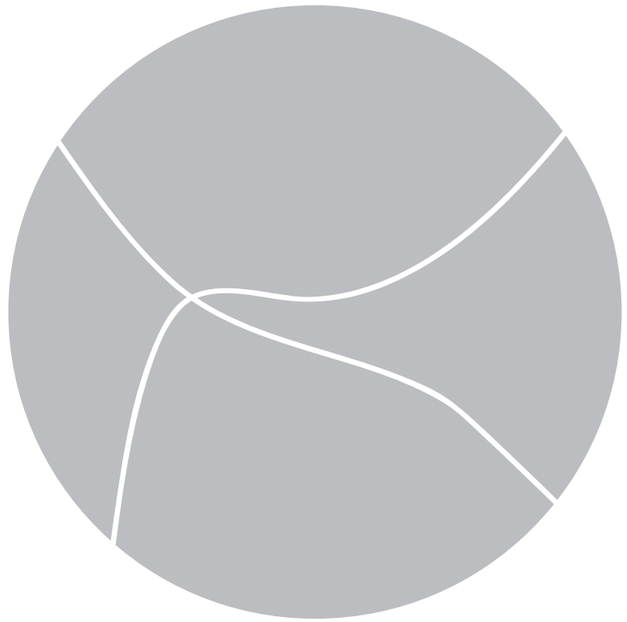
INTERSECTIONS

A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

AMS MID CITY 2100 / COMPLEX PROJECTS
SEBASTIAN BOK / 4218221
03/07/2019

P5 PRESENTATION



INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

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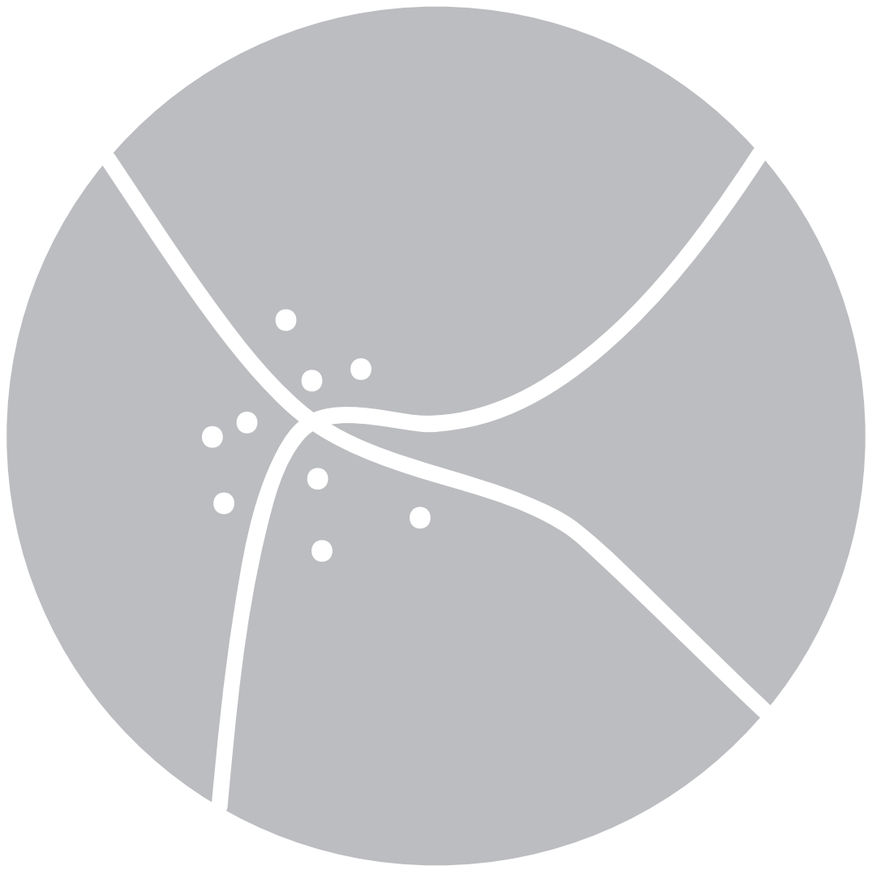
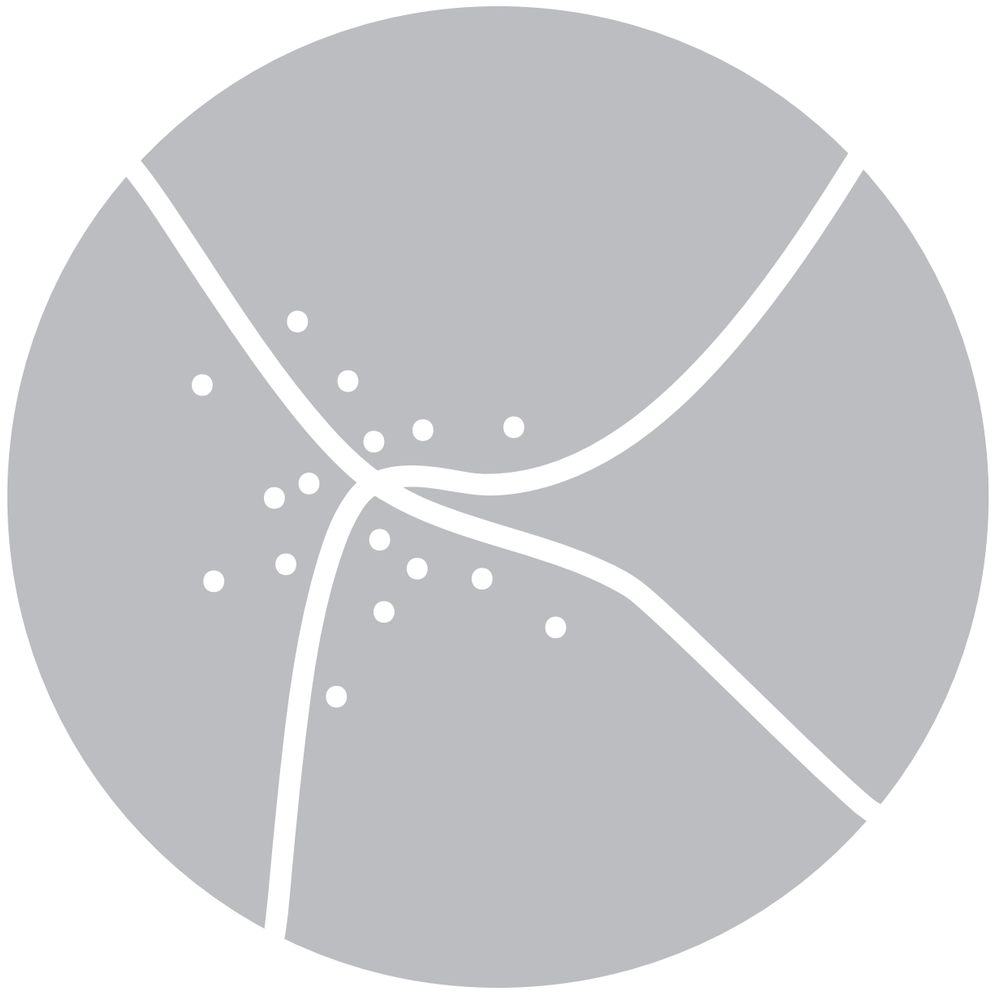


INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS



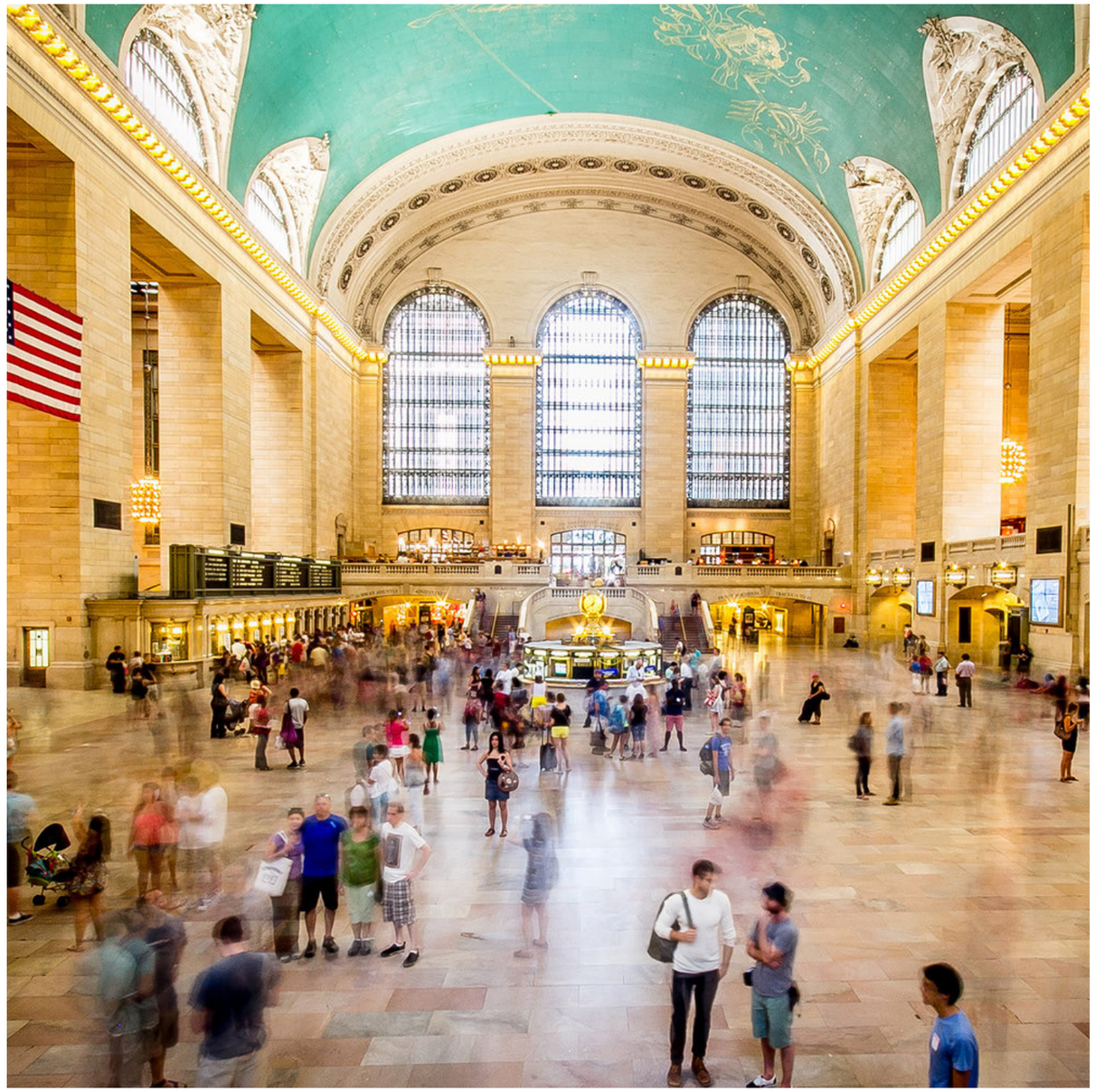
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

PAST: CROSSROADS

Western Saloon

NOW: URBAN NODE / MOBILITY HUB

330.000 visitors each day (Times Square)



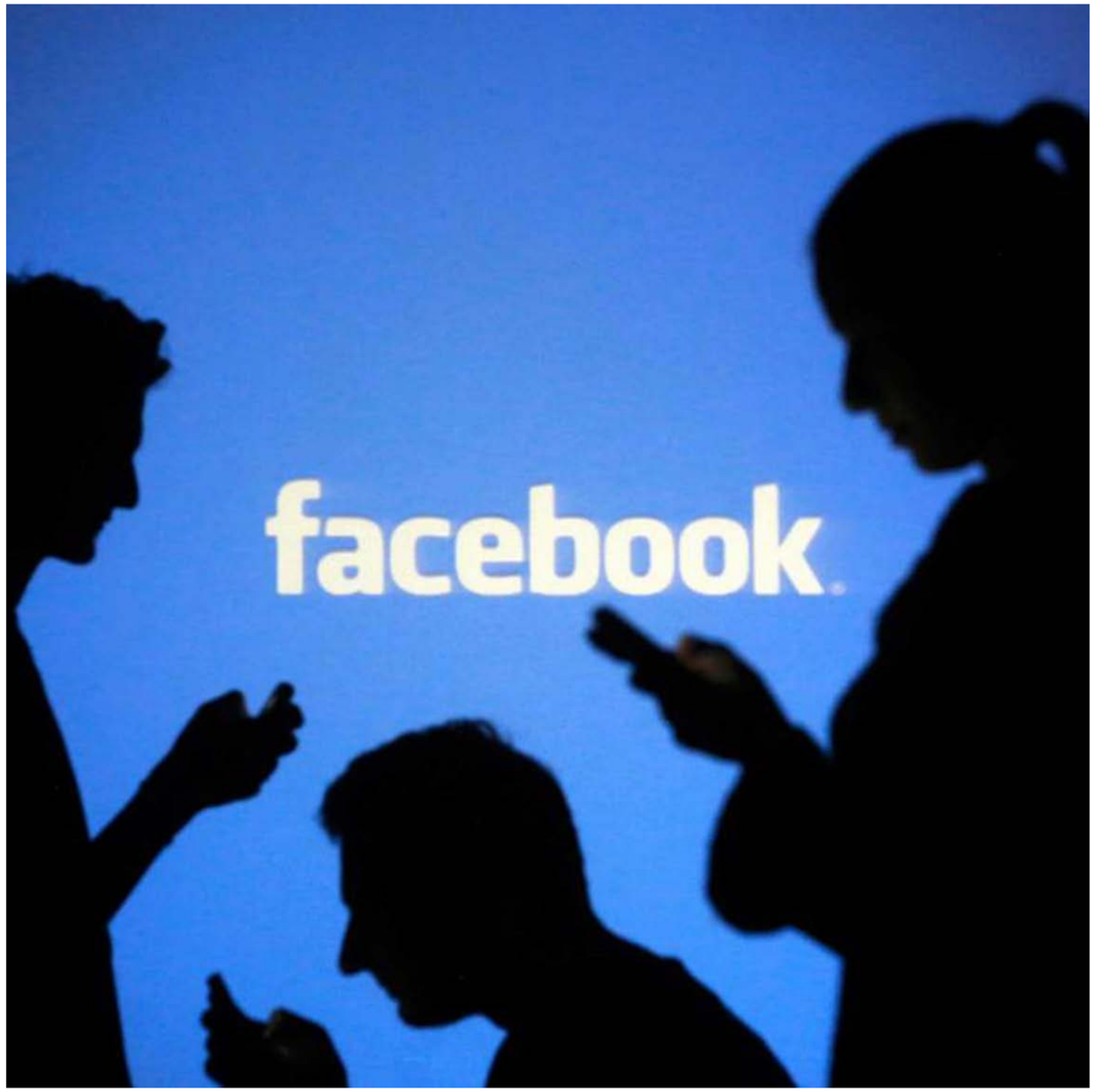
750.000 visitors each day (Grand Central New York)

Times Square, New York, 2017, https://en.wikipedia.org/wiki/Times_Square
Grand Central, New York, https://www.grandcentralterminal.com/about/

PAST: PHONE CALL

The Payphone, Cuba, 1967, Ed van der Elsken

NOW: SOCIAL MEDIA PLATFORM



More than 2.000.000.000 worldwide users (Facebook)

https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/

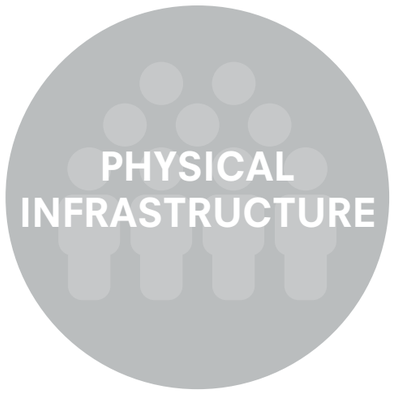
DENSITY = FOCAL POINT FOR ACTIVITY

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

OFFERING CONVENIENCE AND FACILITIES

Schiphol Plaza, ARUP (left)
Stembureau at Utrecht Centraal, 2018, ANP (right)

CHALLENGE 1: ACTIVITY IS DISAPPEARING ONLINE



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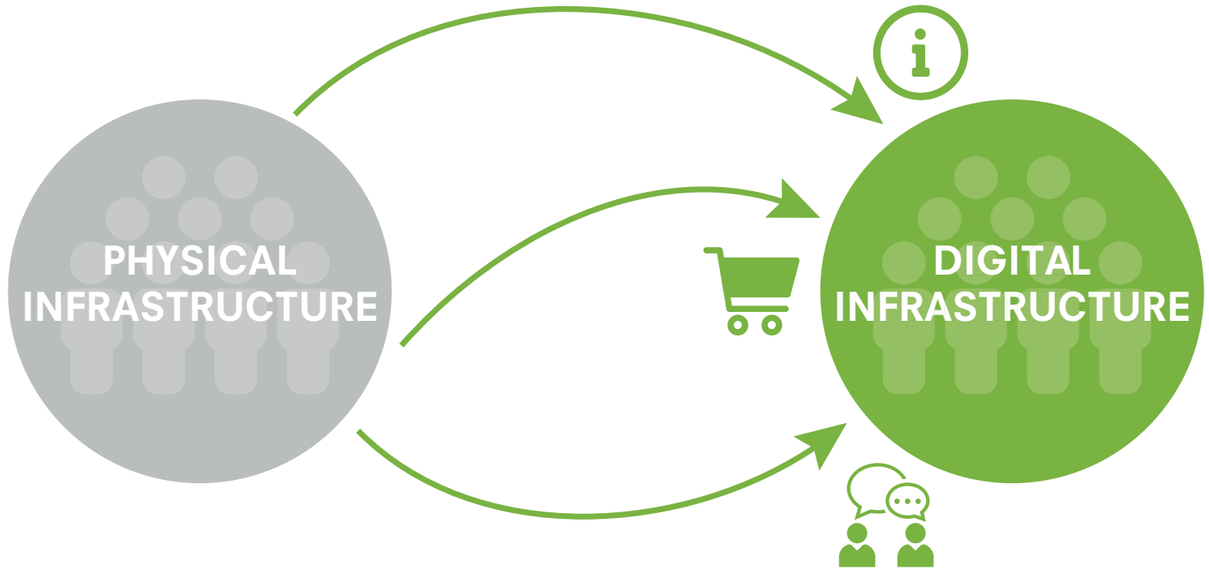


WHAT IF... DIGITAL ACTIVITY PREVAILS?

