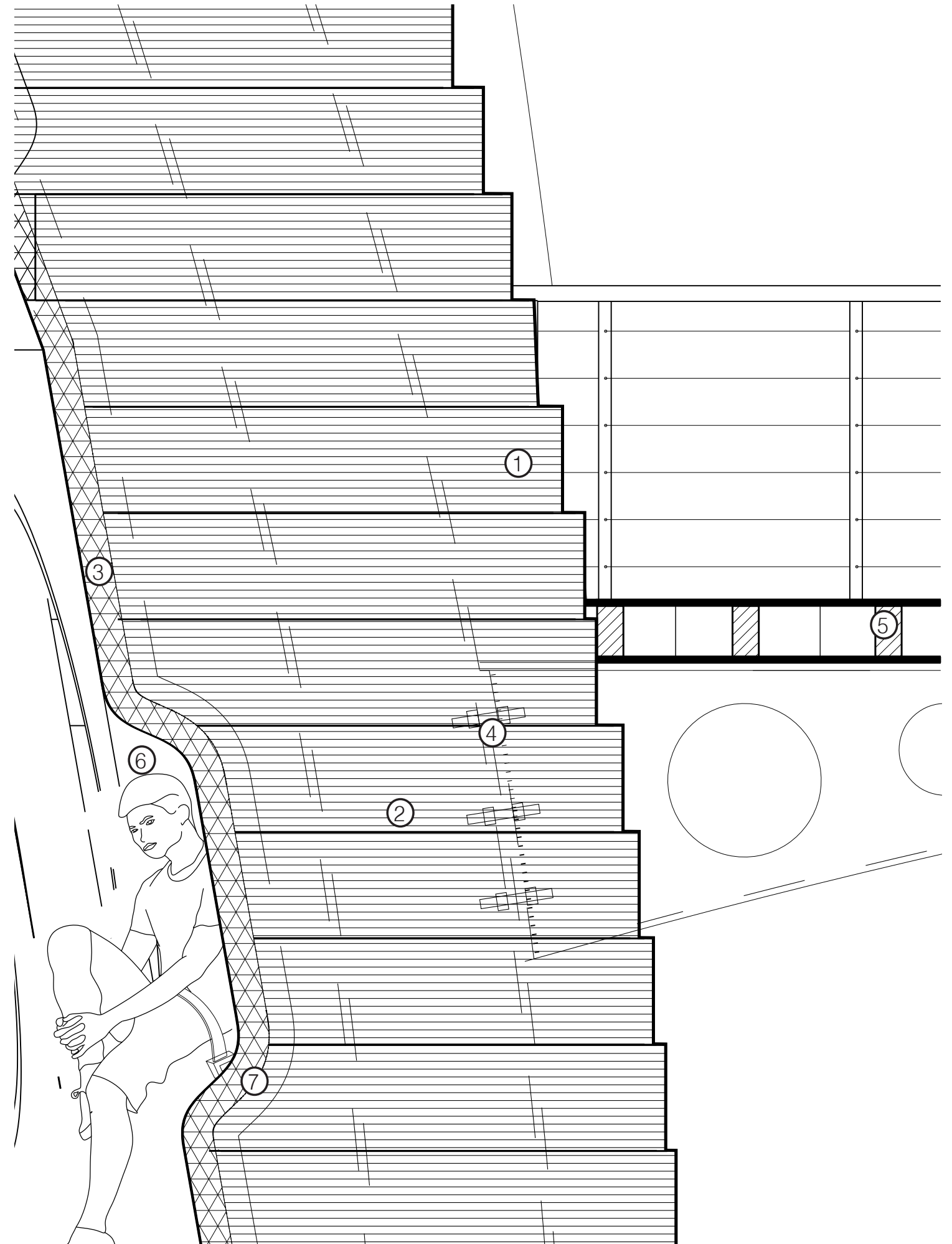
Lockers

toilets

ZERO GRAVITY GAMING

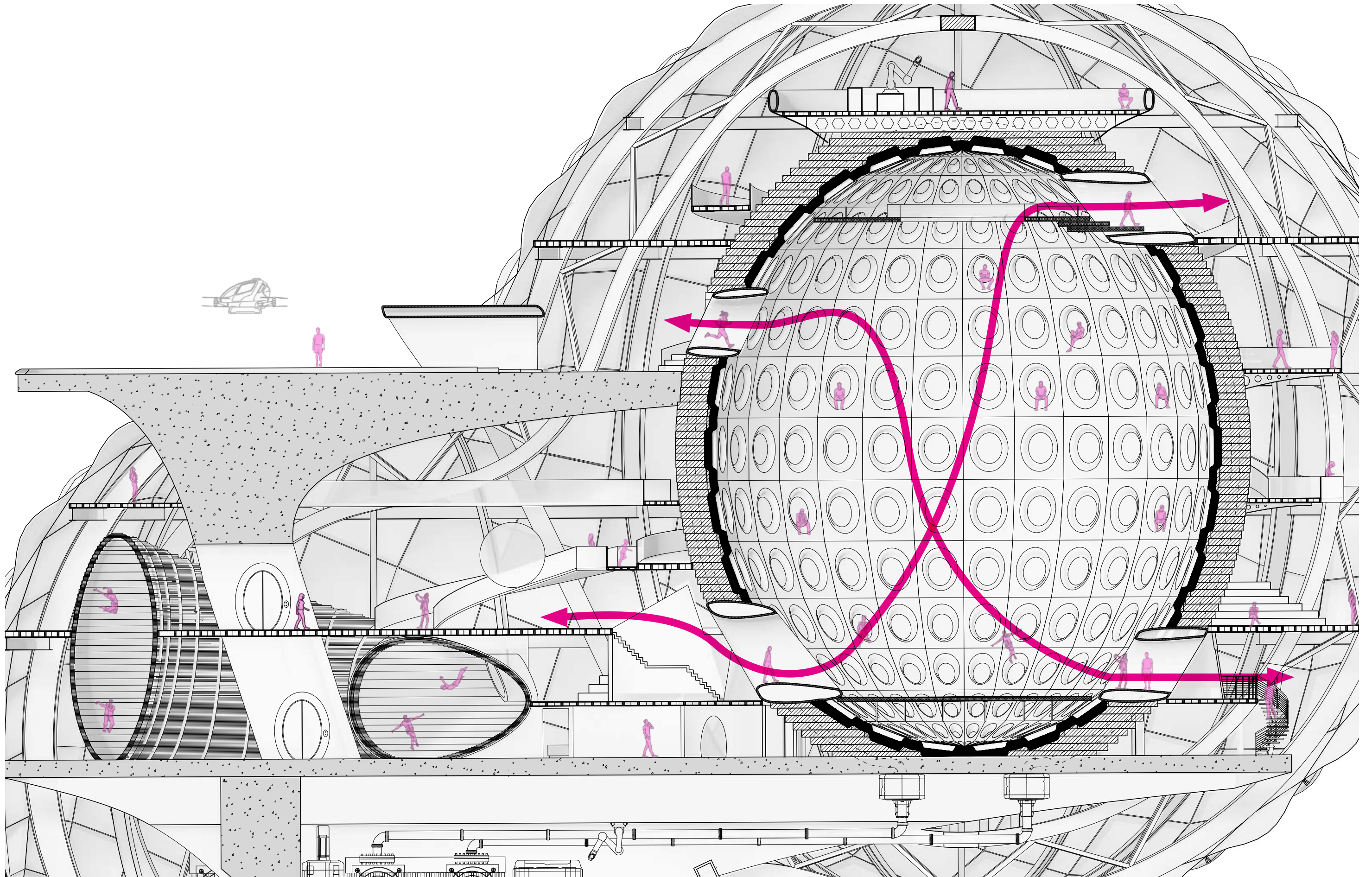
INTEGRATED SEATING

1. Graphine electrode nano plates (semi translucent conducting material used in phones)
2. HEA 600 main structure Zero Gravity Arena attached to base
3. Termal paste attaching interiour and zero gravity device
4. Canopy beam bolted to main frame
5. Wood composite floor bolted to main frame
6. Zero gravity soft impact seating panel
7. Belt fastener