2.2B
Facebooks

200MM
Pinterests

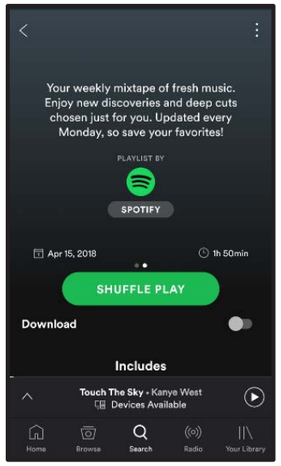
170MM
Spotifys

125MM
Netflixes

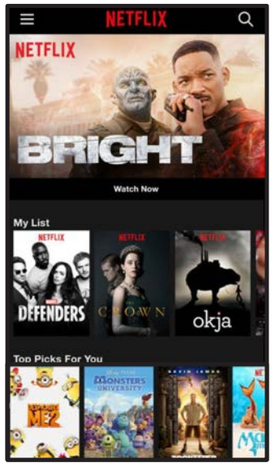
Newsfeed

Discovery

Music



Video



Meeker, M. (2018). Internet Trends 2018.

CHALLENGE 2: DIGITAL LIFESTYLES AFFECT BEHAVIOUR IN PHYSICAL ENVIRONMENT

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WHAT IF...WE LIVE IN A DIGITAL COCOON?

Filter Bubble > Non Critical

https://www.ted.com/playlists/470/how_to_pop_our_filter_bubbles (left)

WHAT IF...WE LIVE IN A DIGITAL COCOON?

Filter Bubble > Non Critical

Online Behaviour > Unsocial/Unaware

https://www.ted.com/playlists/470/how_to_pop_our_filter_bubbles (left)
Absorbed by Light, Gali May Lucas, 2018 (middle)

WHAT IF...WE LIVE IN A DIGITAL COCOON?

Filter Bubble > Non Critical

Online Behaviour > Unsocial/Unaware

Constant motion > Introvert

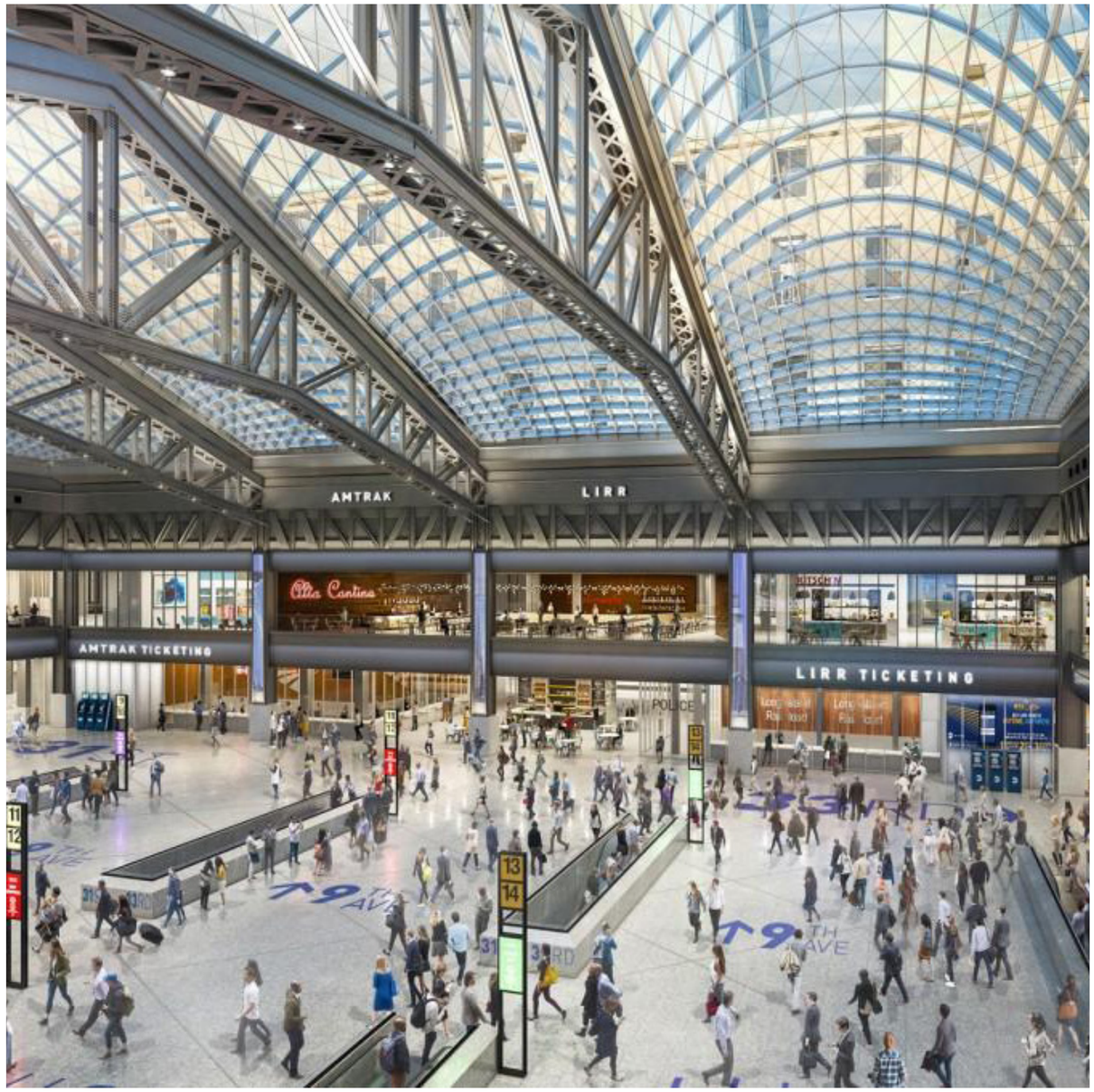
https://www.ted.com/playlists/470/how_to_pop_our_filter_bubbles (left)
Absorbed by Light, Gali May Lucas, 2018 (middle)
Cocoonmask, Jennie Pineus, 2000 (right)

NEVERTHELESS TRANSPORTATION REMAINS A PHYSICAL MEAN

RESEARCH QUESTION

What is the future role of **space in-between transport modes as urban intersections with high density of users** influenced by new digital lifestyles?

EXAMPLE: STATIONHALL

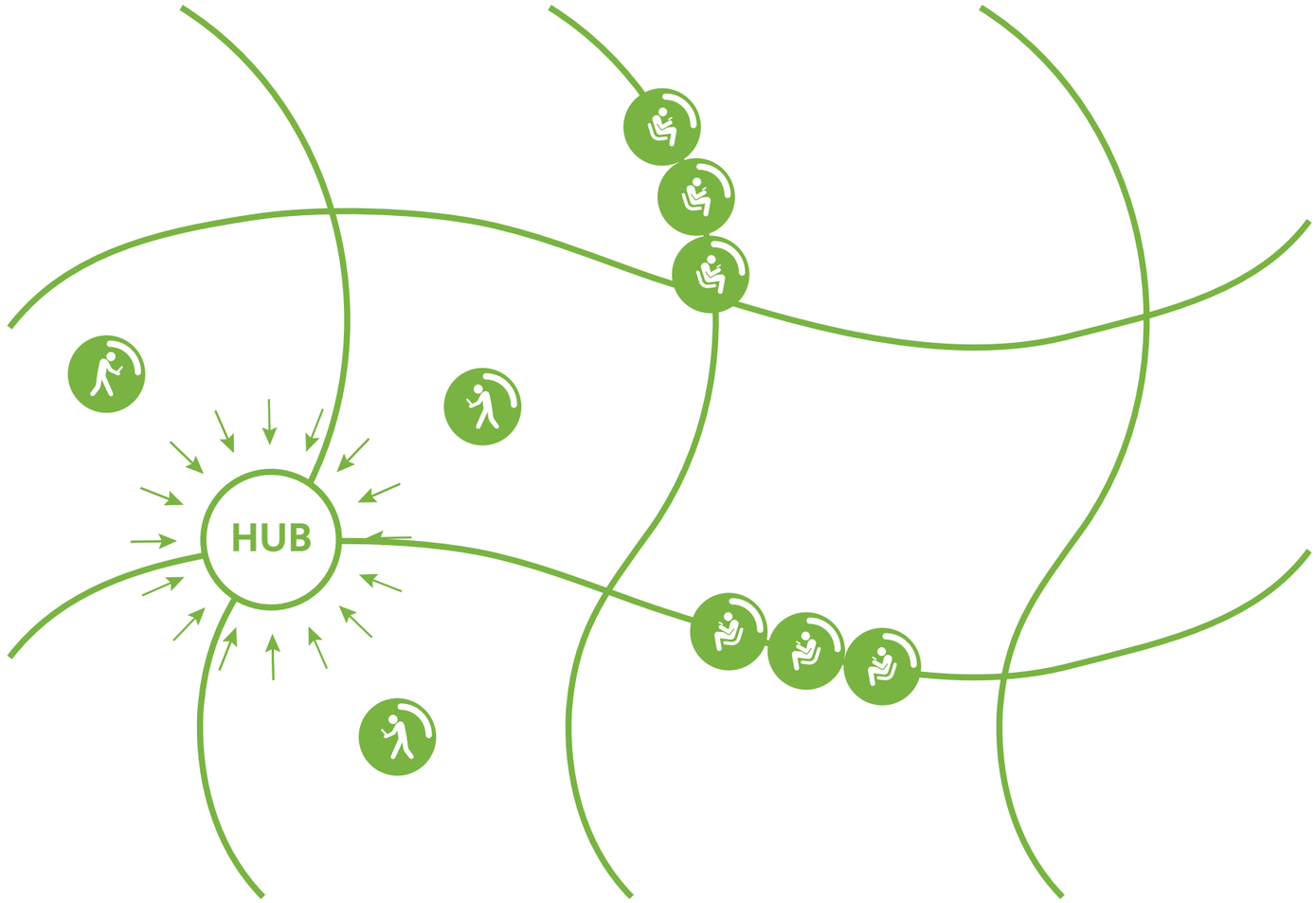


Renovation of Pennsylvania Station, New York, 2017, SOM

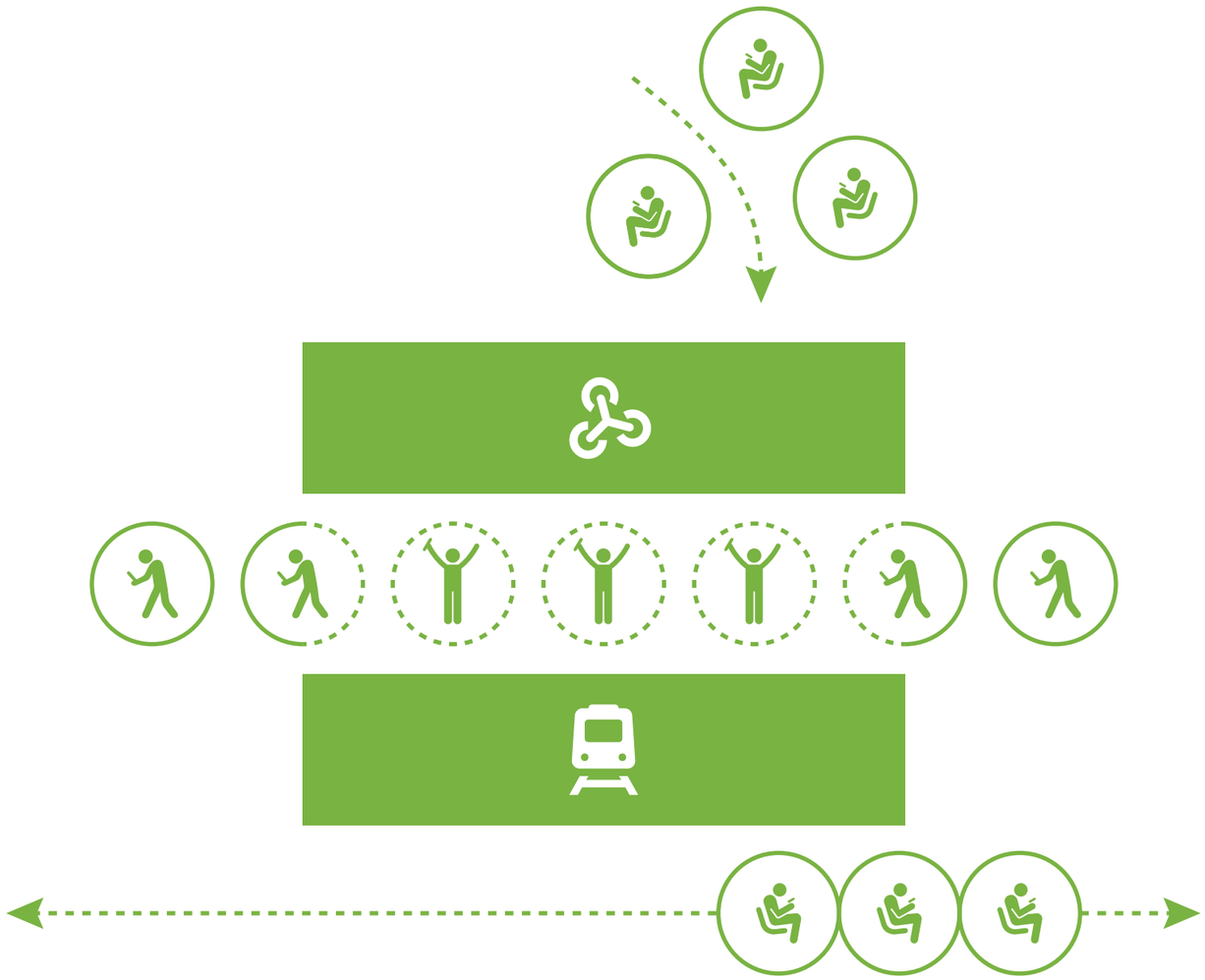
AMBITION

The in-between space of a **physical transport** hub with high densitiy of users **should make use of activity that can’t be done online** and **reflect on new digital lifestyles**

SCENARIO: PEOPLE LIVE IN A BUBBLE



DESIGN QUESTION: WHAT HAPPENS INBETWEEN?