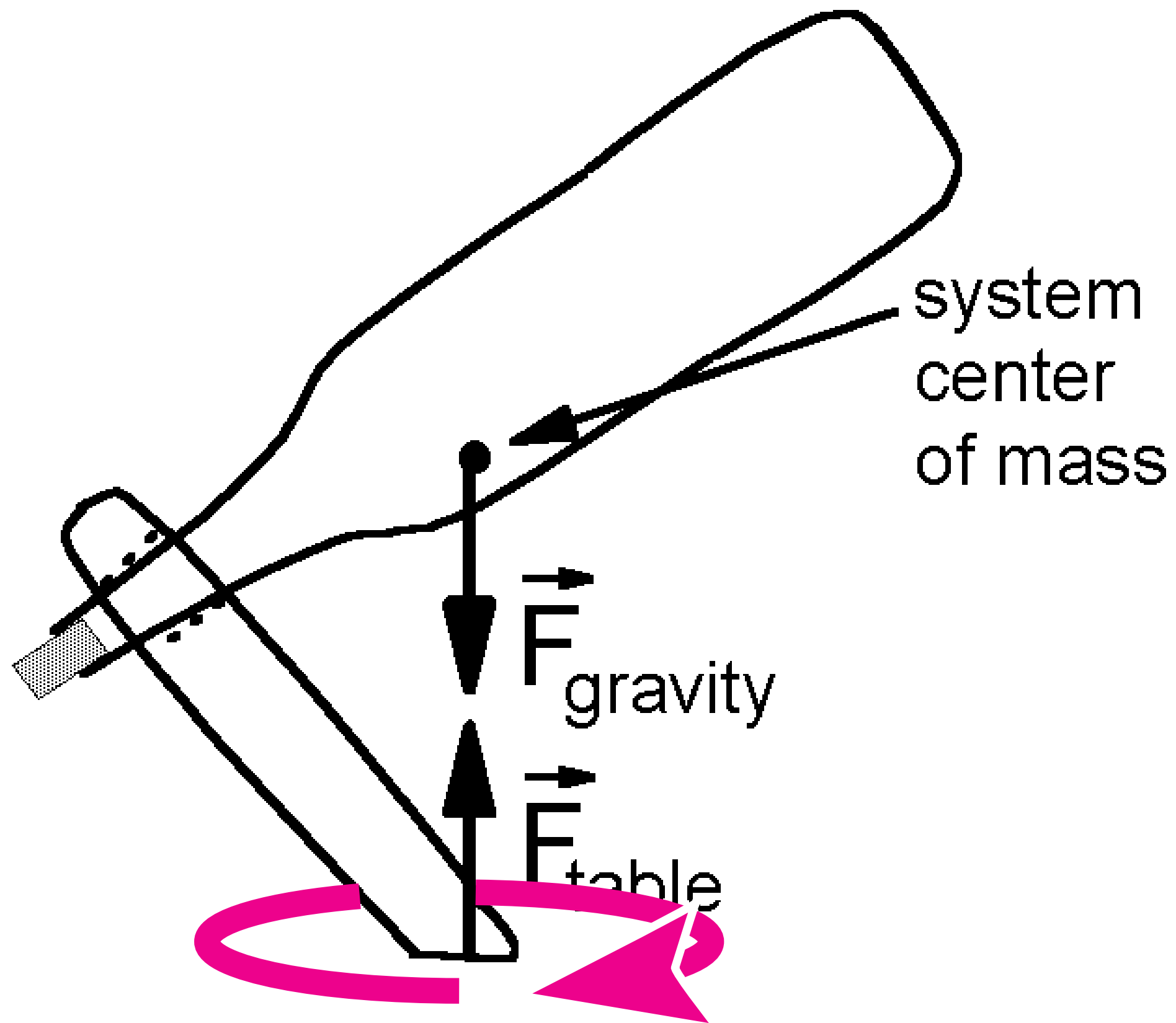
ROUTING TOP

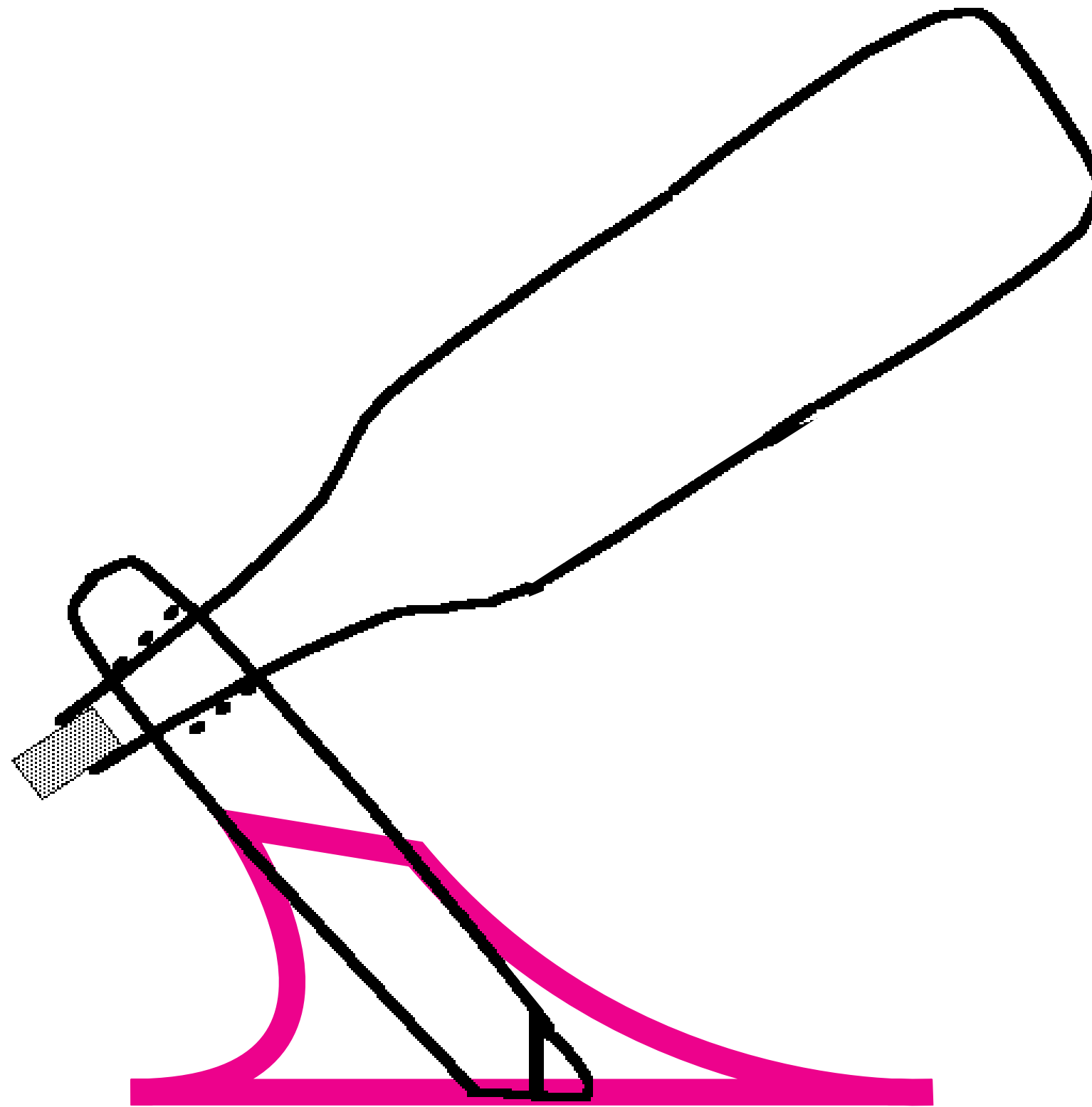
FAST TRACK = ZERO GRAVITY



STRUCTURAL DESIGN







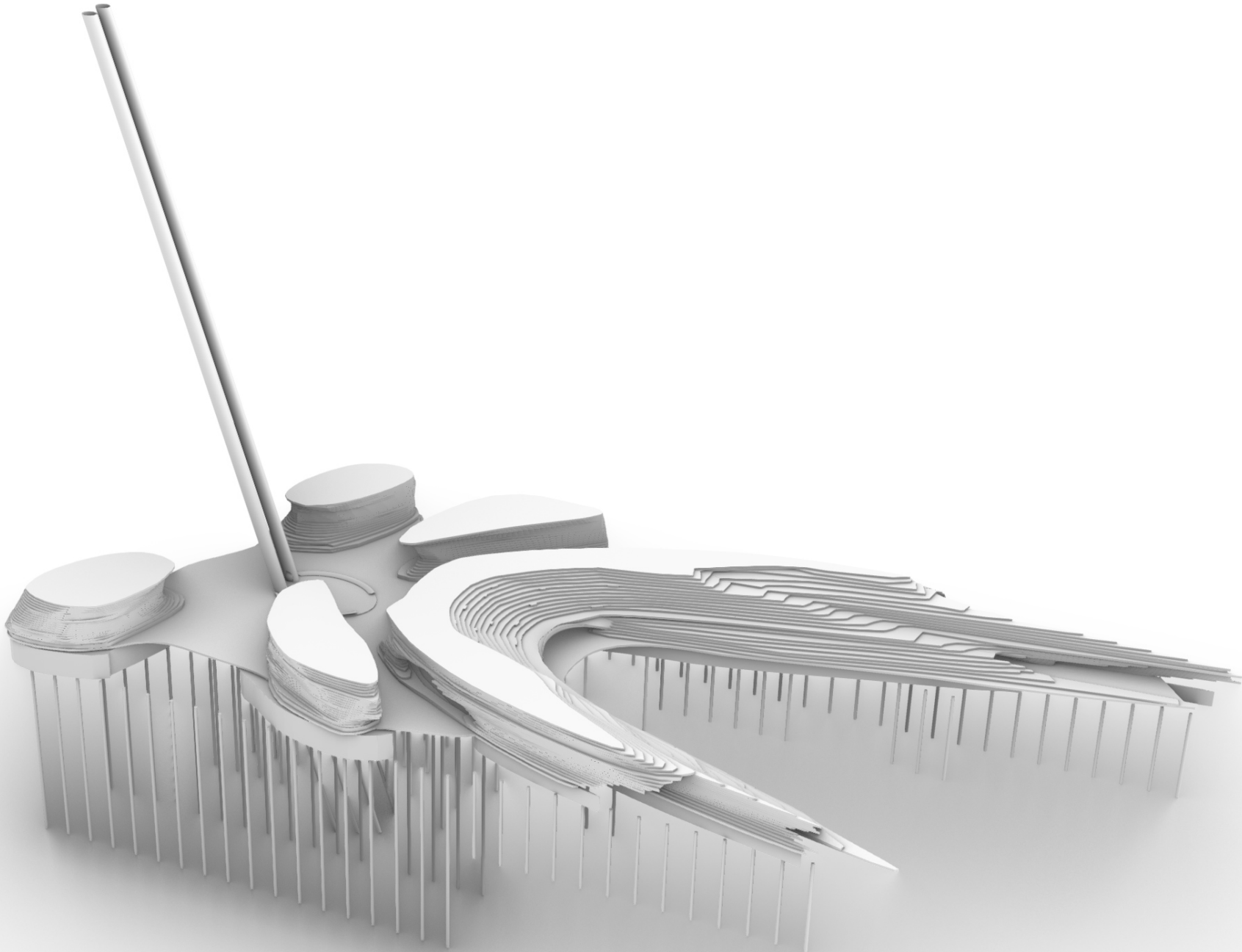
STRUCTURAL DESIGN

STEEL LIFT SHAFT



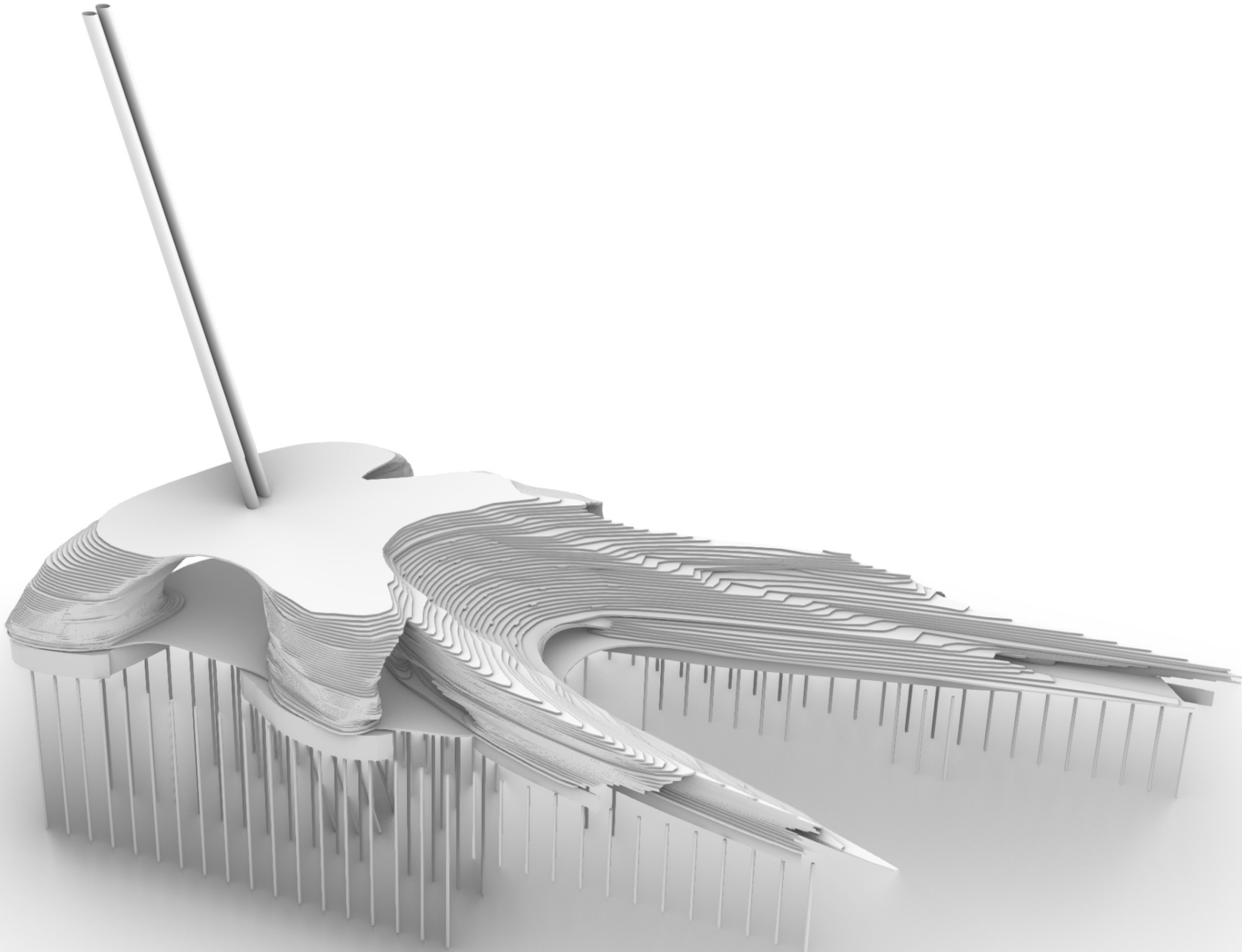
STRUCTURAL DESIGN