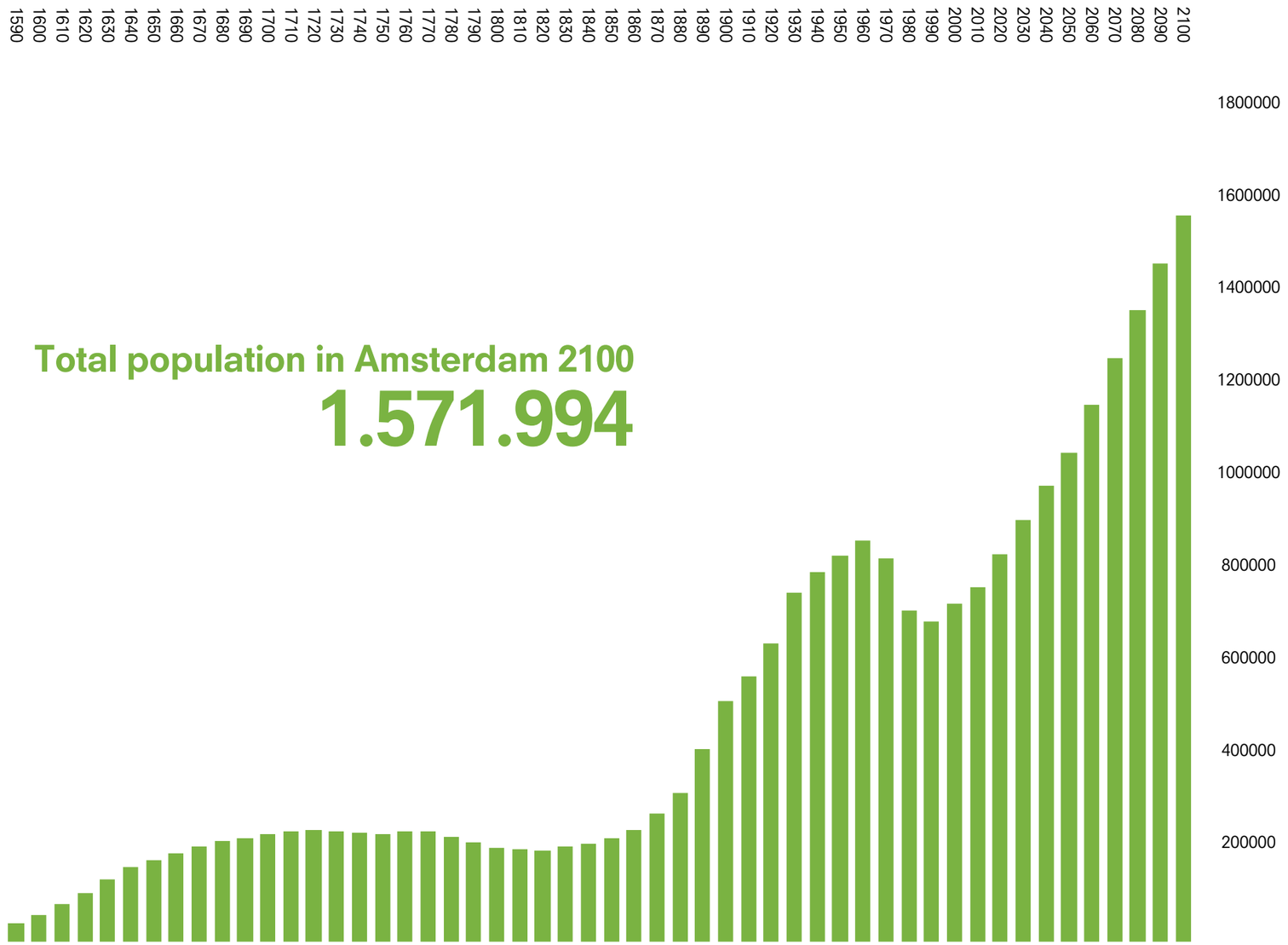


RESEARCH

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

AMS MID CITY: CENTRAAL

POPULATION GROWTH



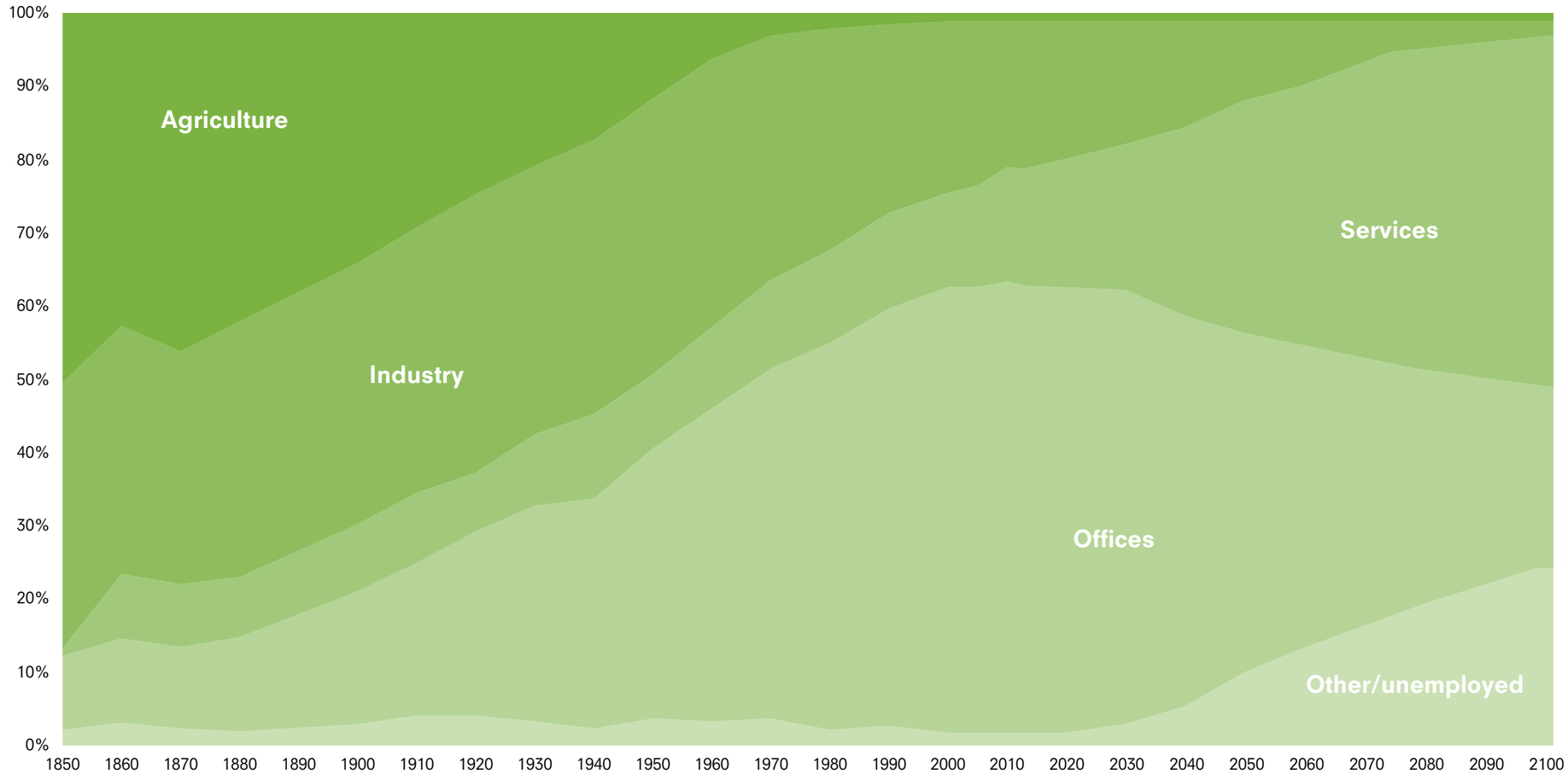
Total population in Amsterdam 2100

1.571.994

Author based on OIS Amsterdam, 2018, Gemeente Amsterdam from https://www.ois.amsterdam.nl/feiten-en-cijfers/

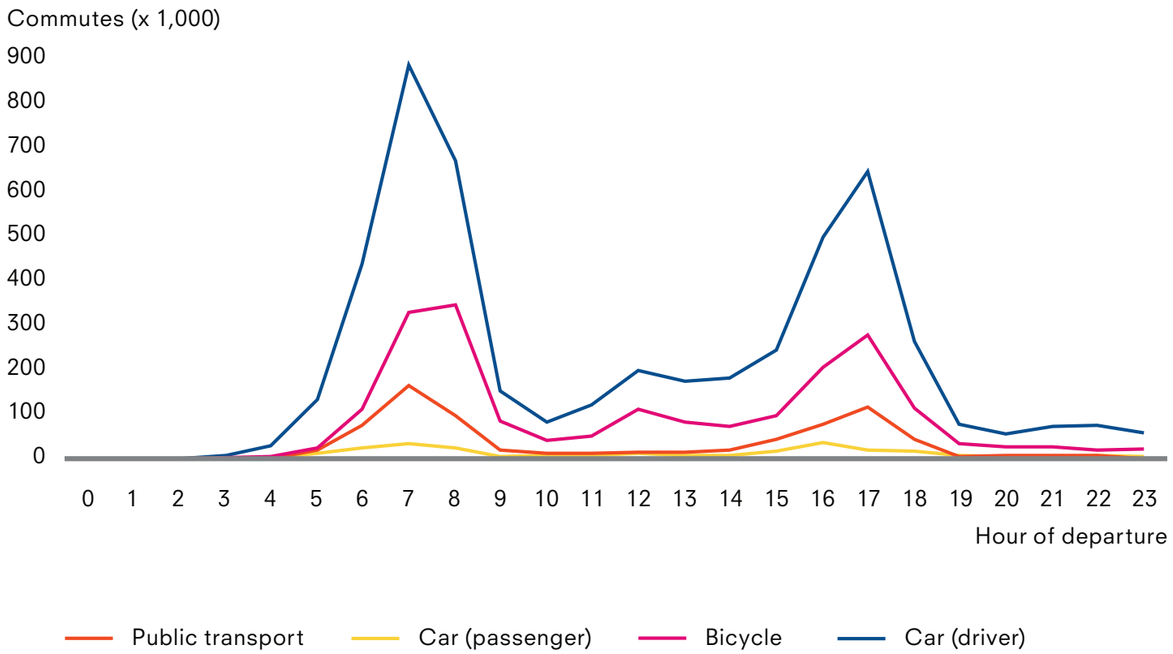
SCENARIO FOR 2100: DENSIFICATION

AUTOMATION OF WORK (OCCUPATION)

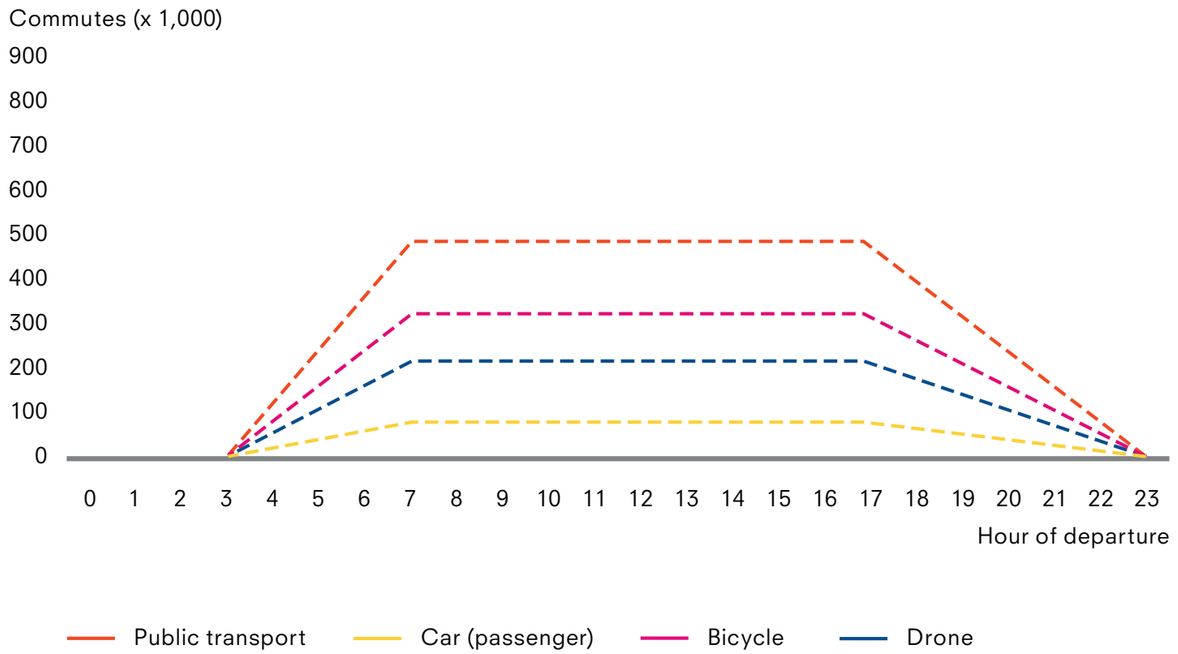


Author based on Projection of US job composition through the years, NPR.org, 2015

SCENARIO FOR 2100: MORE FREE TRAVEL TIME



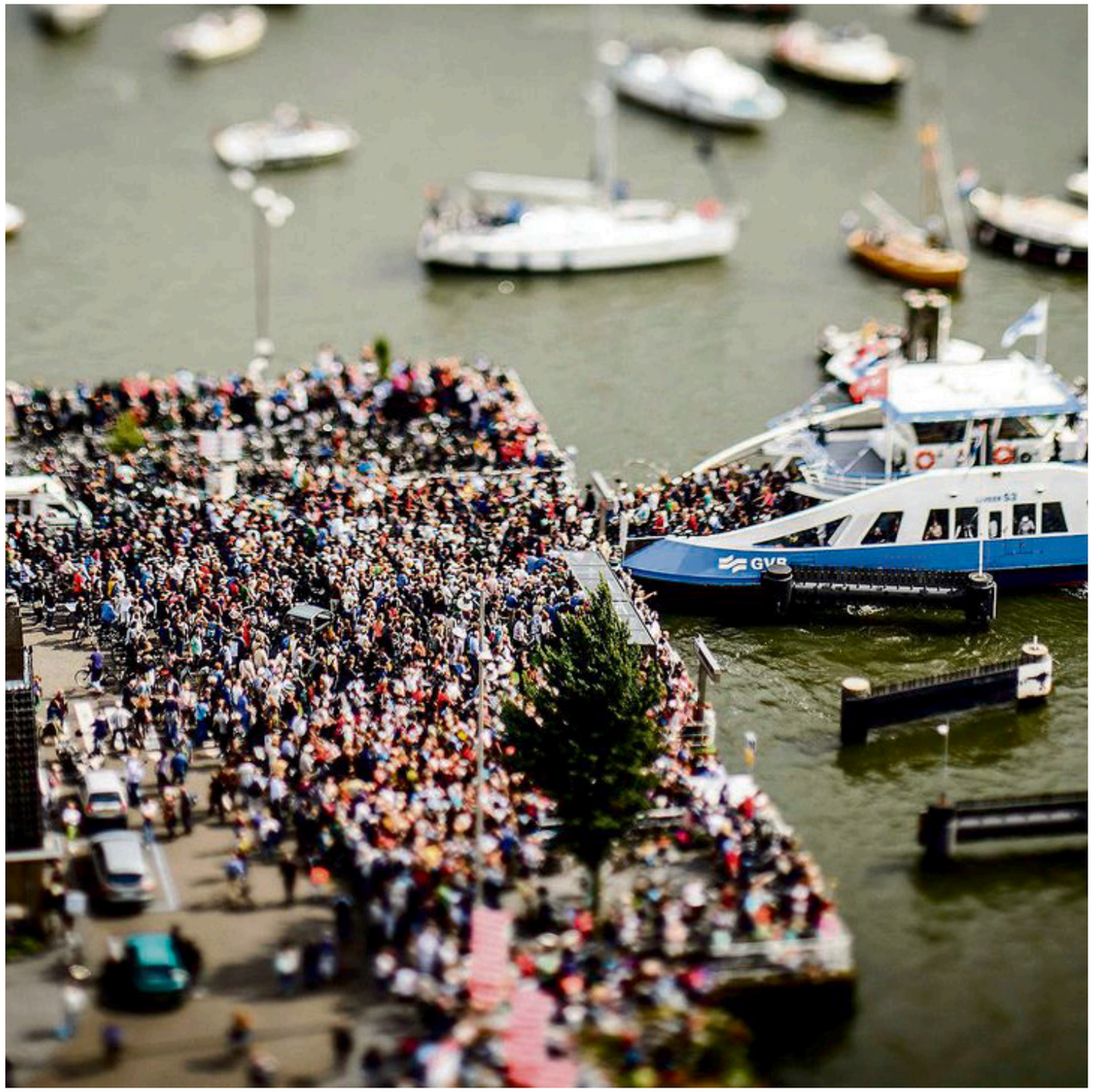
Now: commuting peak hours

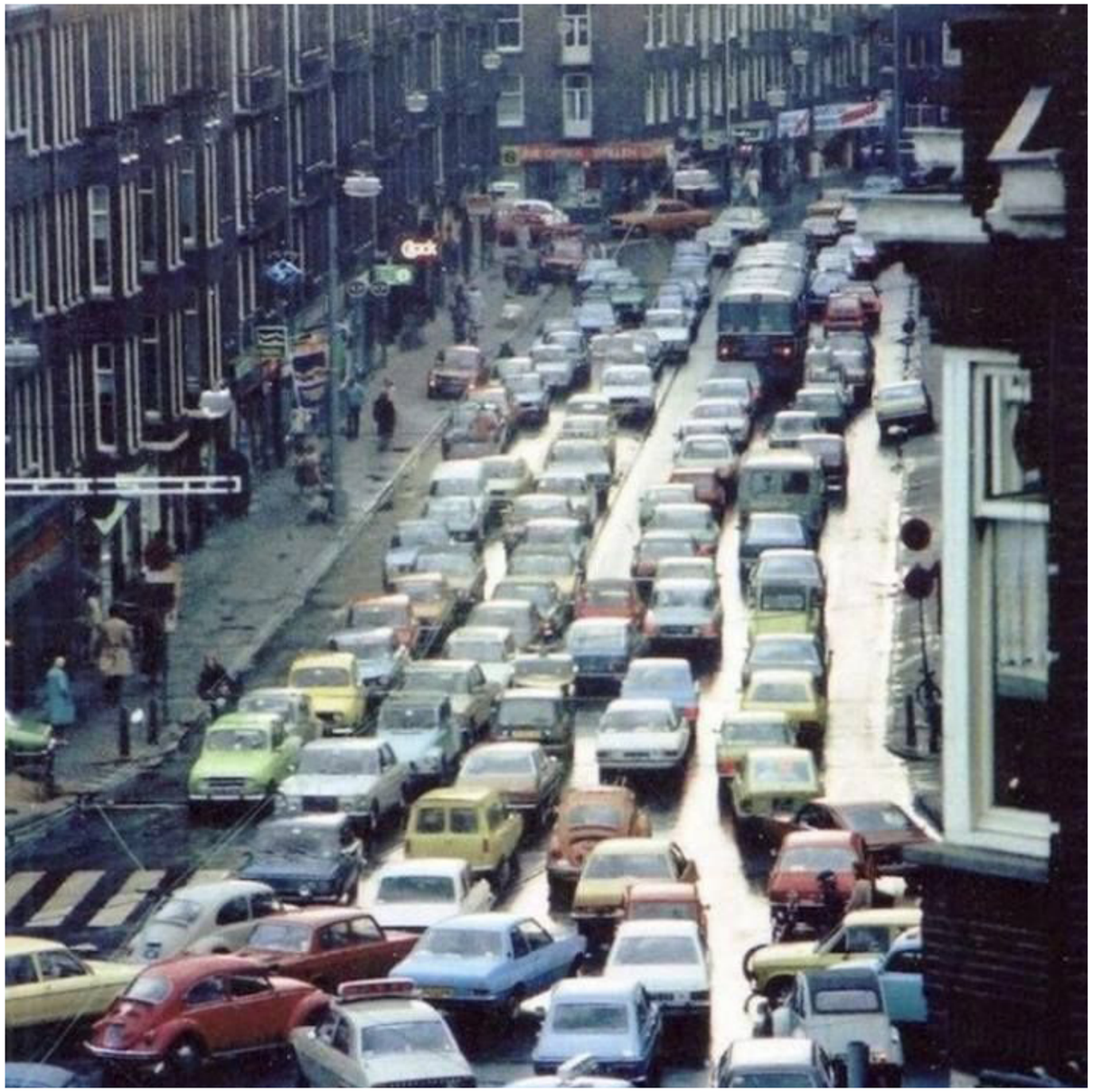


Future: always off peak

Author based on Commuting by working persons on normal weekdays in Transport and Mobility, CBS, 2016

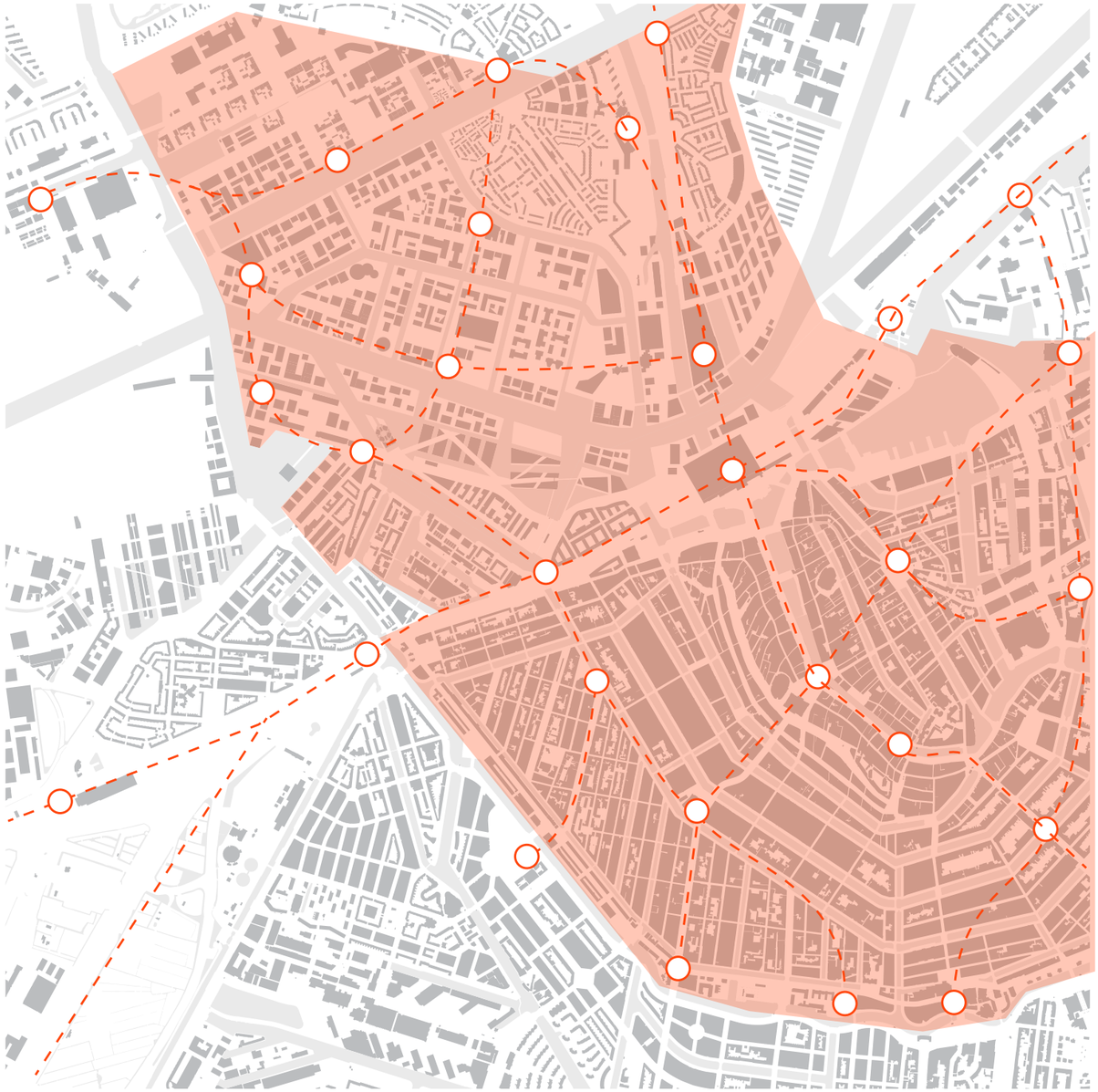
INTENSIFIED USE OF PUBLIC TRANSPORT & REQUEST FOR CAR FREE CENTRE (MOBILITY)





Drukte op de pont over het IJ, 2015, ANP (left)
Traffic jam, Amsterdam, 1970 (right)

SCENARIO FOR 2100: UNDERGROUND NETWORK & PASSENGER DRONES

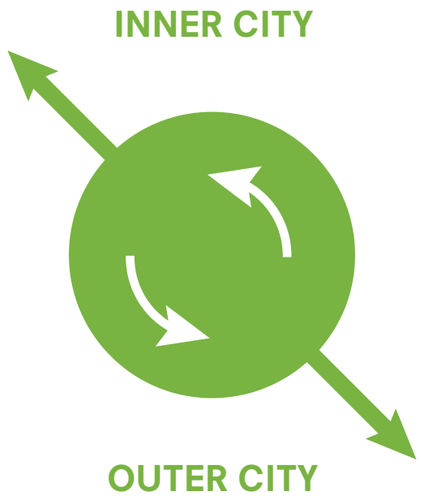


https://www.dezeen.com/2017/02/14/dubai-begin-flying-world-first-passenger-drone-transport-technology-news/

CONCLUSION: NEW TRANSPORT HUB

Traveling can’t be done online
(lifestyle)

CONCLUSION: NEW TRANSPORT HUB



Traveling can’t be done online
(lifestyle)

Transition of transport modes
(mobility)

CONCLUSION: NEW TRANSPORT HUB

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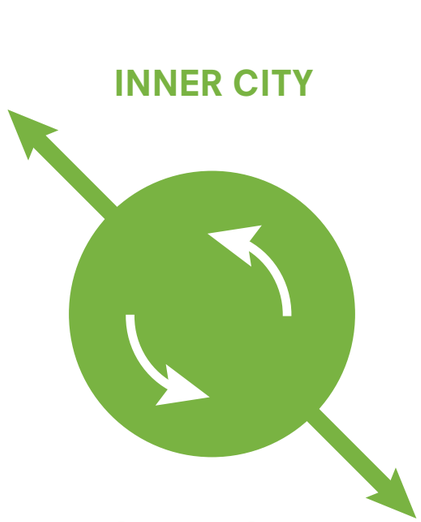
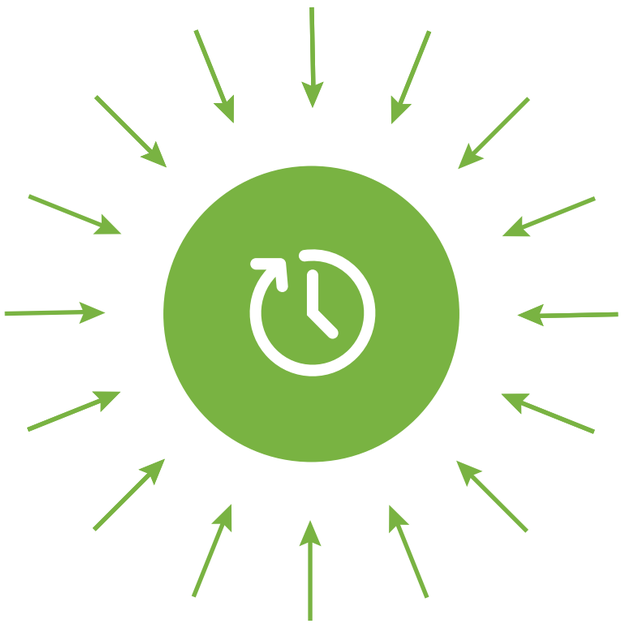


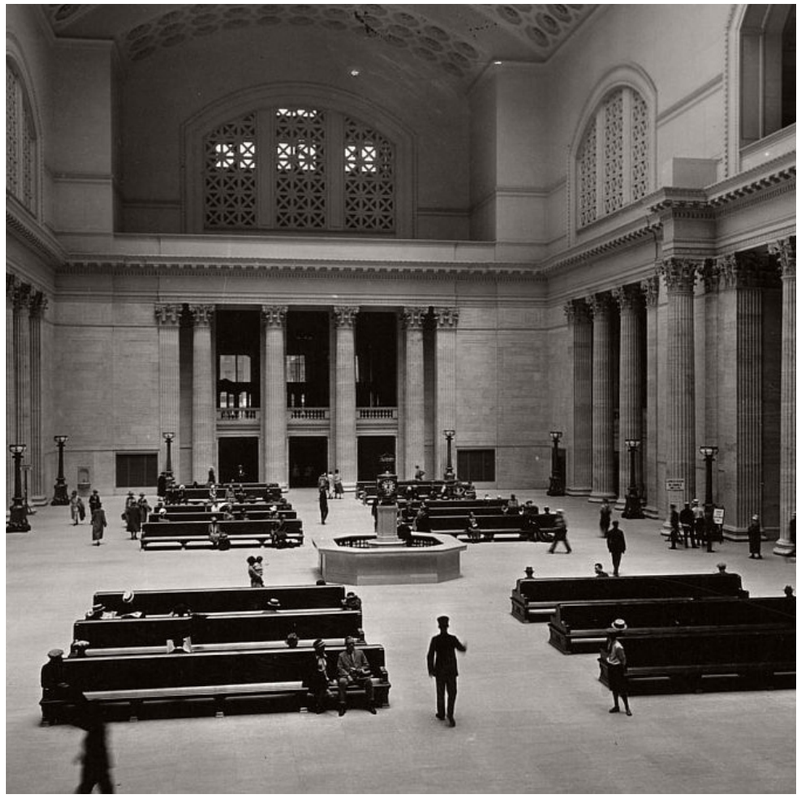
Transition of transport modes
(mobility)



Intersection of constant activity
(occupation)

PROGRAM?

HISTORY OF STATIONHALL



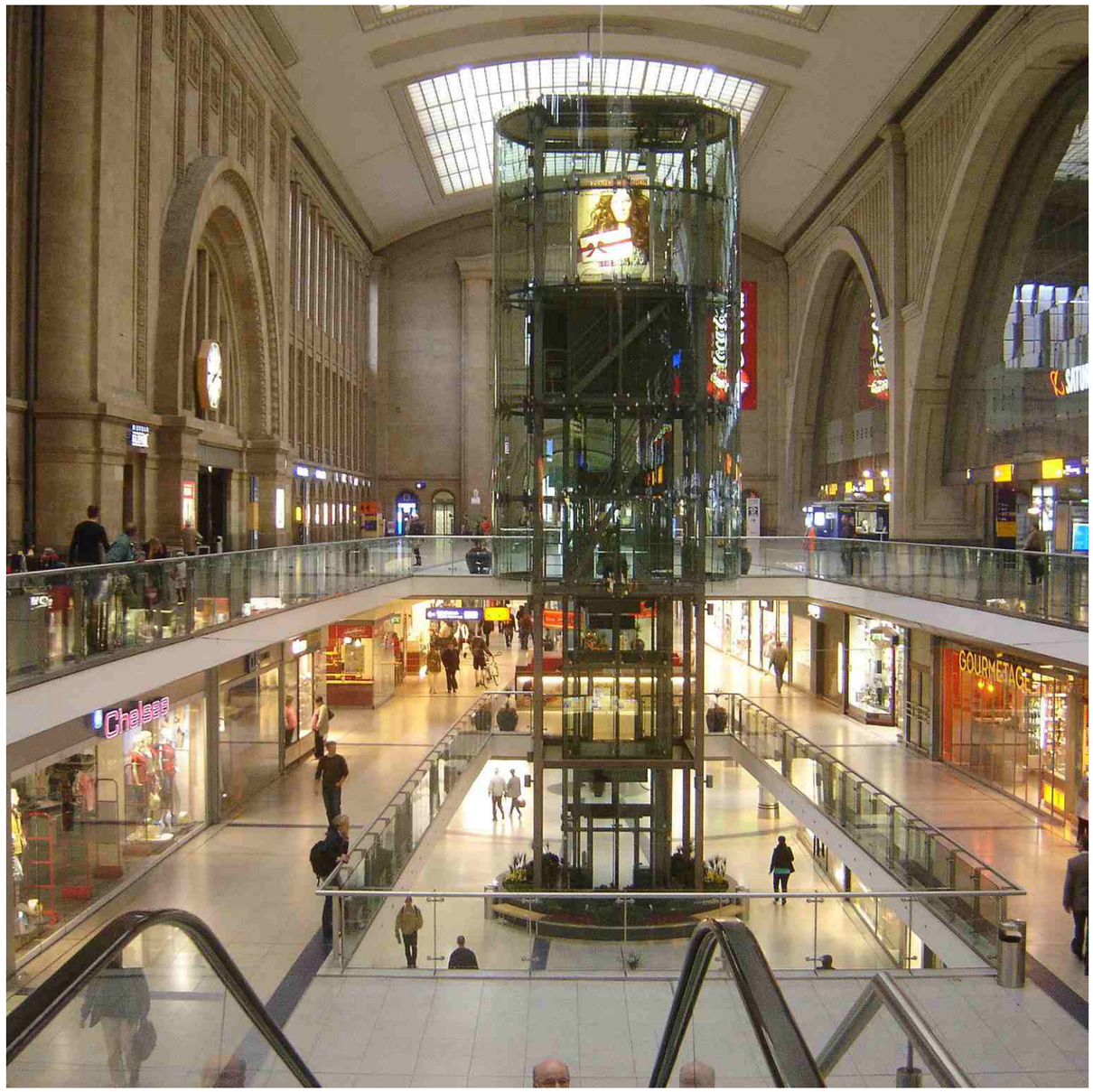
Chicago Union Stationhall, 1925

Pennsylvania Station New York, 1958

Amsterdam Centraal, 1957

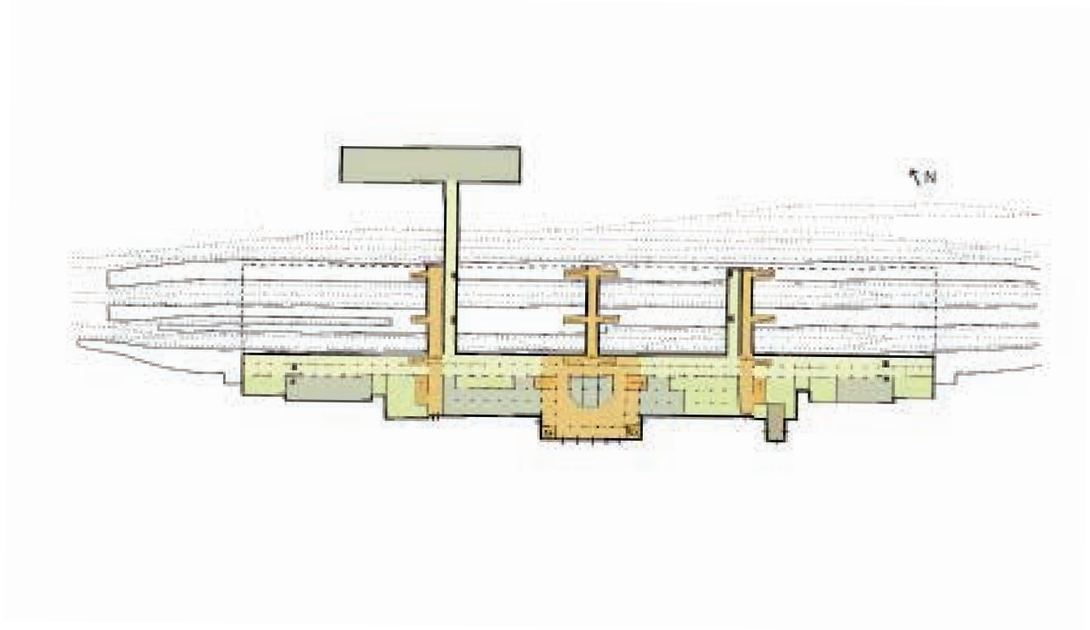
Chicago's Union Stationhall, 1925 (left)
Pennsylvania Station, New York, 1958, Nick deWolf (middle)
Stationshal Amsterdam Centraal, 1957, G.L.W. Oppenheim (right)

STATIONHALL HAS EVOLVED INTO A CONSUMING MACHINE



Leipzig Station in Shannon, K., & Smets, M. (2010). The landscape of contemporary infrastructure.