STEEL LIFT SHAFT



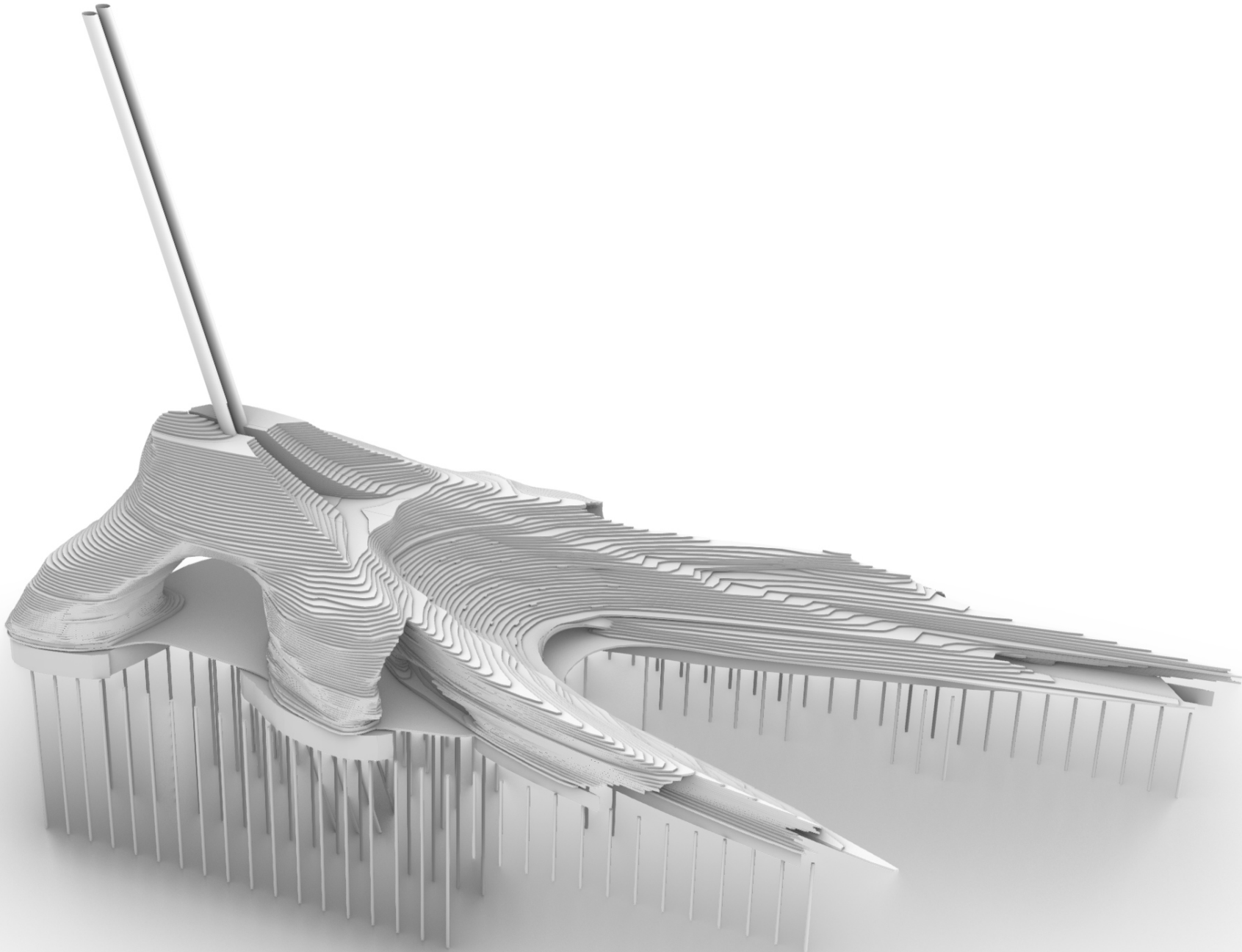
STRUCTURAL DESIGN

STEEL LIFT SHAFT



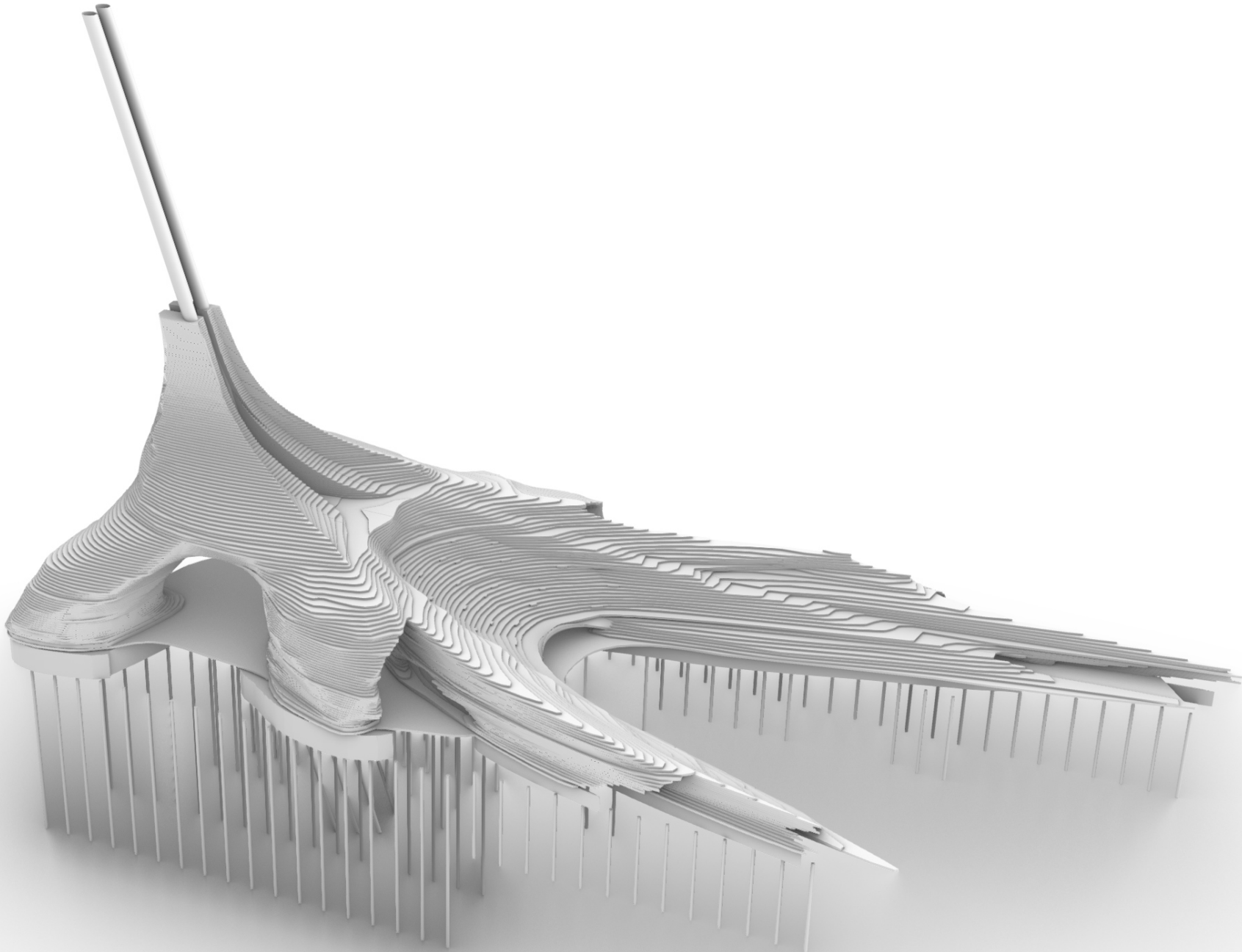
STRUCTURAL DESIGN

STEEL LIFT SHAFT



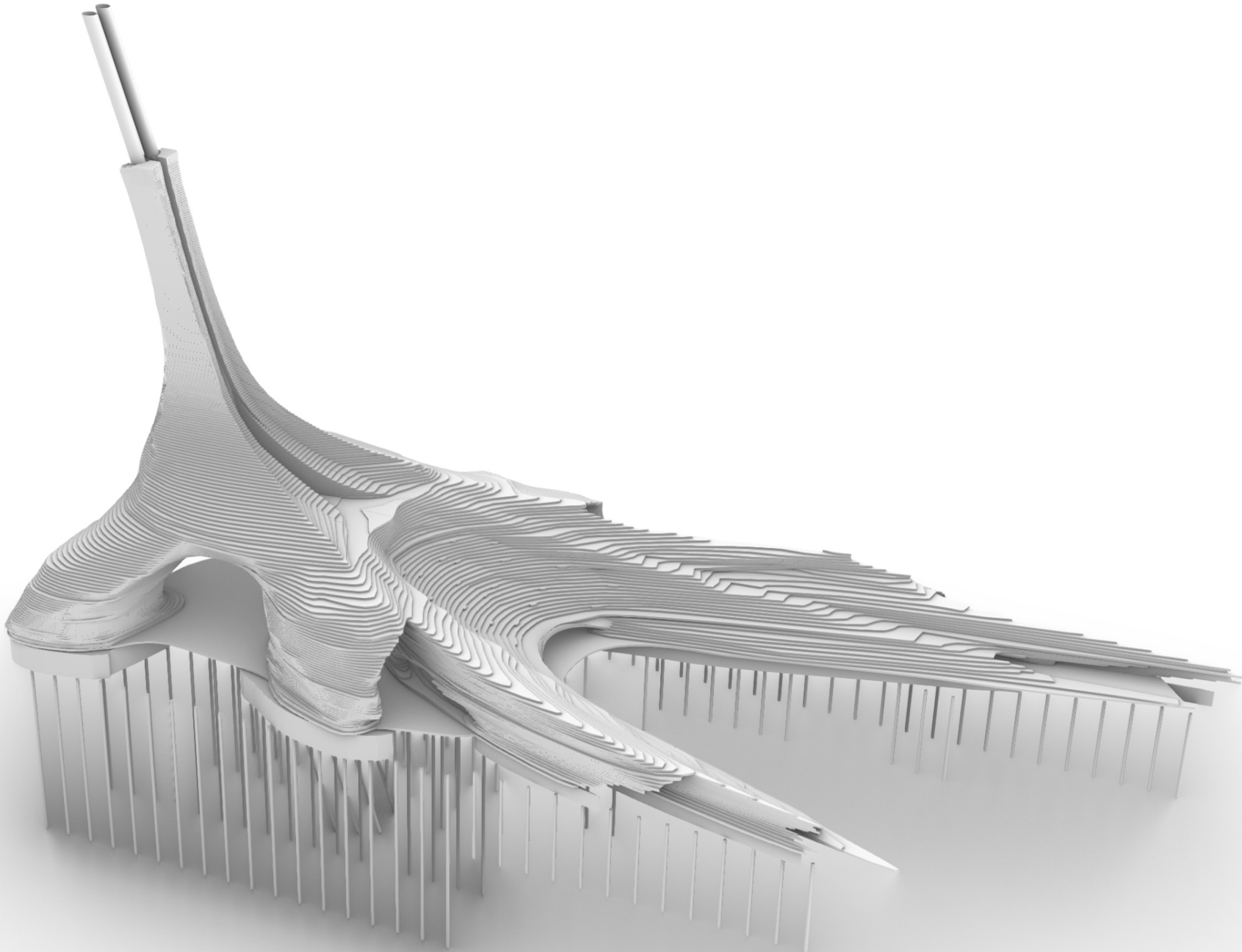
STRUCTURAL DESIGN

STEEL LIFT SHAFT



STRUCTURAL DESIGN

STEEL LIFT SHAFT