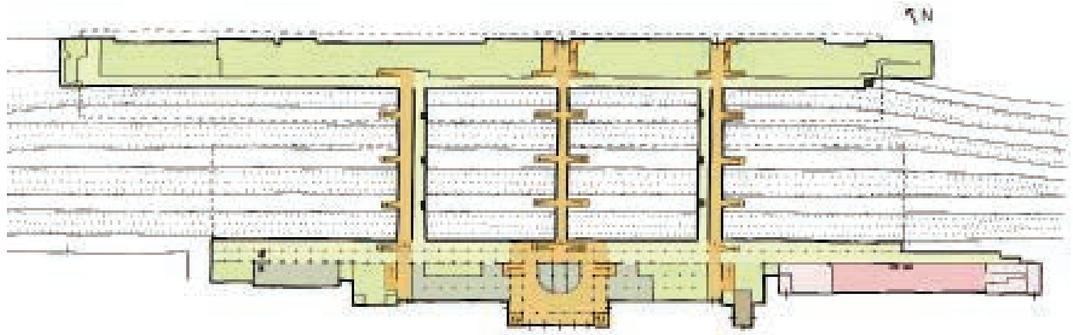
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL



1889

http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen

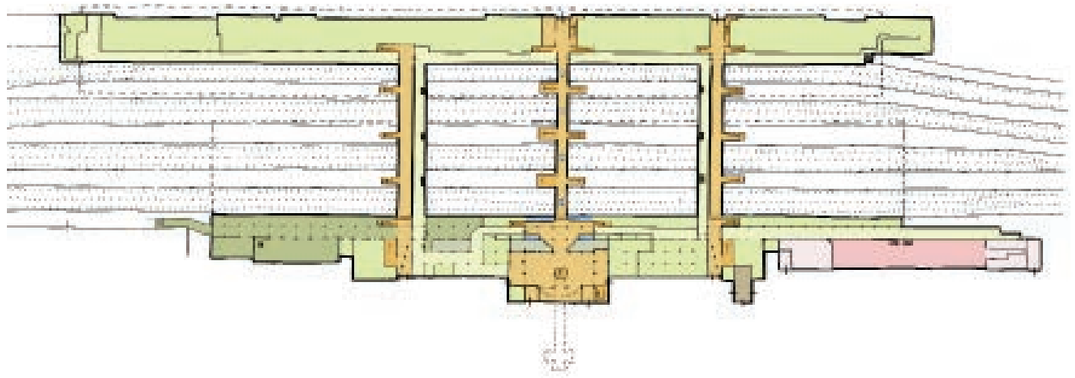
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL



1924

http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen

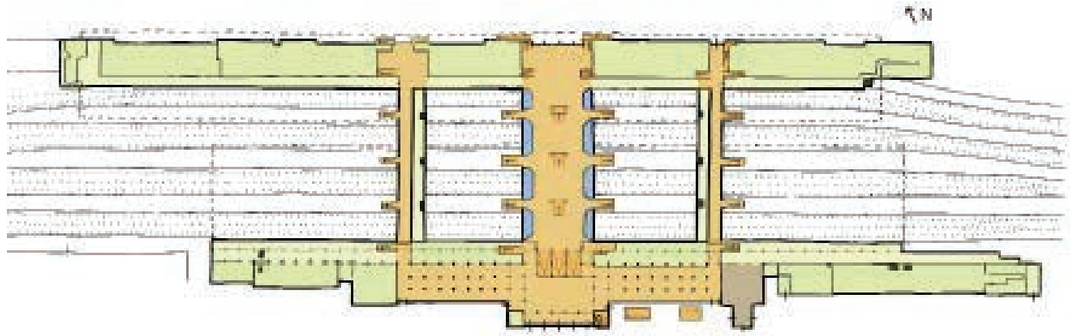
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL



1959

http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen

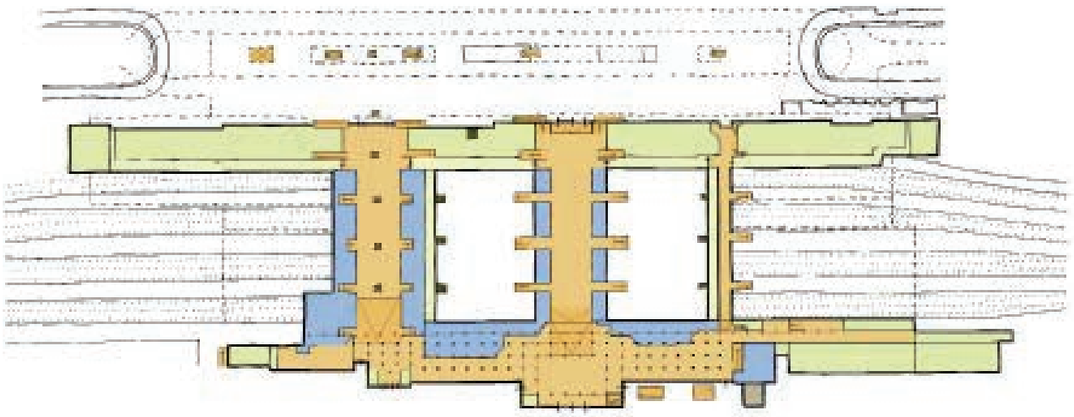
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL



1985

http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen

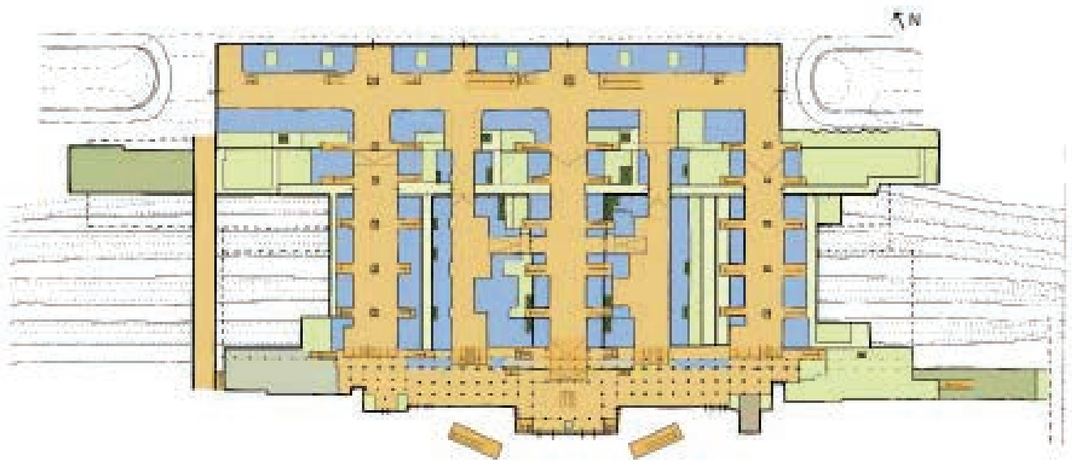
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL



2004

http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen

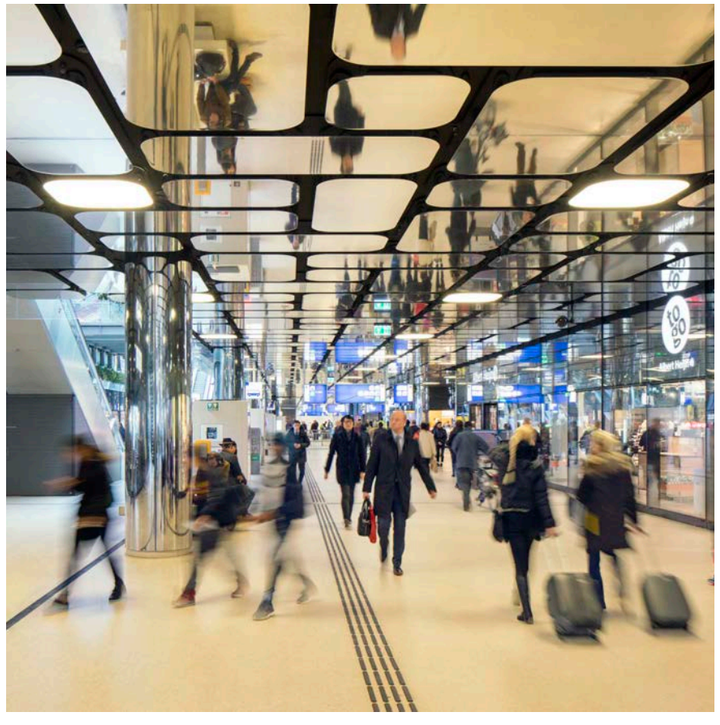
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL



2017

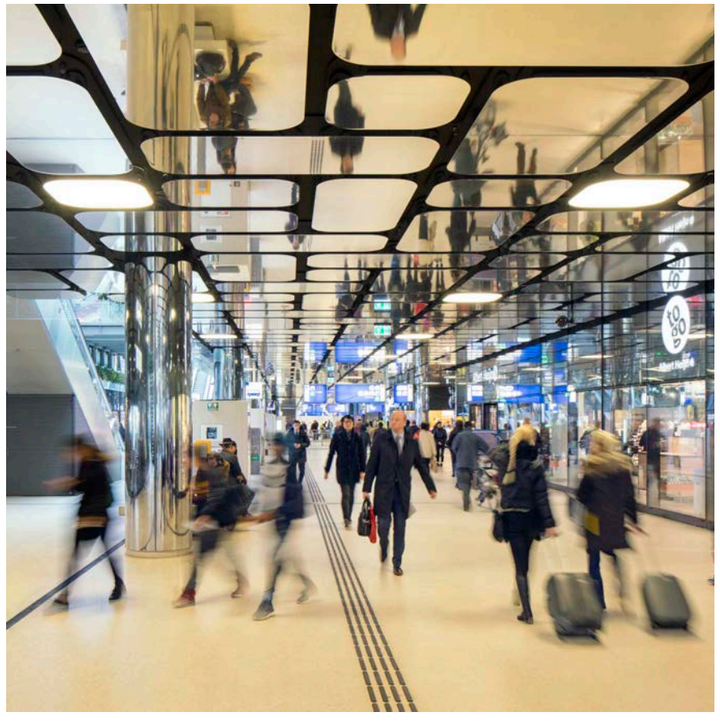
http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen

NATURAL CROWD FOR RETAIL, PERFORMERS, ADVERTISEMENT AND ARTISTS



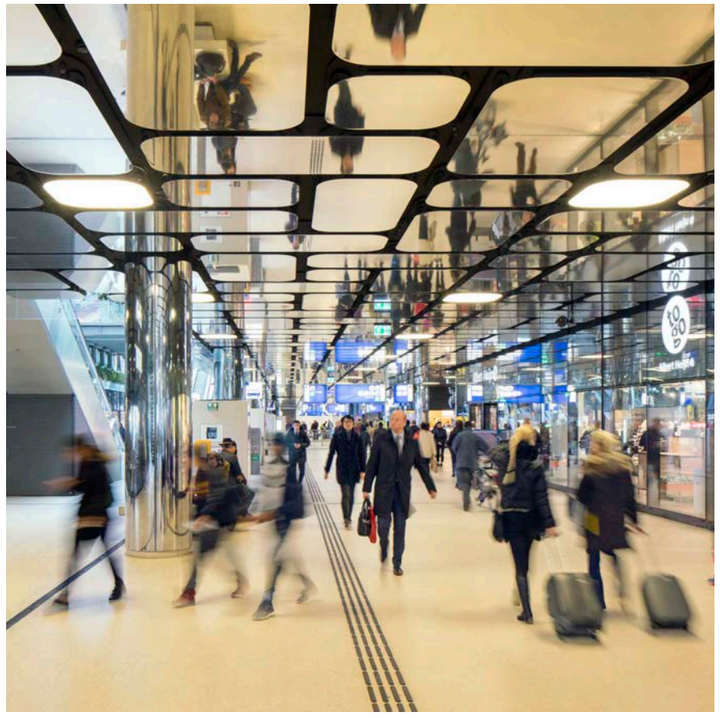
IJhal Amsterdam Centraal, 2017, Jan Bitter (top left)

NATURAL CROWD FOR RETAIL, PERFORMERS, ADVERTISEMENT AND ARTISTS



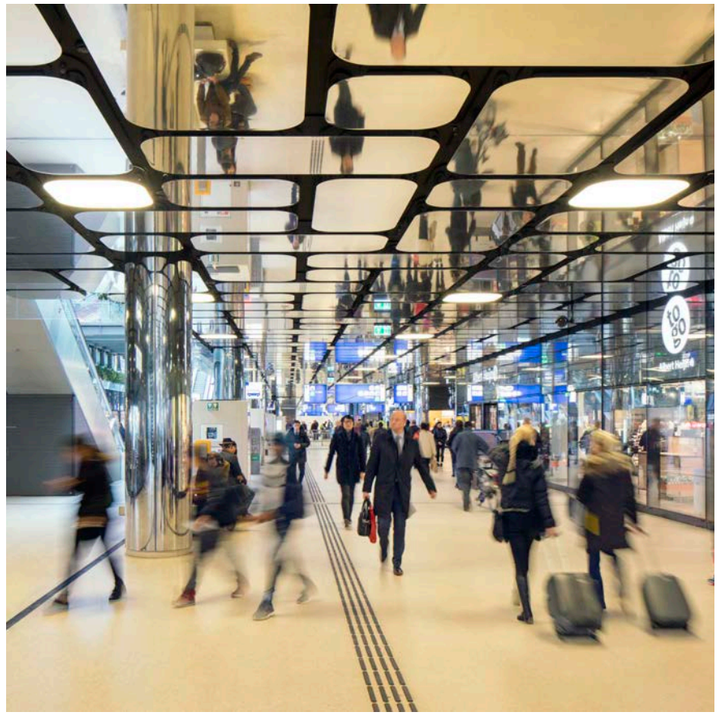
IJhal Amsterdam Centraal, 2017, Jan Bitter (top left)
Piano at Amsterdam Centraal, unknown (top right)

NATURAL CROWD FOR RETAIL, PERFORMERS, ADVERTISEMENT AND ARTISTS



IJhal Amsterdam Centraal, 2017, Jan Bitter (top left)
Piano at Amsterdam Centraal, unknown (top right)
Videoschermen, Amsterdam Centraal, SCN (bottom left)

NATURAL CROWD FOR RETAIL, PERFORMERS, ADVERTISEMENT AND ARTISTS



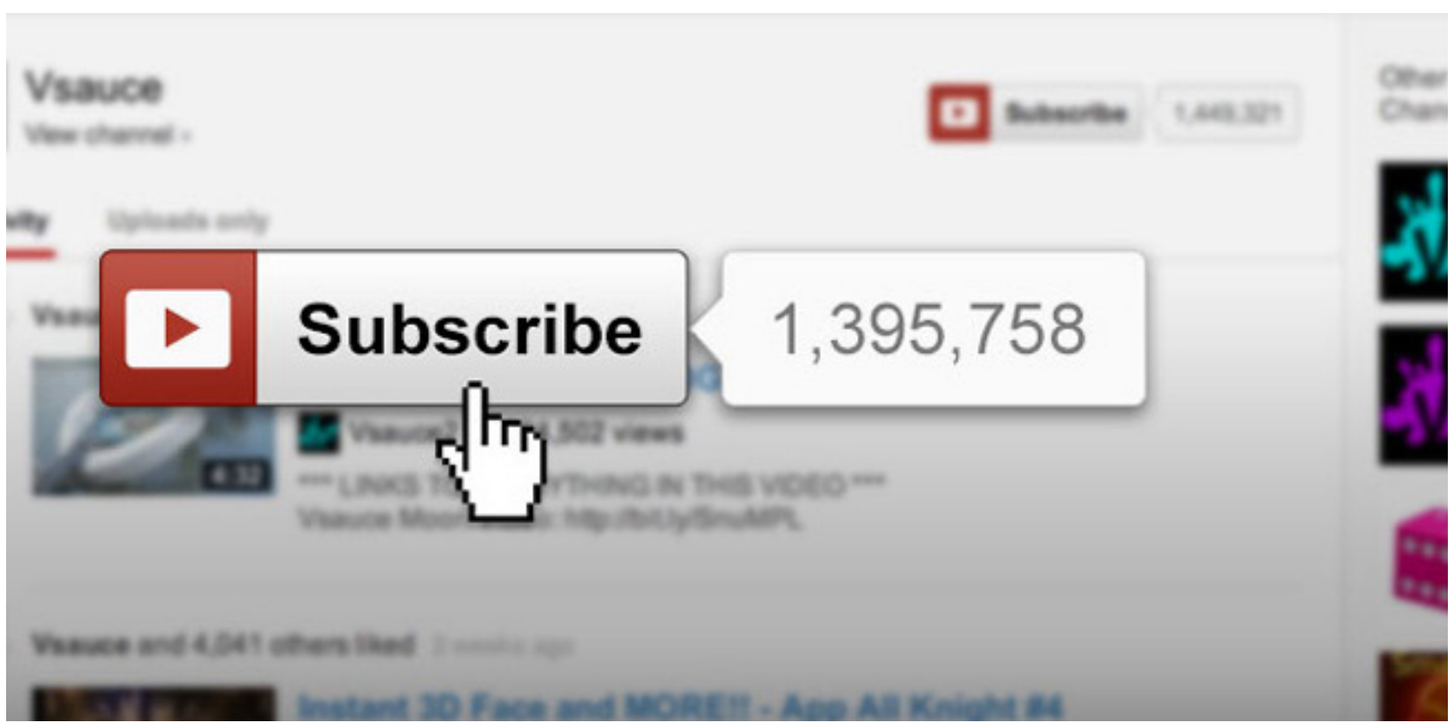
IJhal Amsterdam Centraal, 2017, Jan Bitter (top left)
Piano at Amsterdam Centraal, unknown (top right)
Videoschermen, Amsterdam Centraal, SCN (bottom left)
Party Like it's 1888, Amsterdam Centraal, Stefan Glerum (bottom right)

PEOPLE COME TO TRANSPORT HUB TO TRAVEL

DENSITY OF PEOPLE ATTRACTS ACTIVITY

ACTIVITY ALSO ATTRACTS NON-TRAVELLERS

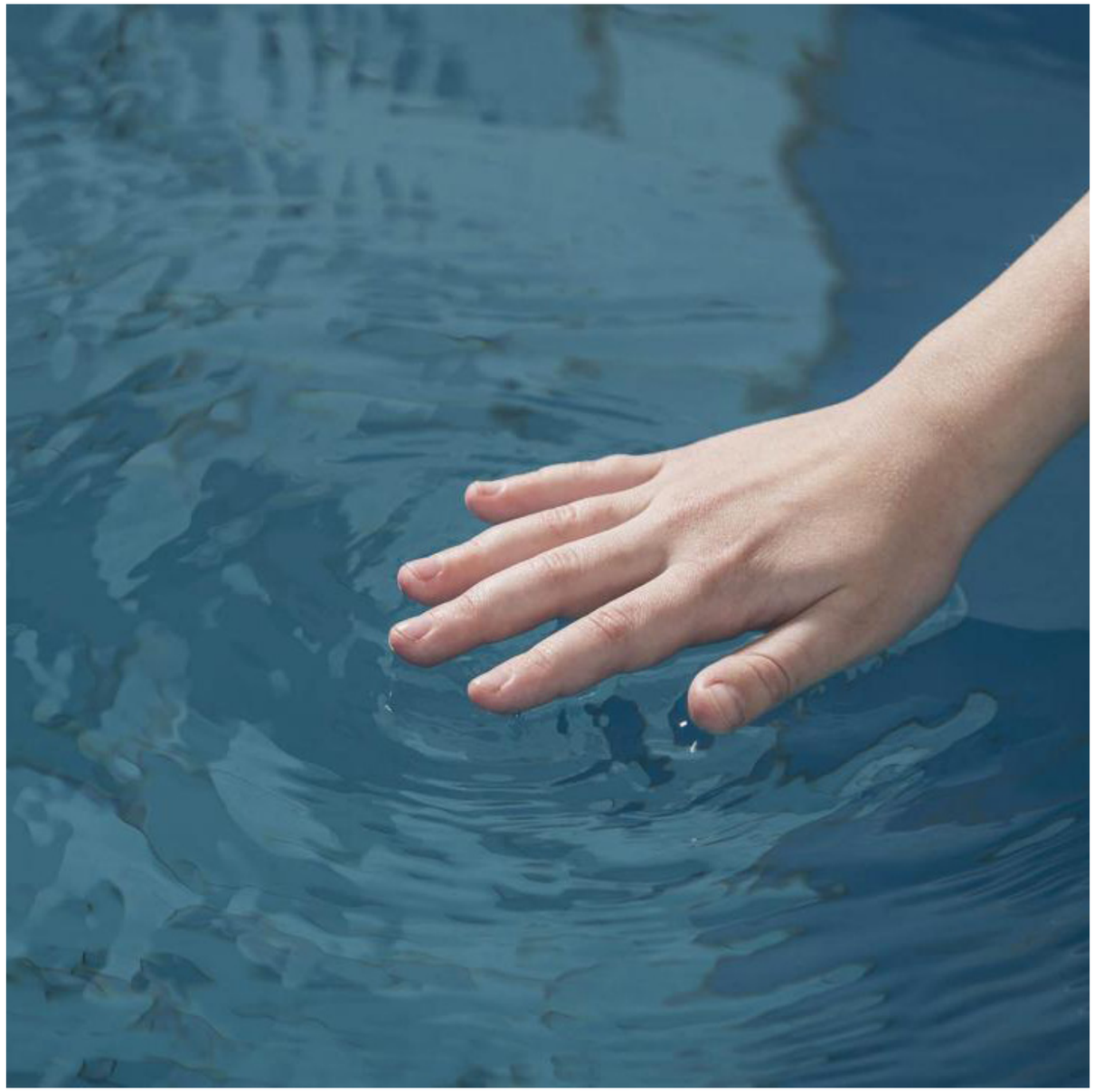
...HOWEVER NOWADAYS DENSITY IS ALSO EXPLOITED ONLINE



http://mediakix.com/2015/11/best-instagram-campaigns-brand-sponsored-posts-1/
https://www.want.nl/anoniem-online-shoppen/

DIGITAL ENVIRONMENT

THEREFOR DENSITY OFFLINE SHOULD ATTRACT NON-VIRTUAL ACTIVITY

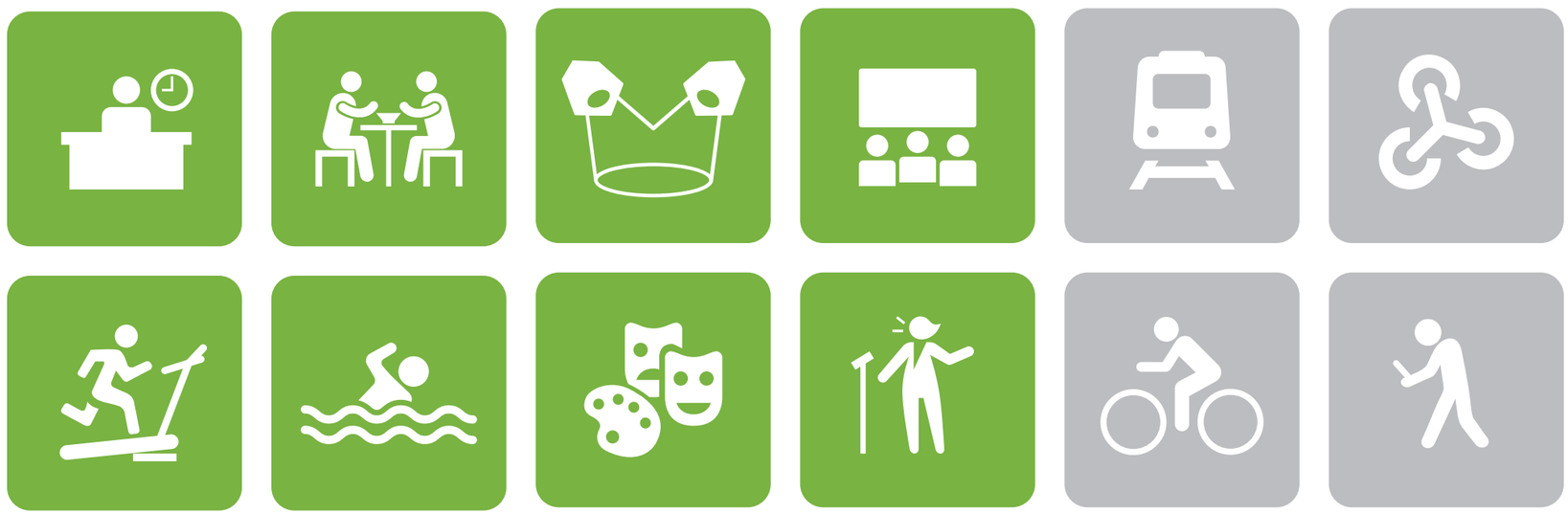


PHYSICAL ENVIRONMENT

DESIGN BRIEF

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

PROGRAM DEFINITION: PHYSICAL ACTIVITY ON THE GO



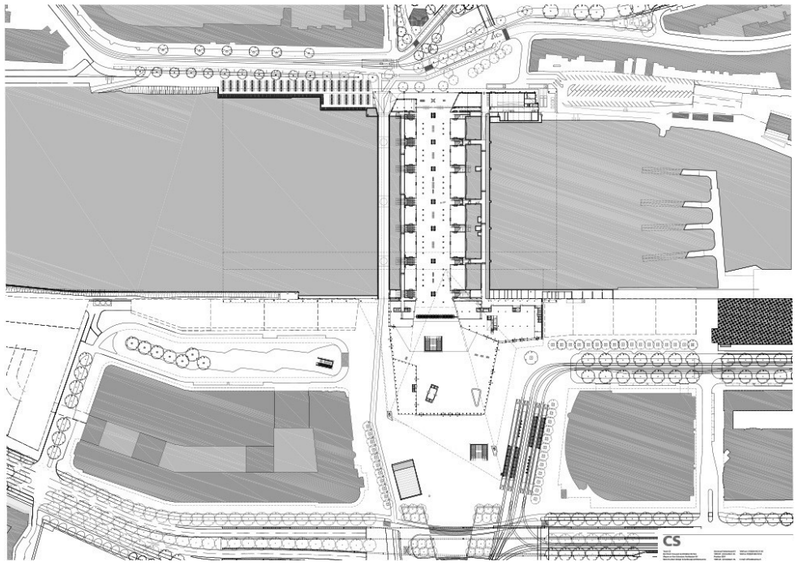
Discover, Exercise, Learn, Act

Transport

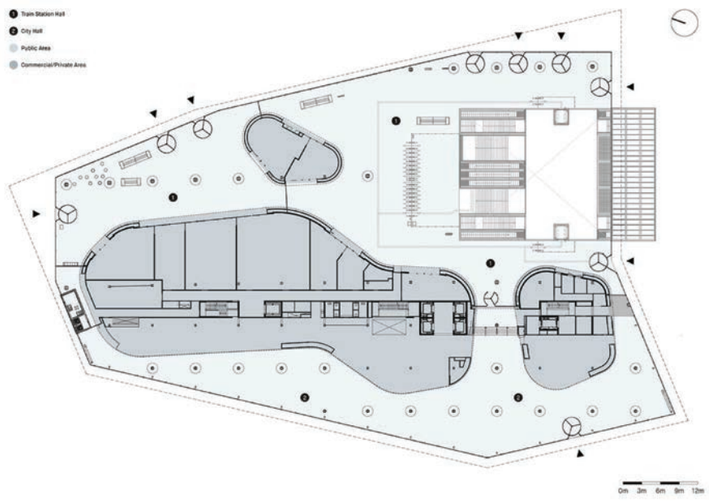
EXAMPLES OF PHYSICAL ACTIVITIES

WORM, Rotterdam, 2012Architectuen (top left)
Xiaomi Showroom, Beijing (top right)
http://artisticthings.com/theres-a-robot-among-us/ (bottom left)
Digital Art Museum, Tokyo, teamLab (bottom right)

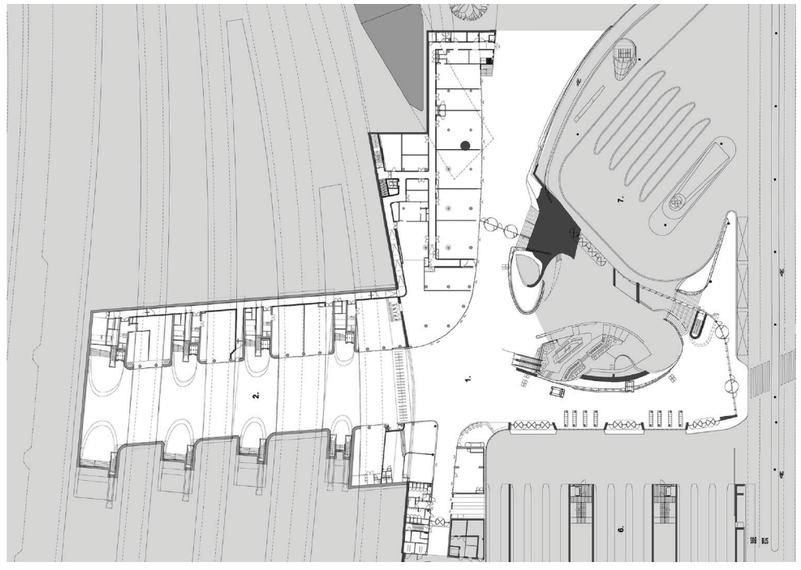
SIZE



ROTTERDAM 46000 M2



DELFT 28320 M2

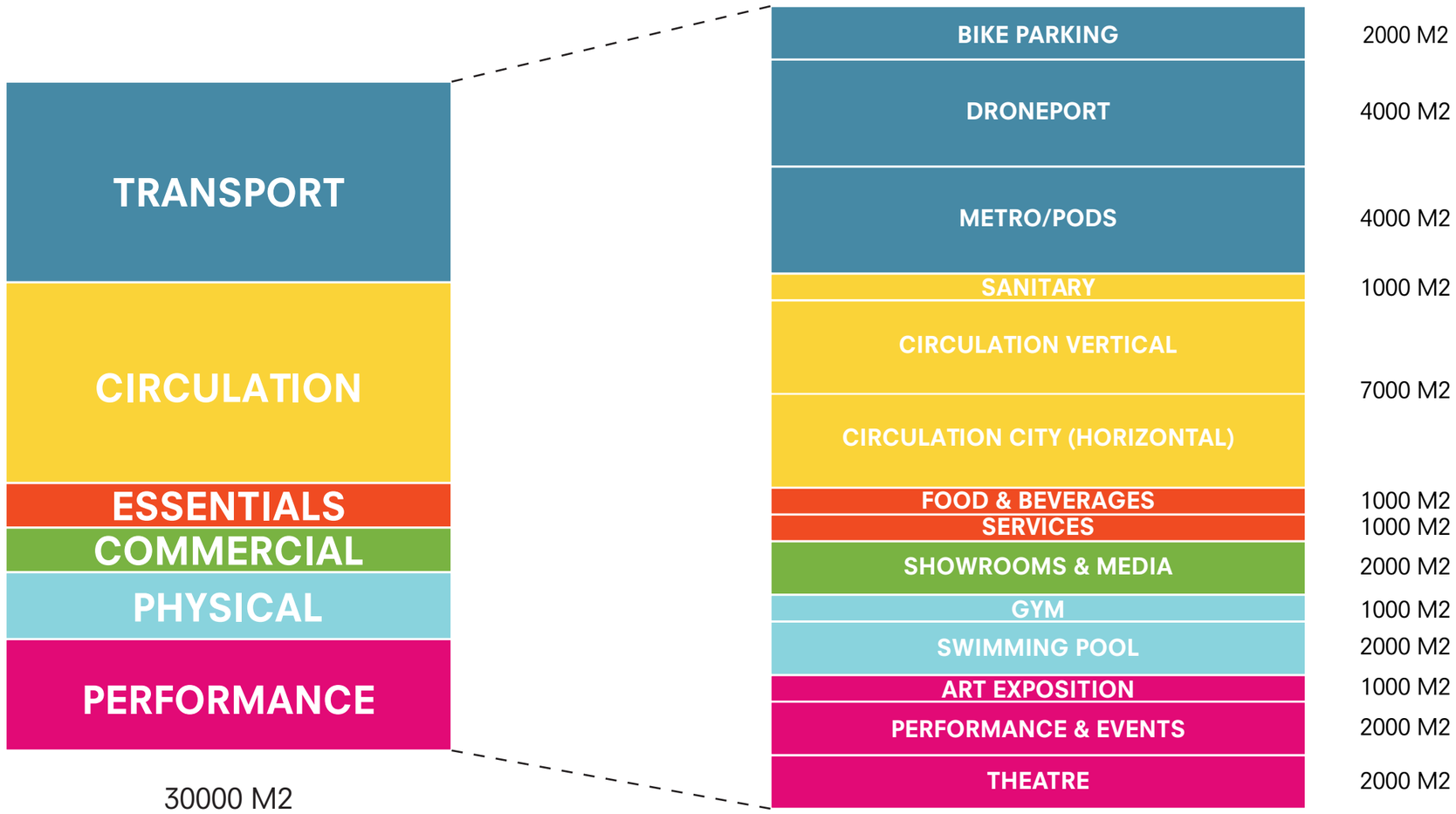


ARNHEM 21750 M2

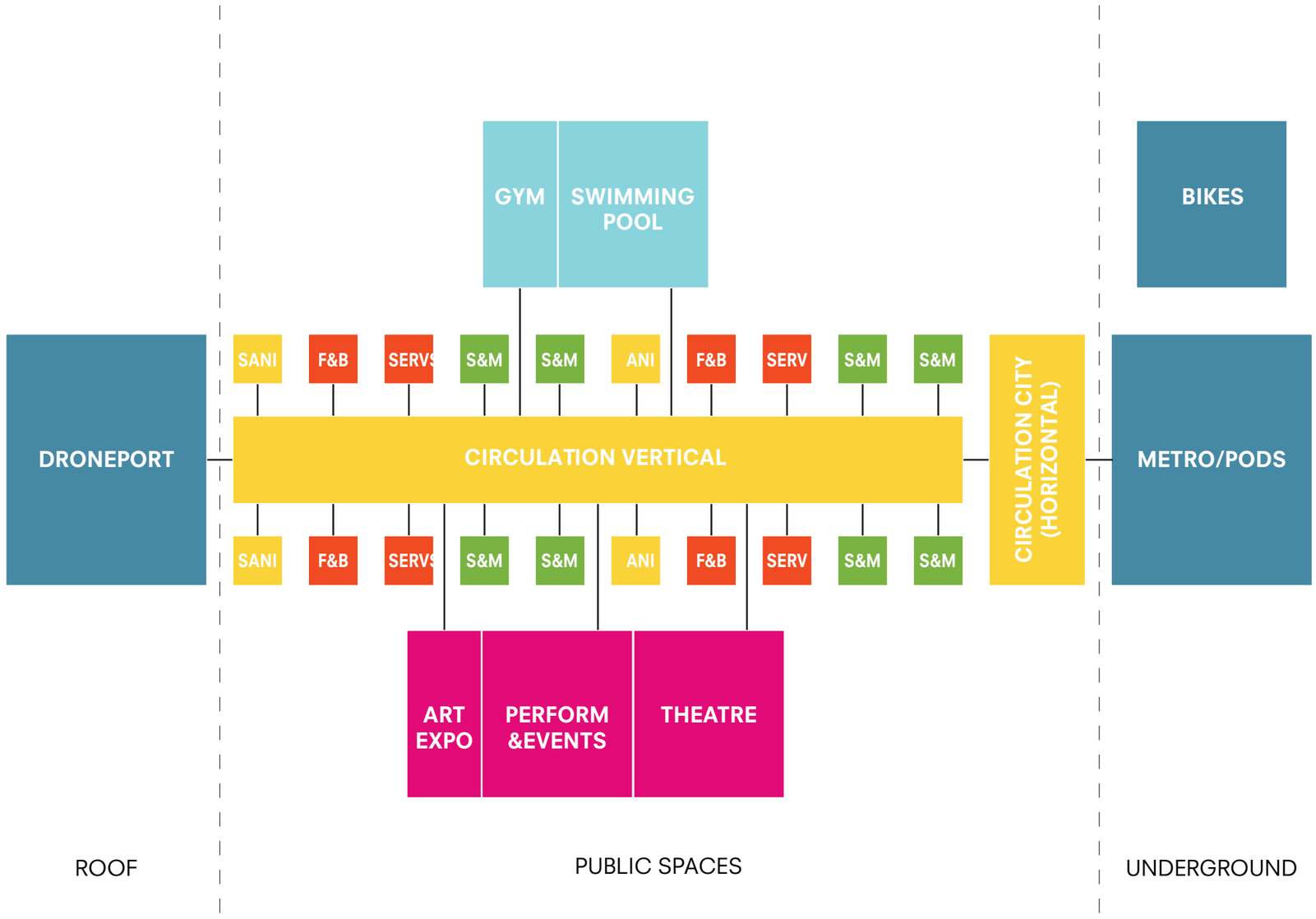
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Rotterdam Centraal, Benthem & Crouwel Architects (left)
Delft Station, Mecanoo (middle)
Arnhem Centraal, UN Studio (right)