STRUCTURAL DESIGN

STEEL LIFTSHAFT BRACED BY CONCRETE STRUCTURE



STRUCTURAL DESIGN

HIGH PEFORMANCE CONCRTE CANOPY / CRANE STRUCTURE



STRUCTURAL DESIGN

CONCRETE FLOORSLAB



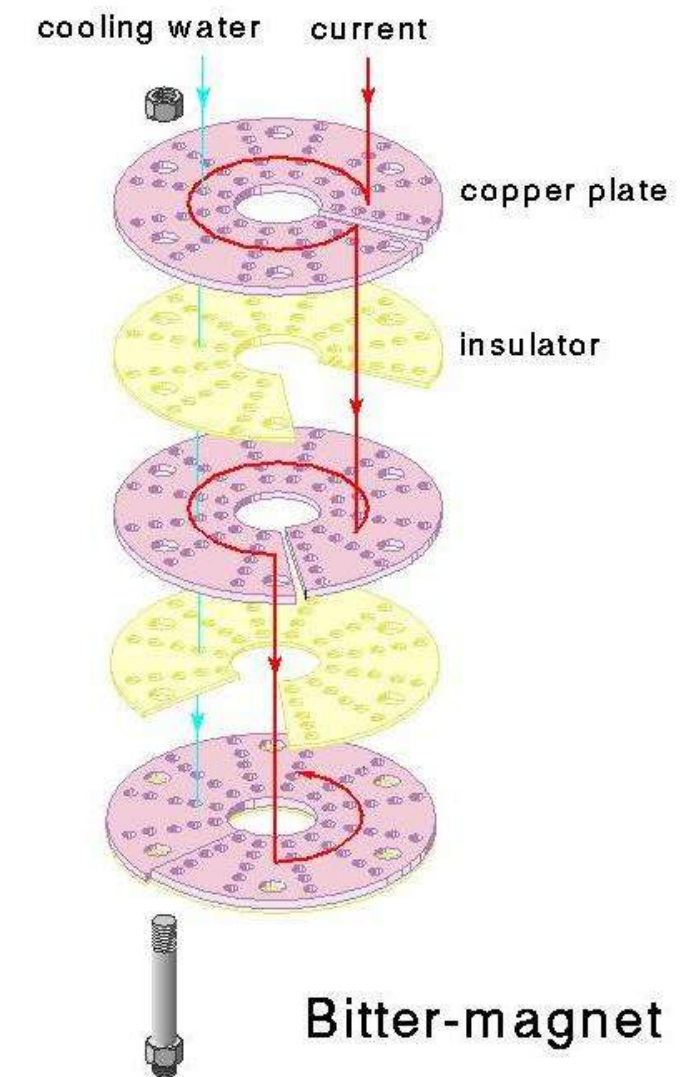
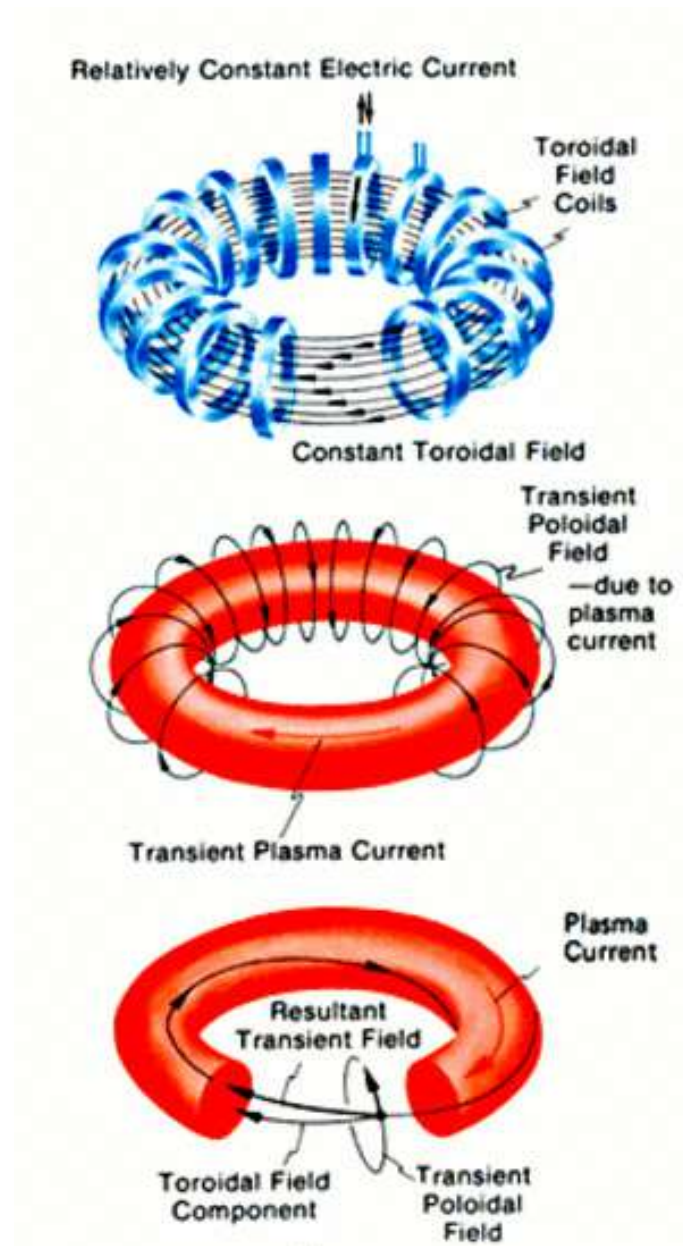
STRUCTURAL DESIGN

ZERO GRAVITY STEEL STUCTURE SECURED TO FLOOR



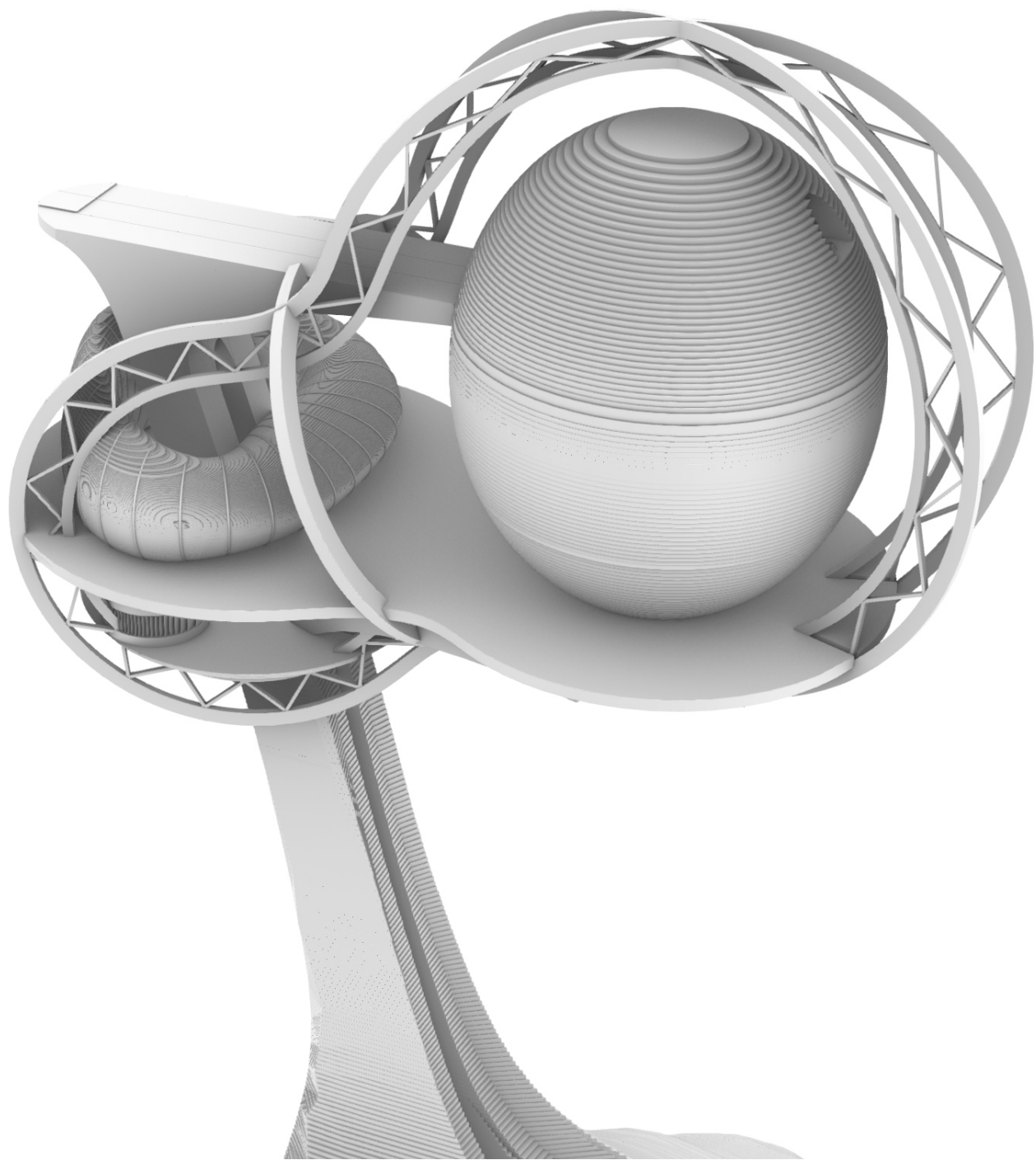
STRUCTURAL DESIGN

ZERO GRAVITY MACHINE BUILD WITH GRAPHENE CONDUCTING NANO PLATES



STRUCTURAL DESIGN

TWO HORIZONTAL TRUSSES
AND CROSS BEAM



STRUCTURAL DESIGN

VERTICAL BEAMS



STRUCTURAL DESIGN

HORIZONTAL FLOOR BEAMS



STRUCTURAL DESIGN

LIGHTWEIGHT WOODCOMPOSITE FLOOR SLABS



STRUCTURAL DESIGN

DIAMOND STEEL GRID FOR STABILITY AND ETFE FACADE PILLOWS



STRUCTURAL DESIGN

MULTIFUNCTIONAL ETFE FACADE PILLOWS

- MULTIMEDIA SCREEN
- PHOTOVOTAIC CELLS
- INSULATING AND COOLING CAPACITY

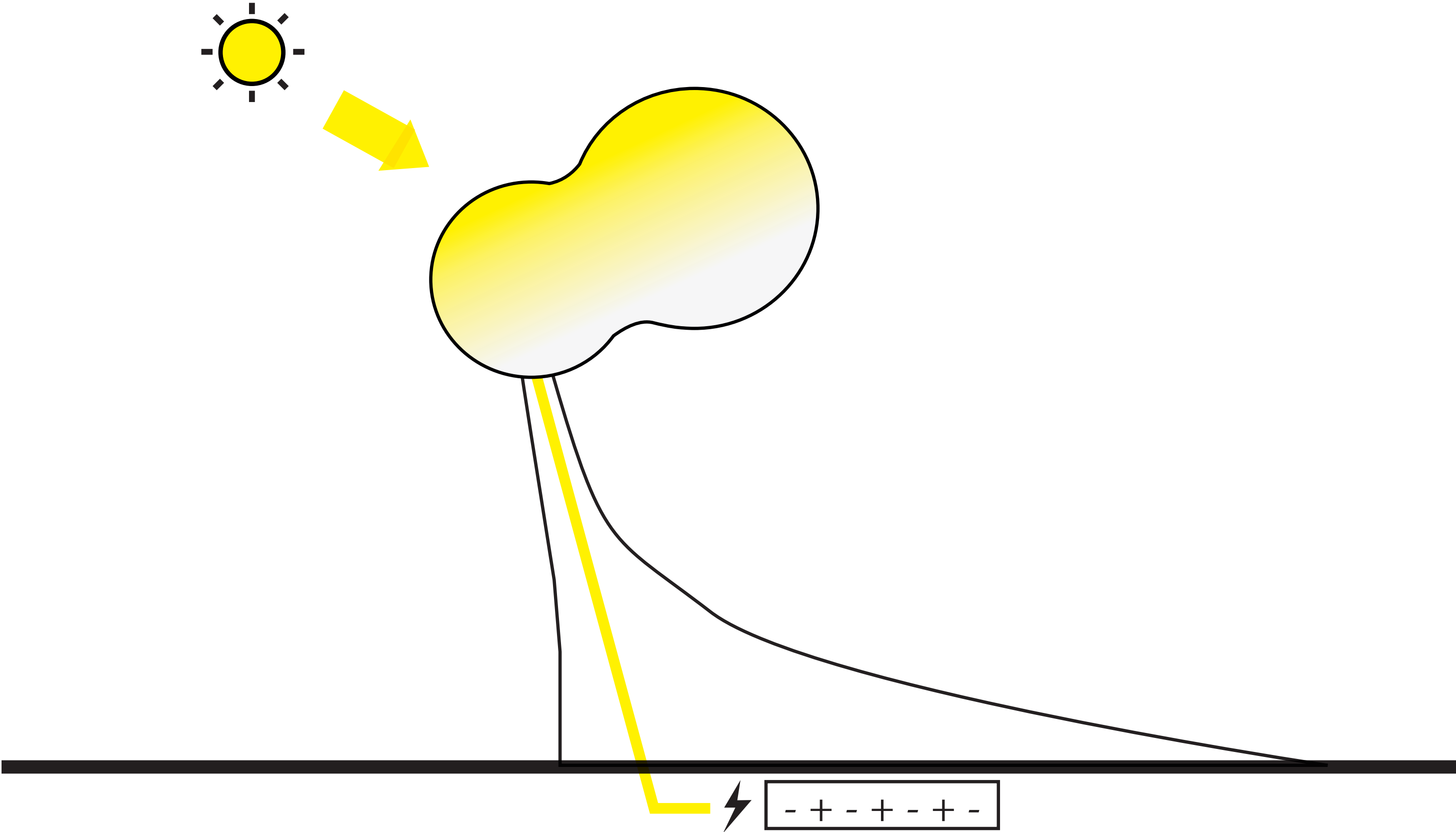


CLIMATIC DESIGN

ENERGY DESIGN

SOLAR ENERGY

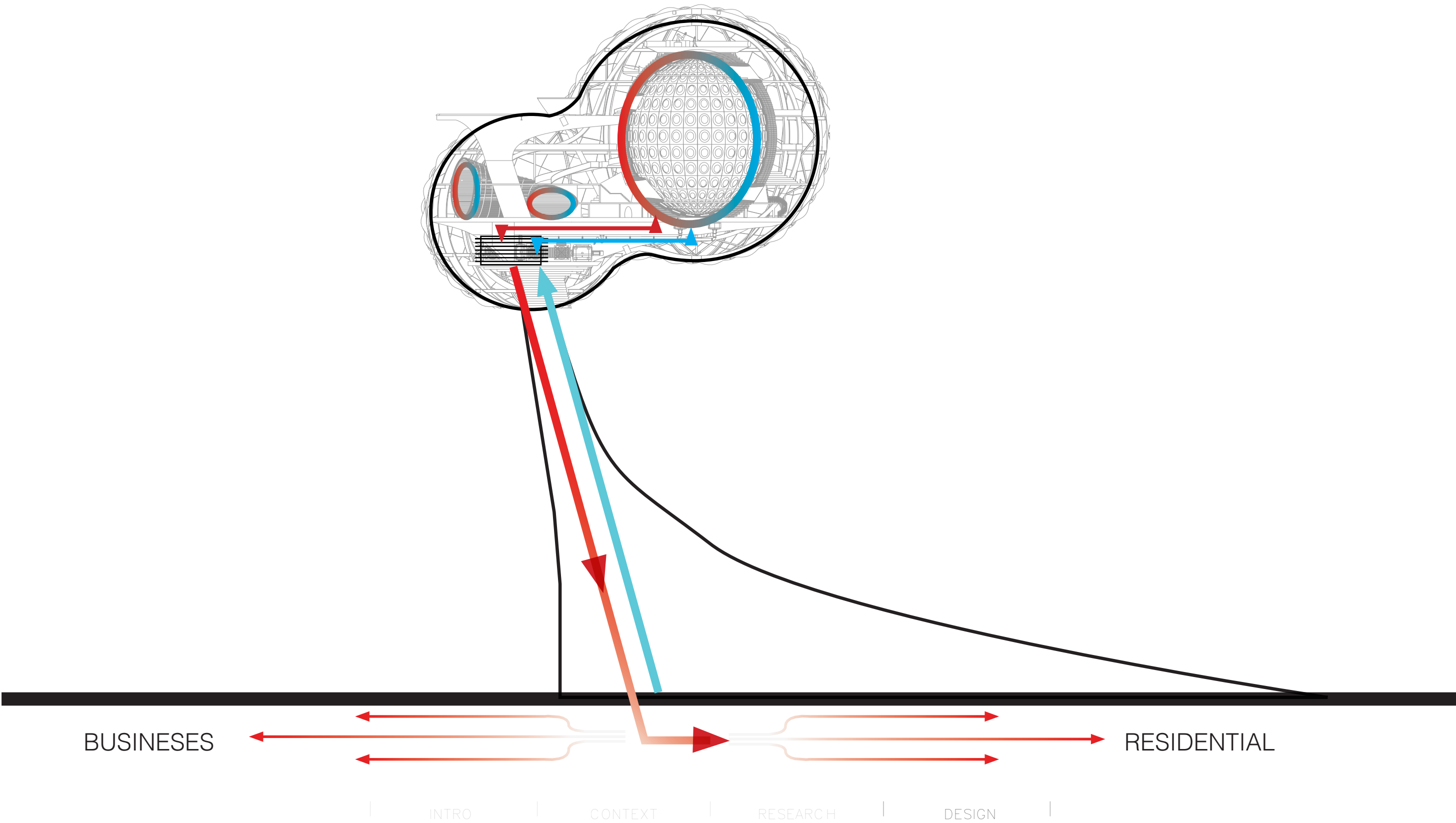
MULTIFUNCTIONAL ETFE FACADE WITH PHOTOVOLTAIC CELLS GENERATE ELECTRICITY FOR DIRECT USE AND STORAGE IN BATTERY LOCATED IN BASEMENT



ENERGY DESIGN

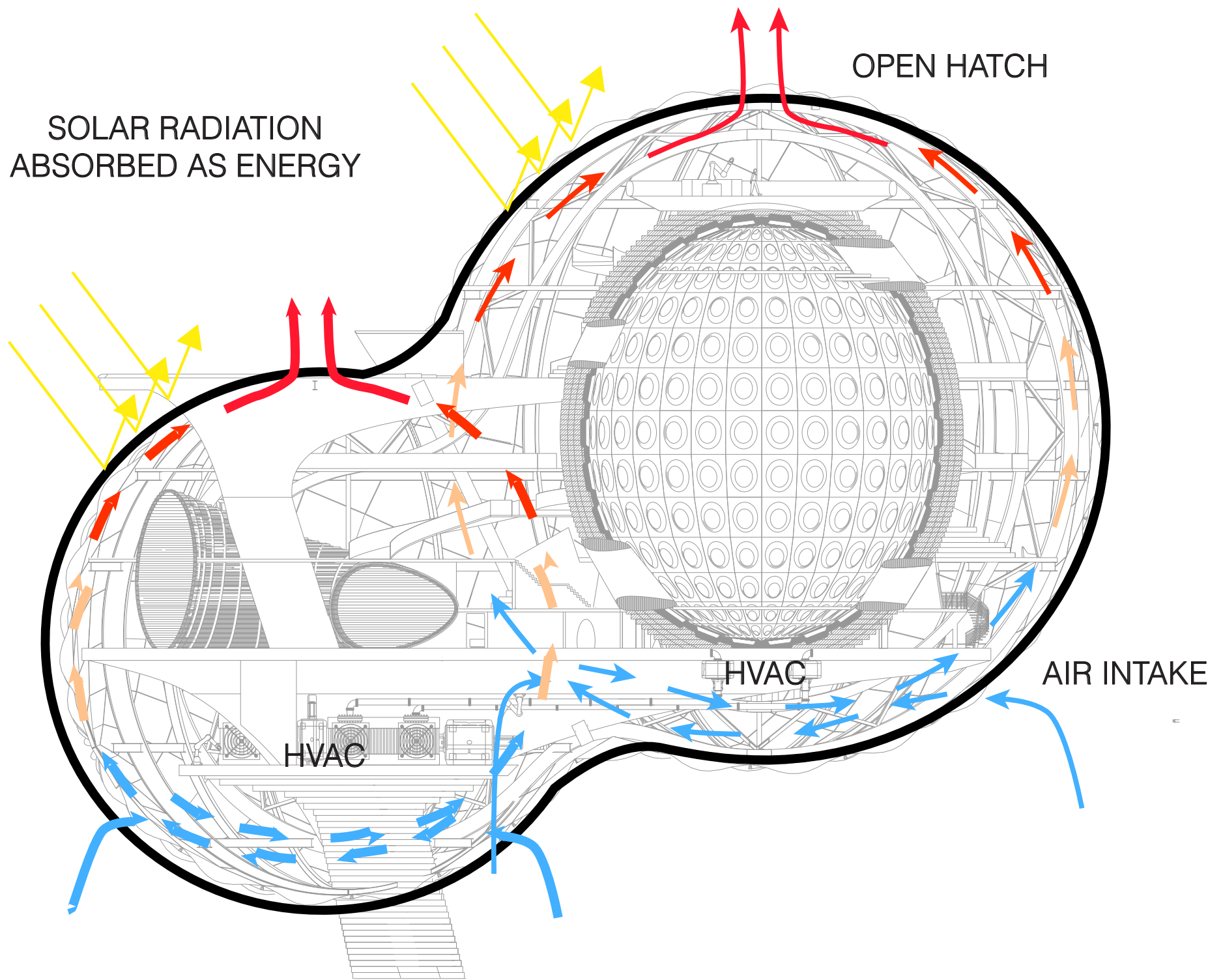
HEAT GENERATION

ZERO GRAVITY MACHINE IS COOLED BY COOLING LIQUID AND PELTIER ELEMENT, EXCESSIVE HEAT IS EXTRACTED BY HEAT EXCHANGER AND TRANSFERRED TO NEARBY USERS