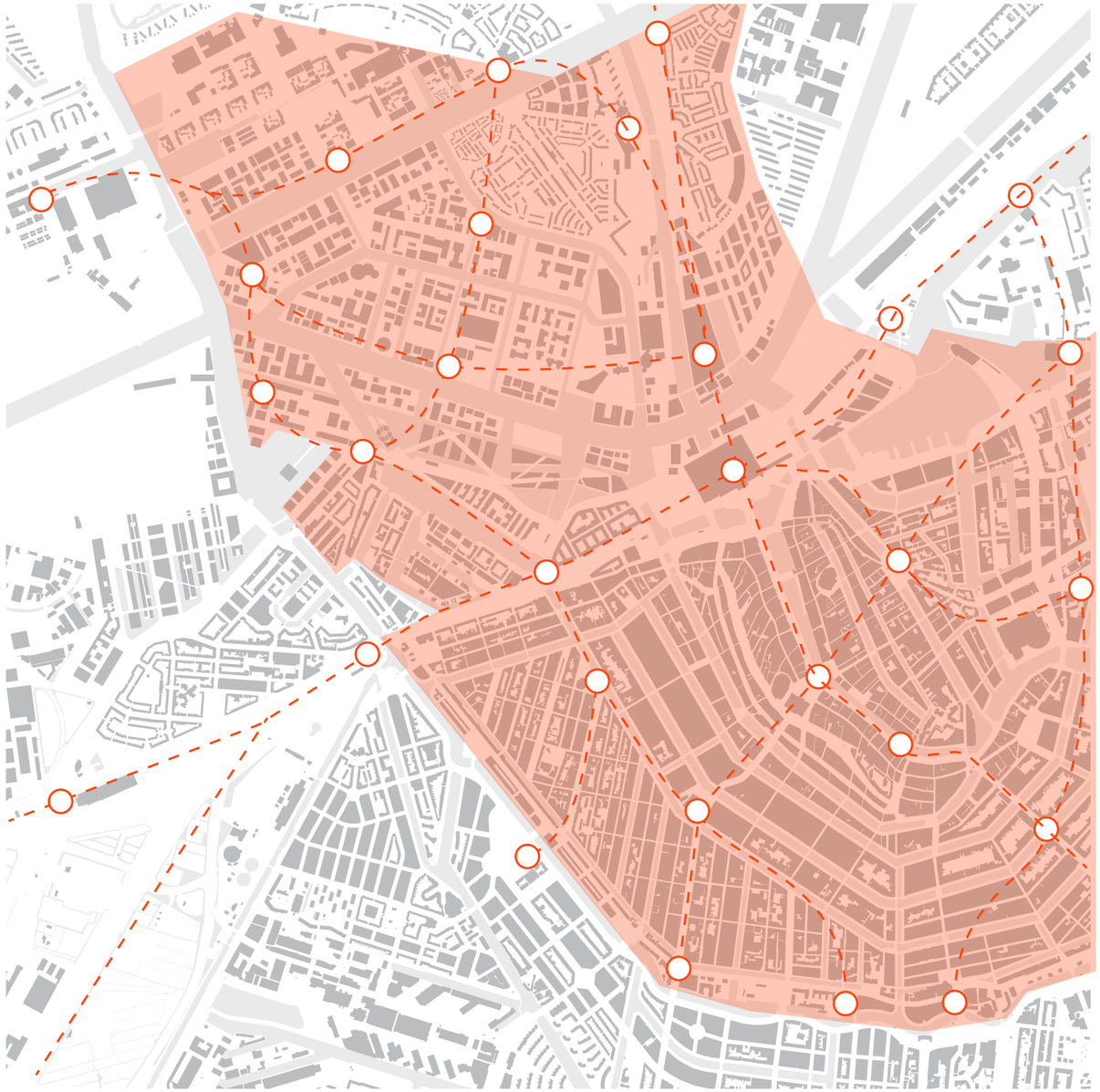
PROGRAM BAR


TRANSPORT
CIRCULATION
ESSENTIALS
COMMERCIAL
PHYSICAL
PERFORMANCE
30000 M2
BIKE PARKING
2000 M2
DRONEPORT
4000 M2
METRO/PODS
4000 M2
SANITARY
1000 M2
CIRCULATION VERTICAL
CIRCULATION CITY (HORIZONTAL)
7000 M2
FOOD & BEVERAGES
1000 M2
SERVICES
1000 M2
SHOWROOMS & MEDIA
2000 M2
GYM
1000 M2
SWIMMING POOL
2000 M2
ART EXPOSITION
1000 M2
PERFORMANCE & EVENTS
2000 M2
THEATRE
2000 M2