CLIMATE DESIGN

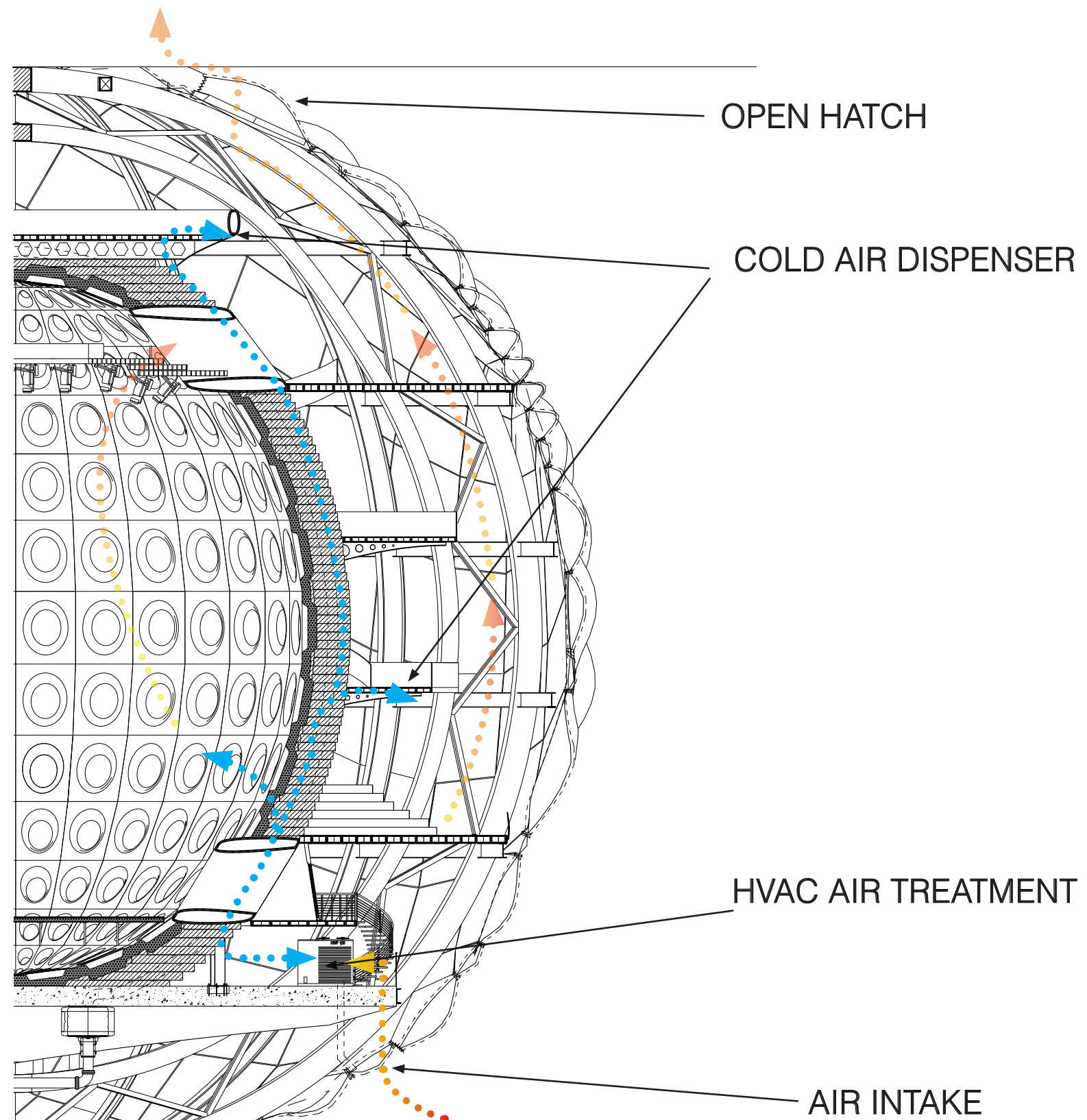
SUMMER SITUATION
EXCESSIVE HEAT IS NATURALLY VENTED AWAY (MECHANICALLY WHEN DRAFT IS NOT PROMENENT ENOUGH) AND COOL AIR IS PROVIDED BY HVAC MACHINE



CLIMATE DESIGN

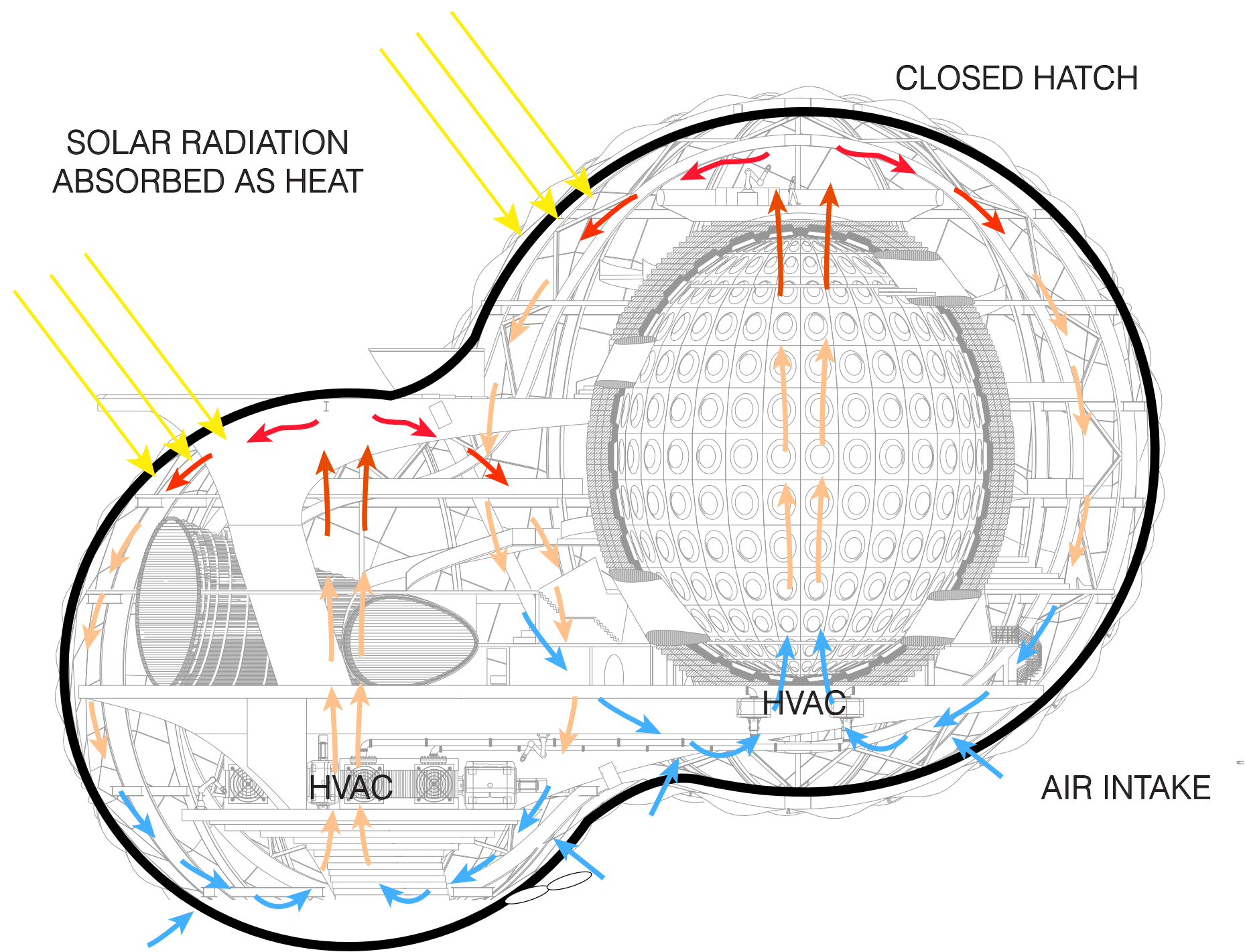
SUMMER SITUATION

EXCESSIVE HEAT IS NATURALLY VENTED AWAY (MECHANICALLY WHEN DRAFT IS NOT PROMENENT ENOUGH) AND COOL AIR IS PROVIDED BY HVAC MACHINE

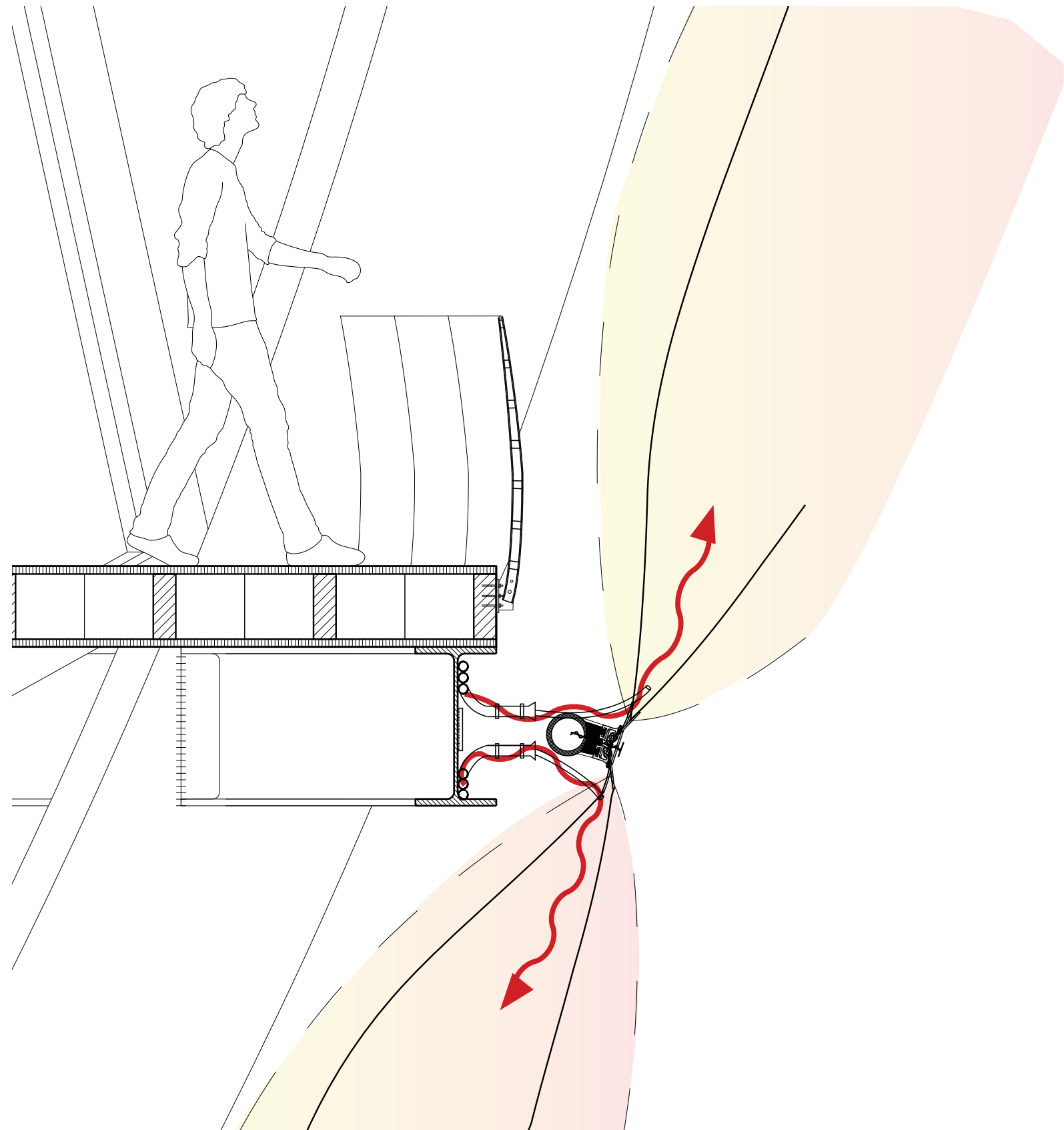


CLIMATE DESIGN

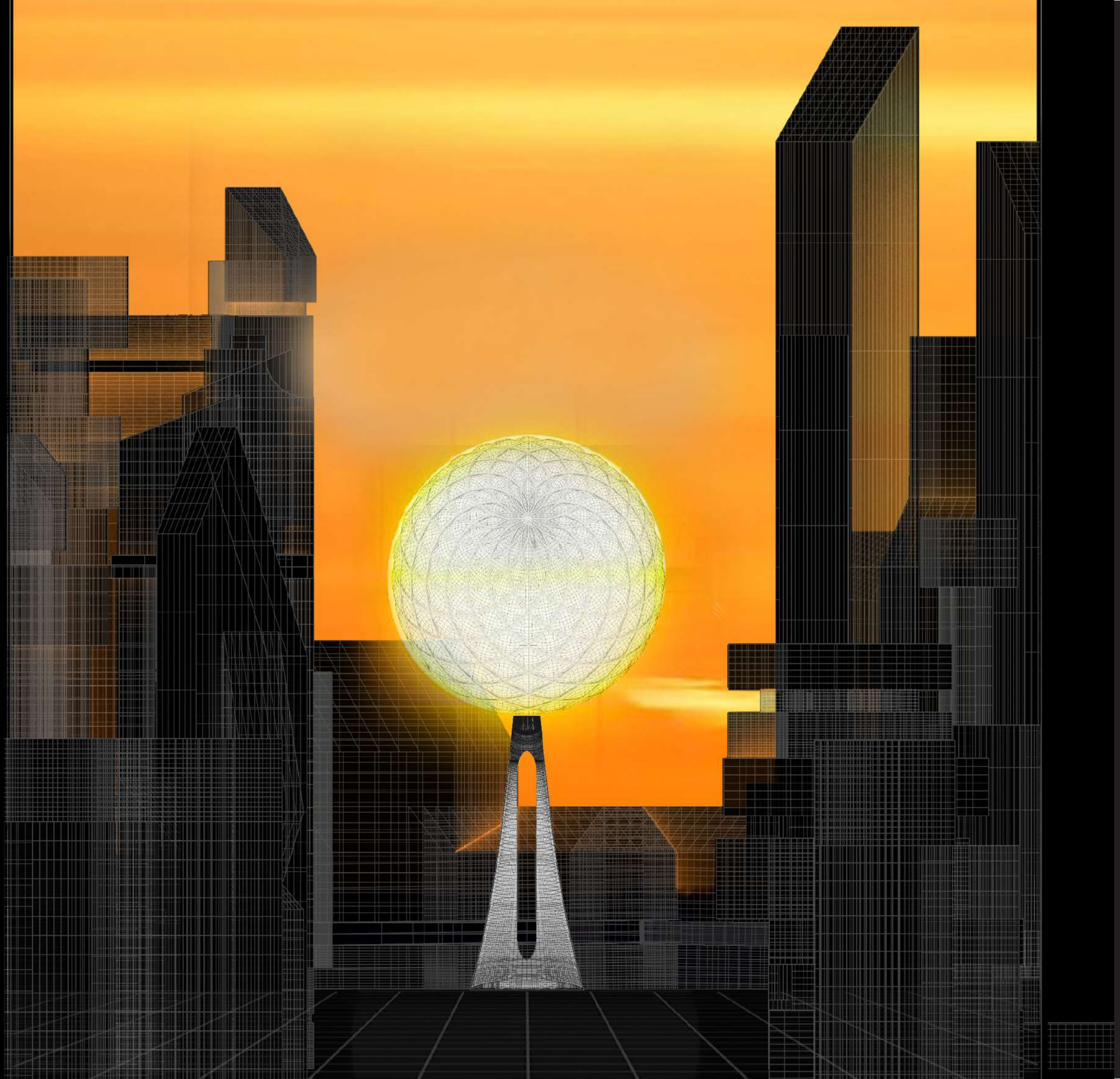
WINTER SITUATION
COLD AIR IS HEATED BY HVAC MACHINE AND VENTILATED THROUGH THE BUILDING
ETFE FACADE IS FILLED WITH HOT AIR TO MAINTAIN INTERNAL TEMPERATURE



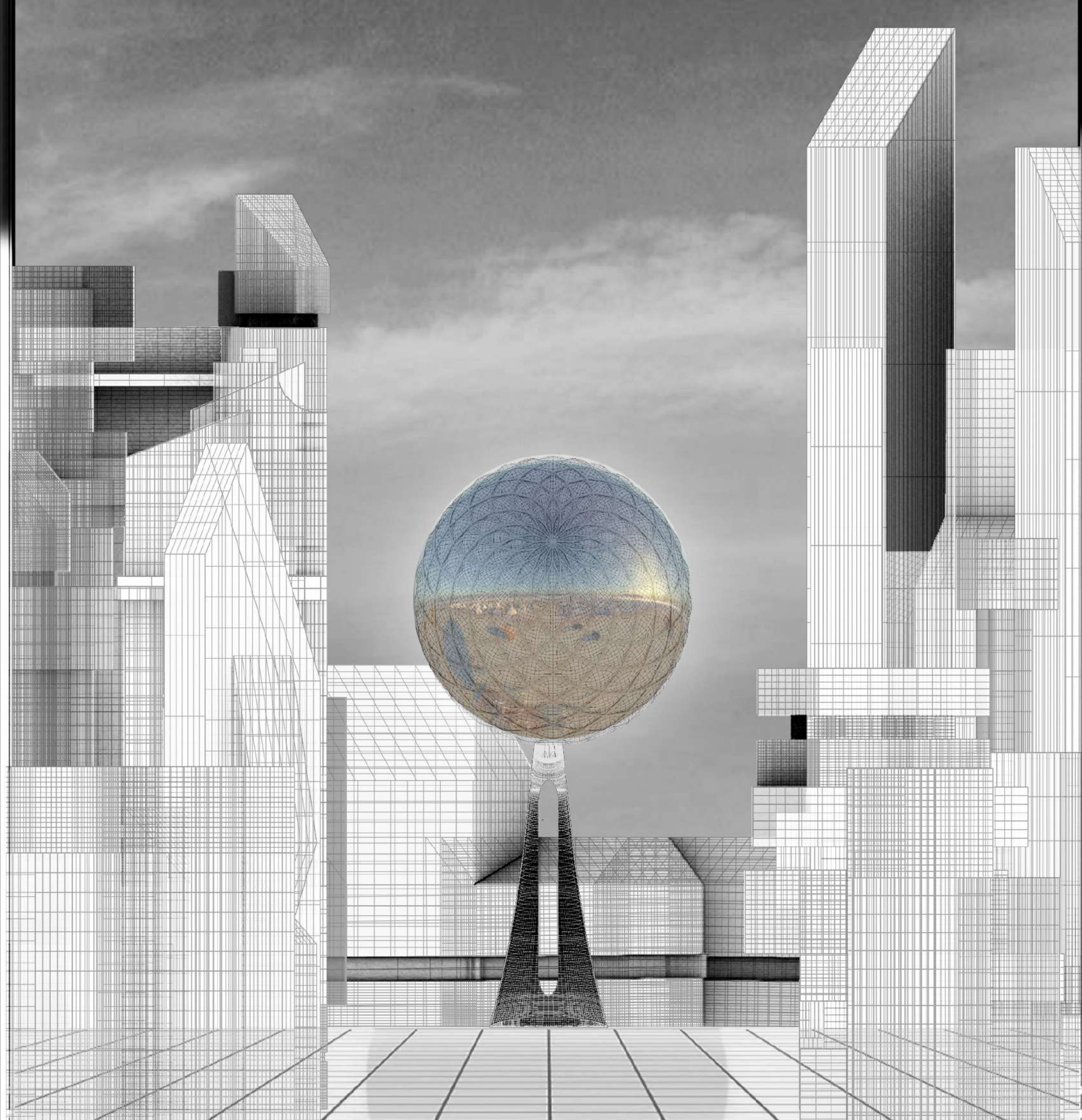
WINTER SITUATION
COLD AIR IS HEATED BY HVAC MACHINE AND VENTILATED THROUGH THE BUILDING
ETFE FACADE IS FILLED WITH HOT AIR TO MAINTAIN INTERNAL TEMPERATURE



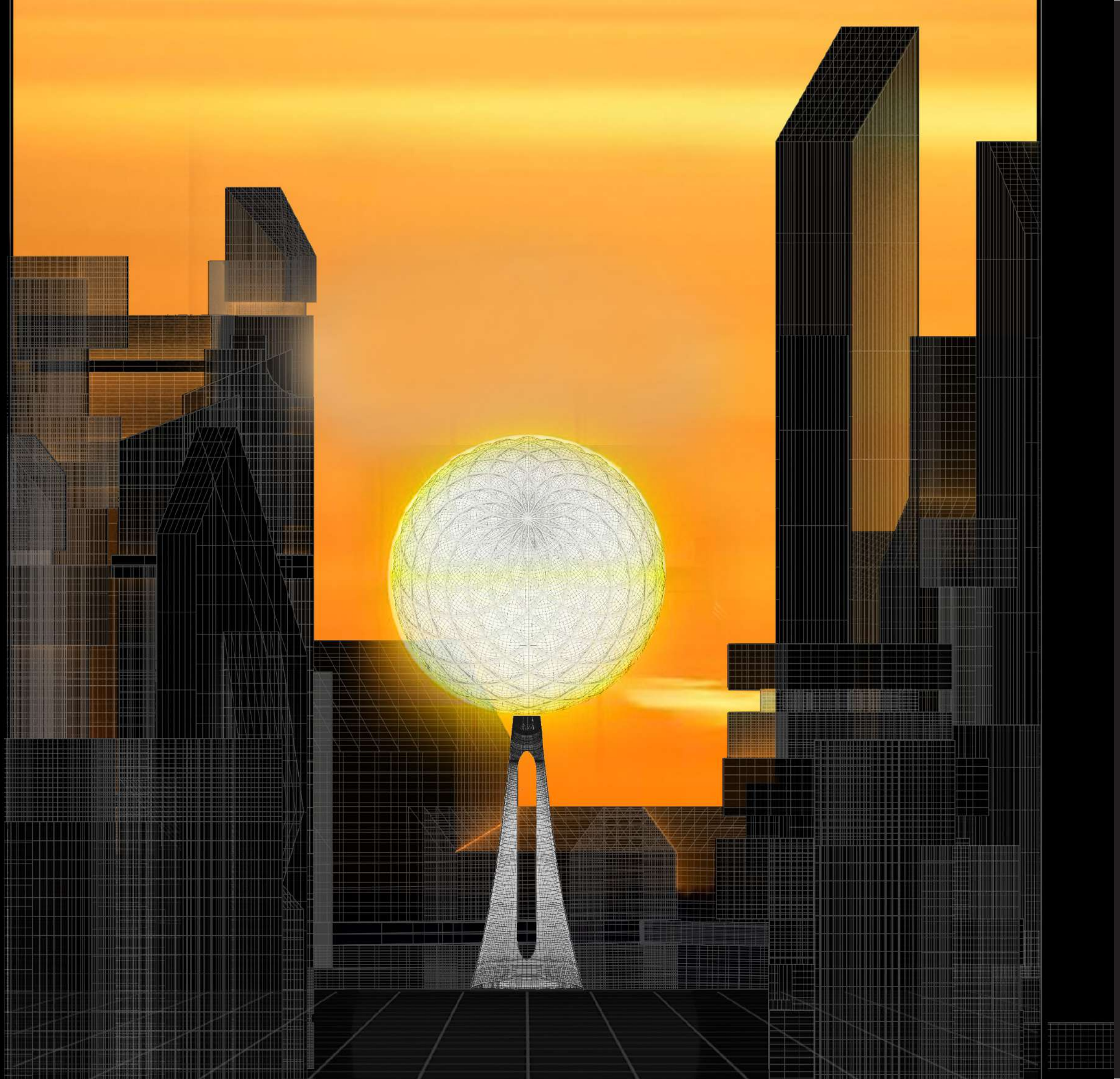
FACADE
SUNRISE
6:00AM



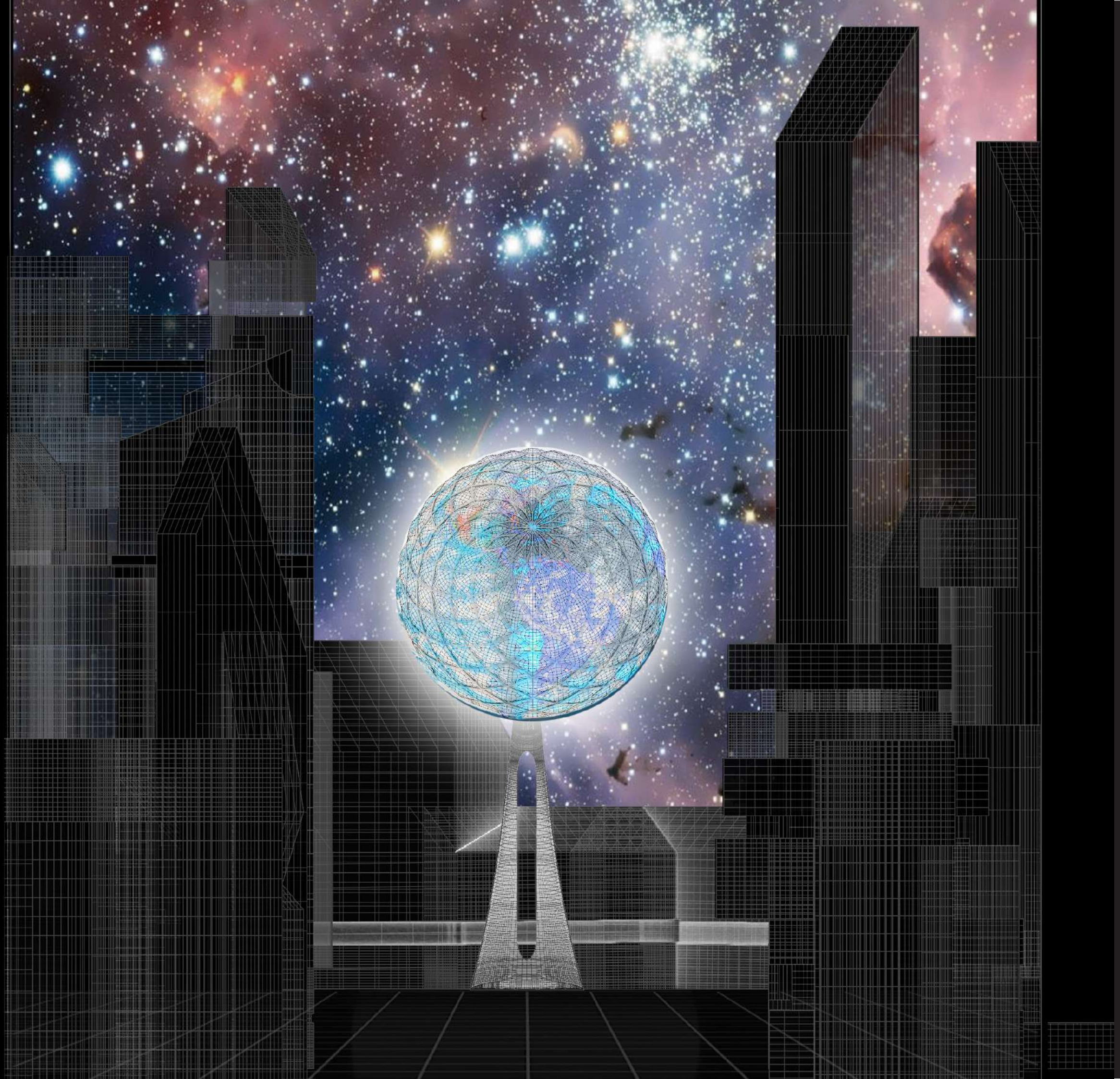
FACADE
MID-DAY
12:00



FACADE
DAWN
19:00



FACADE
MIDNIGHT
11:00PM

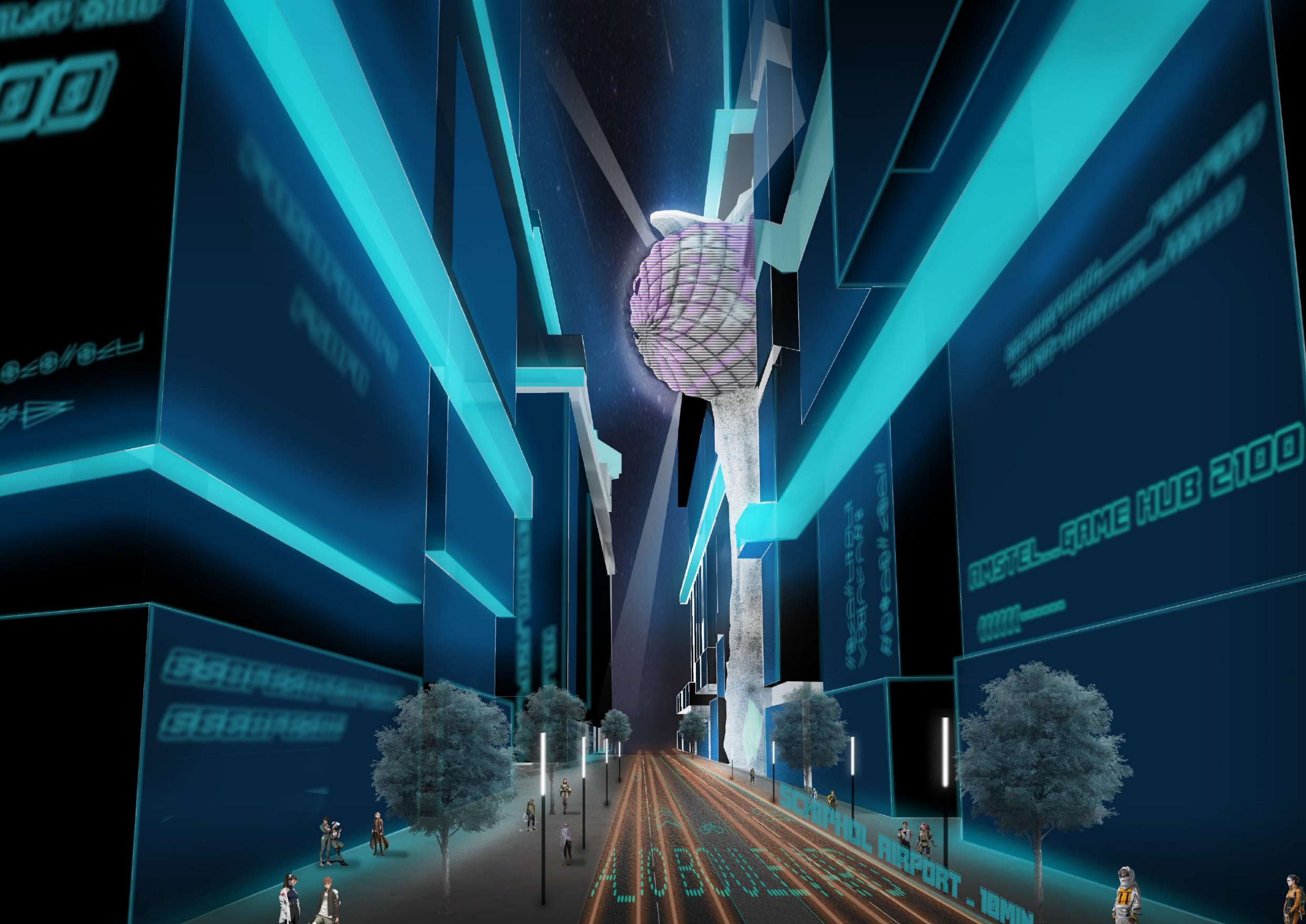




ONE.
MORE.
ROUND.

WELCOME TO THE
HOTEL GAMEHUB

STAR
LABORATORIES



THANK YOU