FUNCTIONAL DIAGRAM

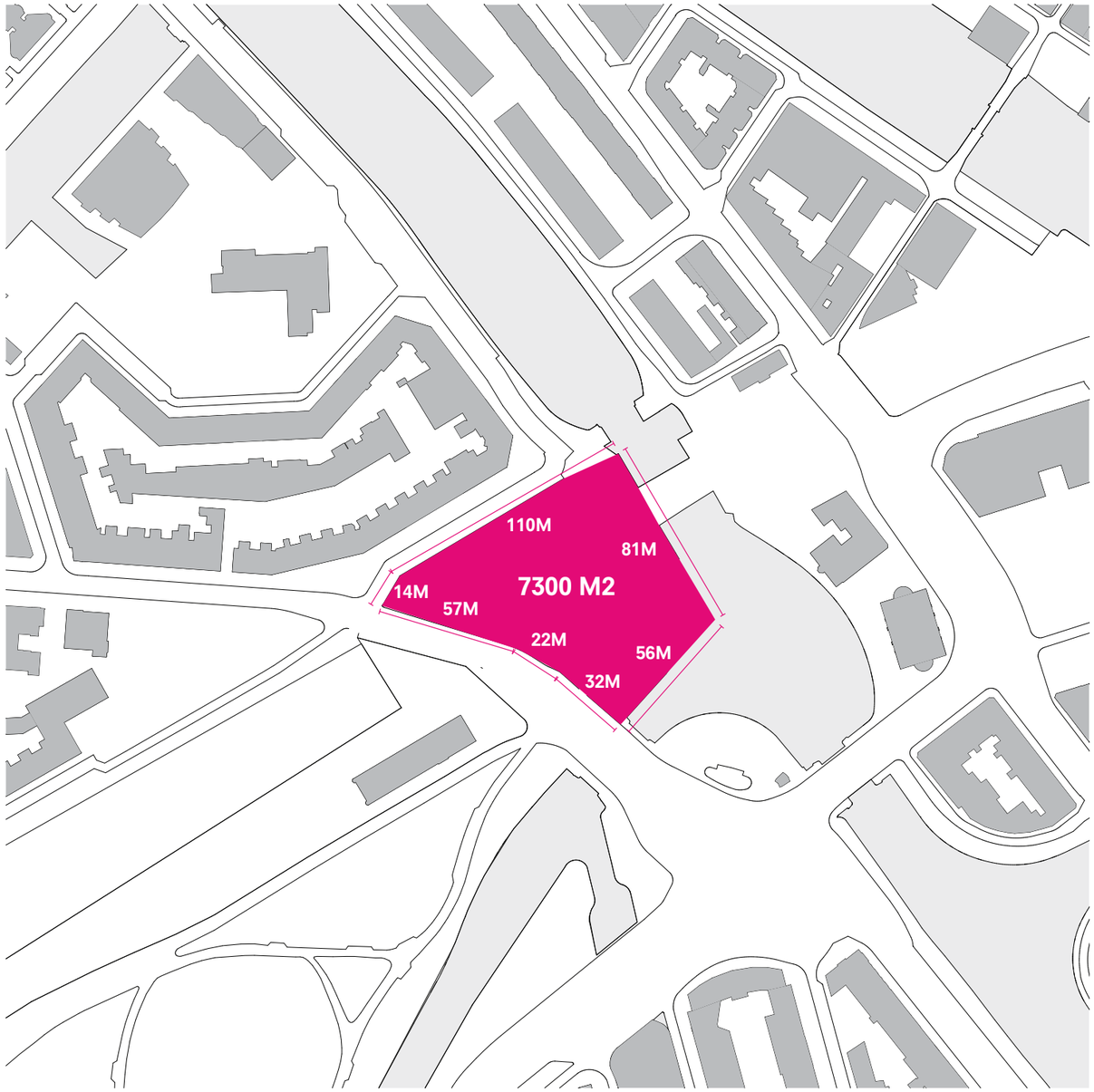


LOCATION: DRONE/CAR FREE CITY CENTRE

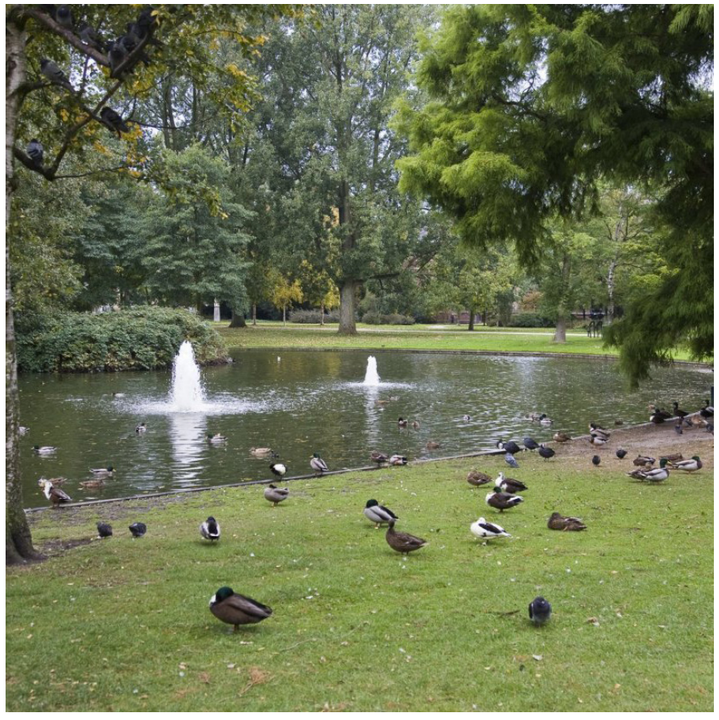


SITE CHOICE: WESTERPARK

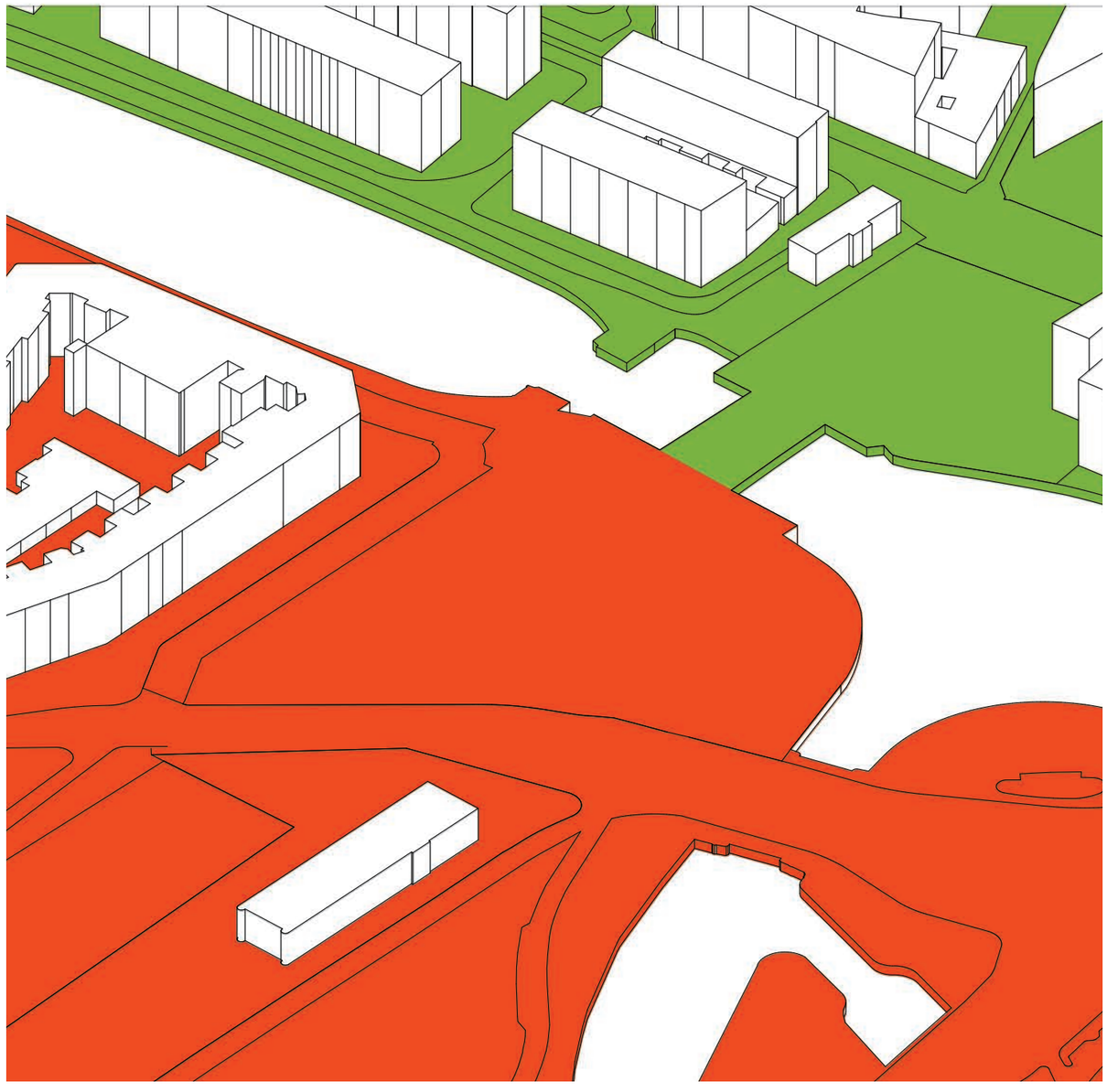
PLOT



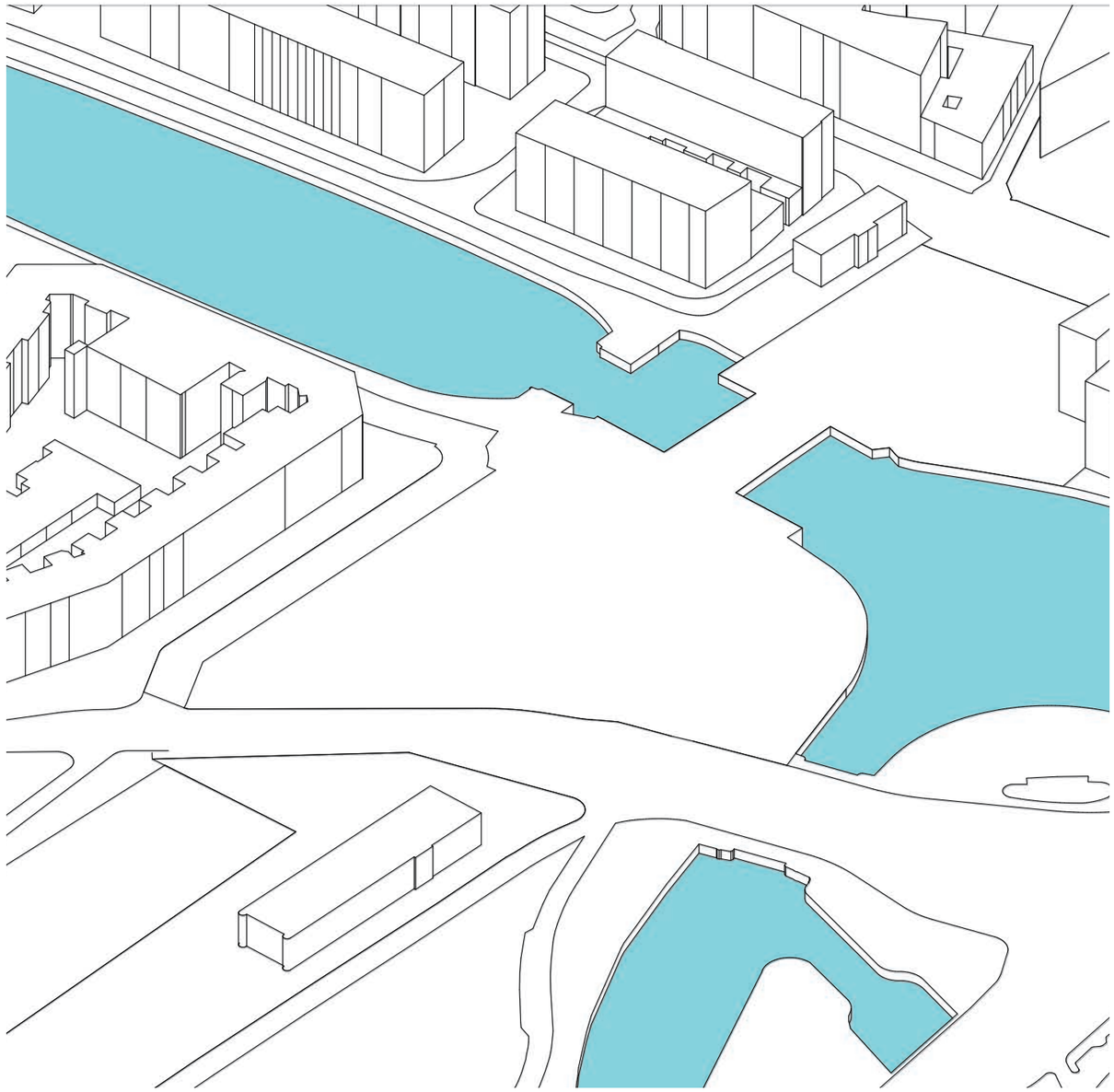
SURROUNDINGS



ANALYSIS: CAR FREE INNER CITY



ANALYSIS: WATERNETWORK



ANALYSIS: UNDERGROUND LINE

ANALYSIS: PARK

USERS

COMMUTER
Using the hub as transfer point to work

USERS

COMMUTER
Using the hub as transfer point to work

ACTOR/SPECTATOR
Accidentally passing by

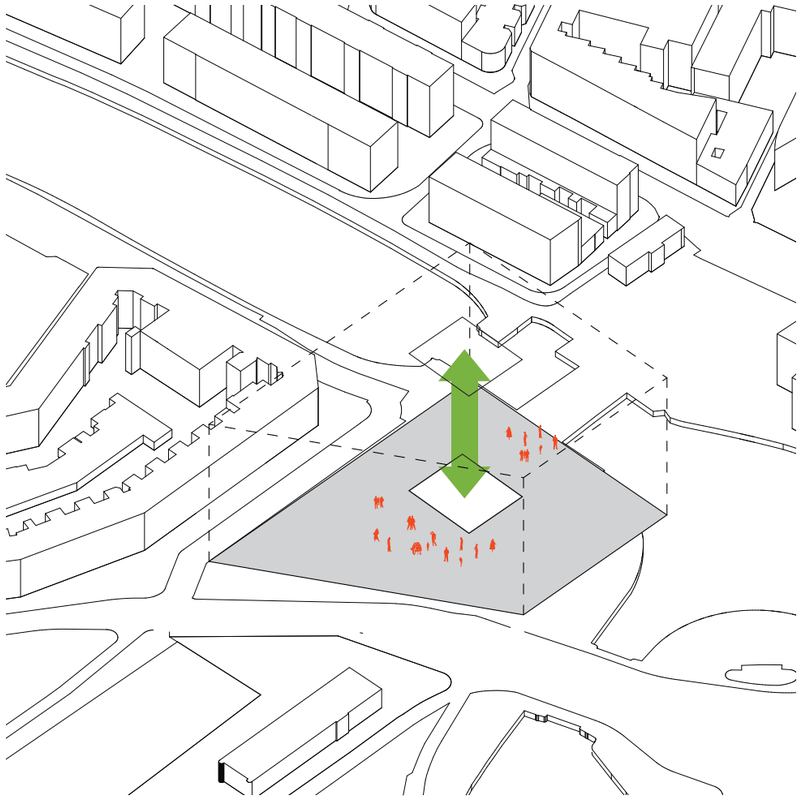
USERS

COMMUTER
Using the hub as transfer point to work

ACTOR/SPECTATOR
Accidentally passing by

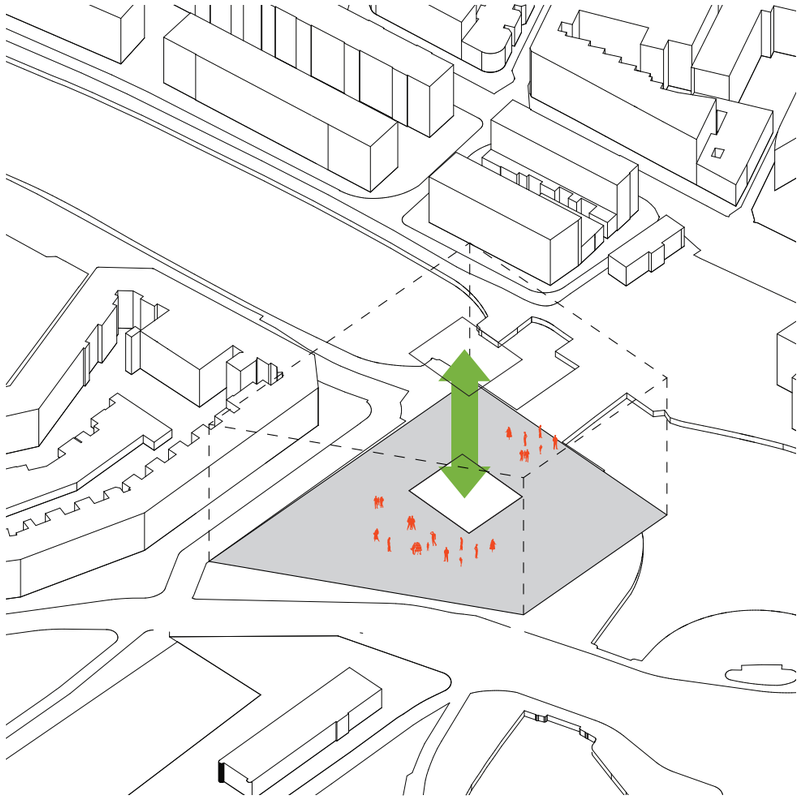
FACILITY USER
Using facilities/amenities at hub

HIERARCHY

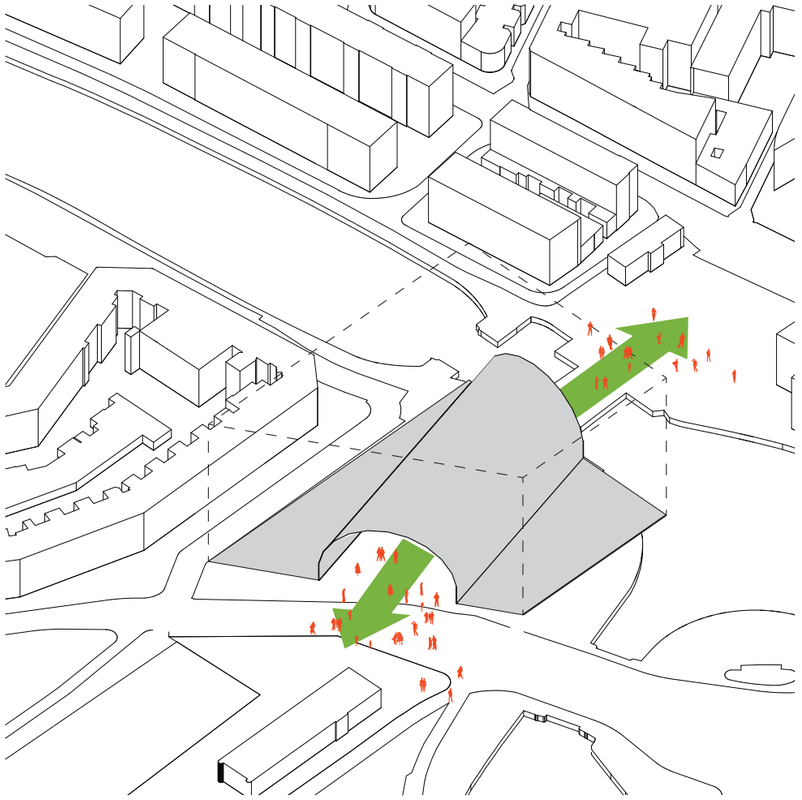


Transfer (flying-underground)

HIERARCHY

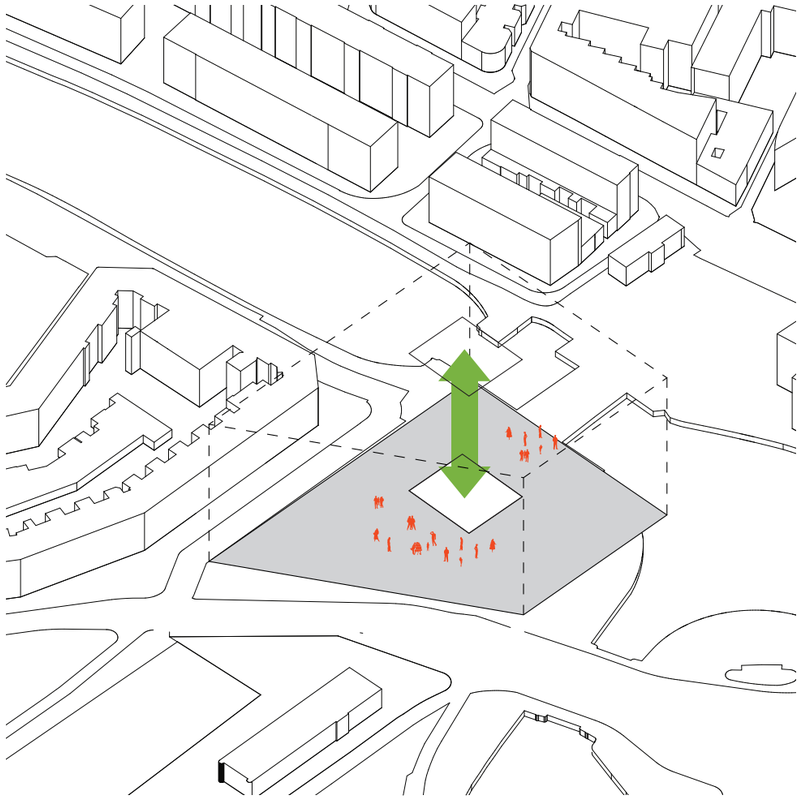


Transfer (flying-underground)

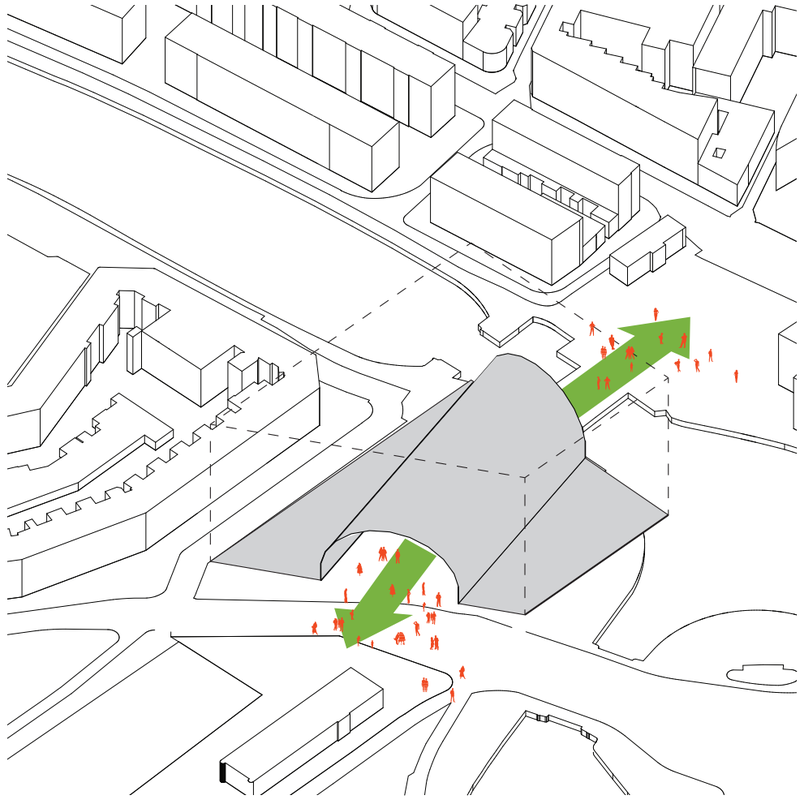


Urban passage

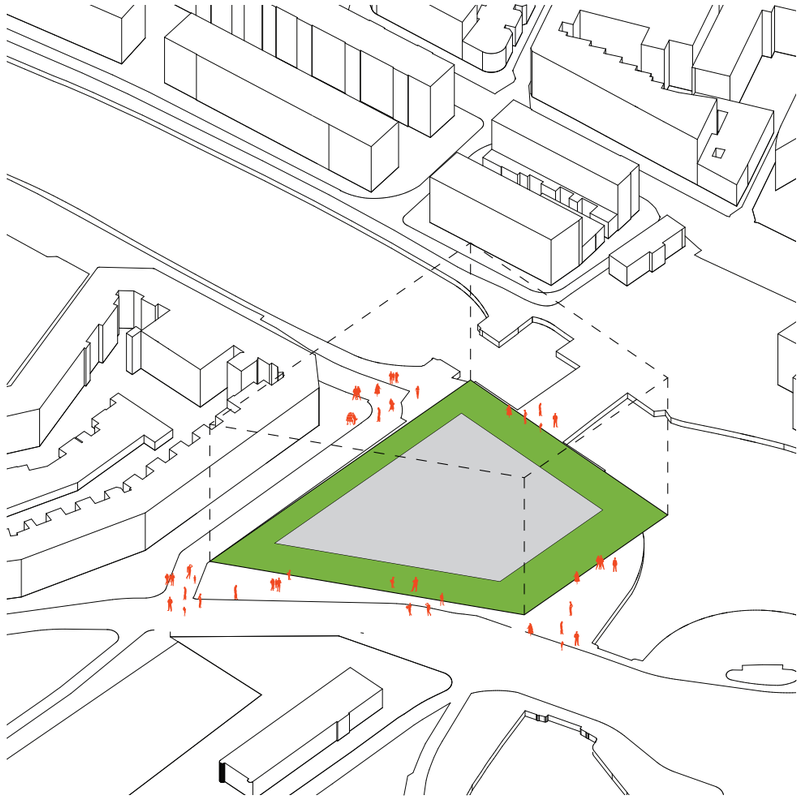
HIERARCHY



Transfer (flying-underground)

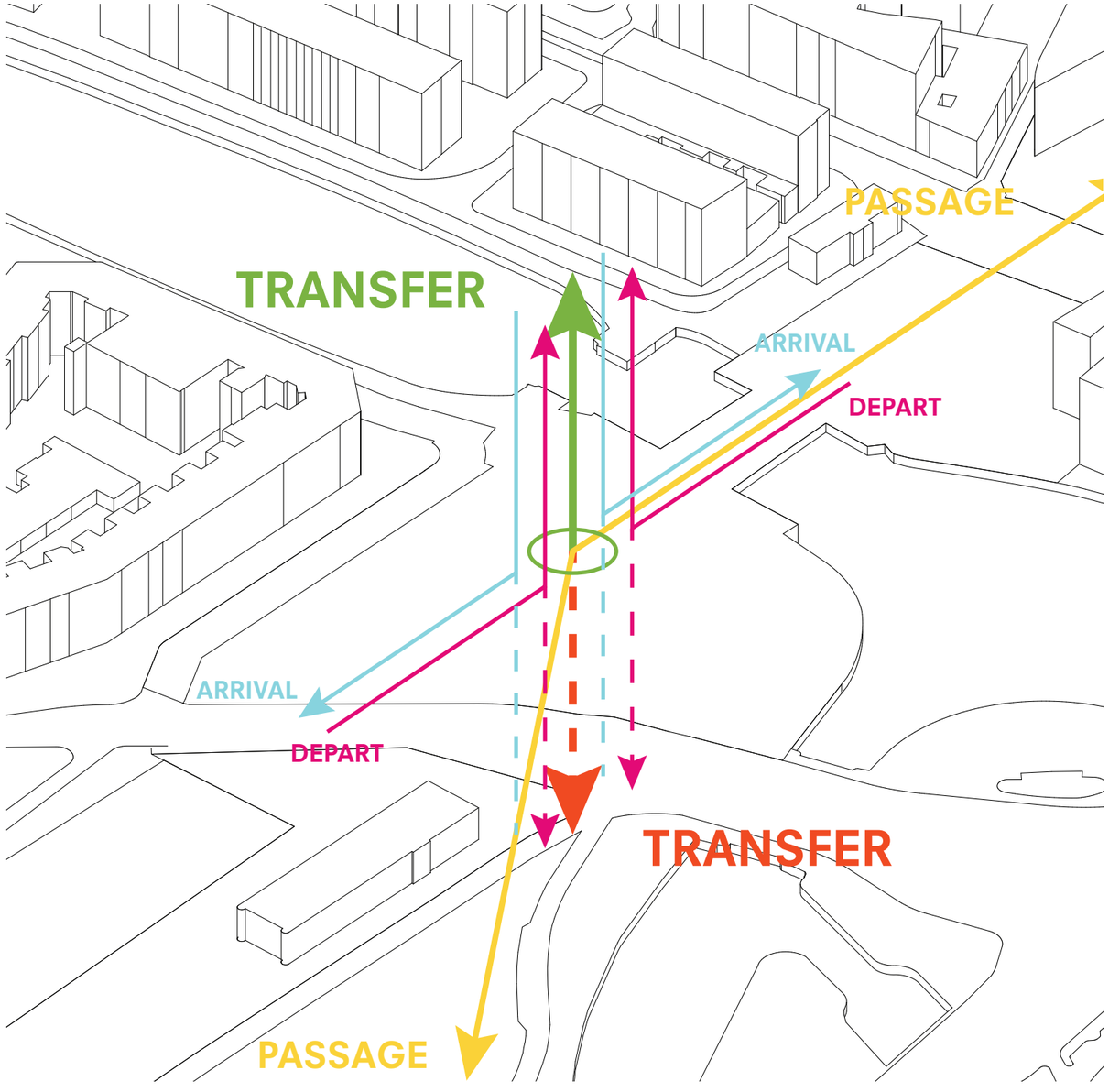


Urban passage



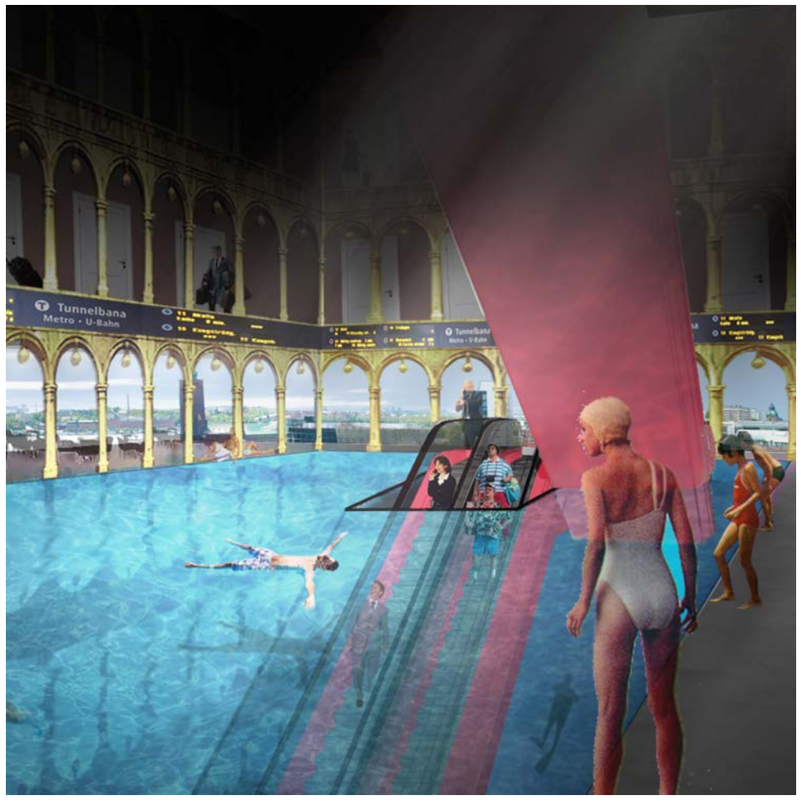
Arrival/Departure

INTERSECTION OF FLOWS IN URBAN NETWORK



CONSTRAINTS: DIGITAL COCOON

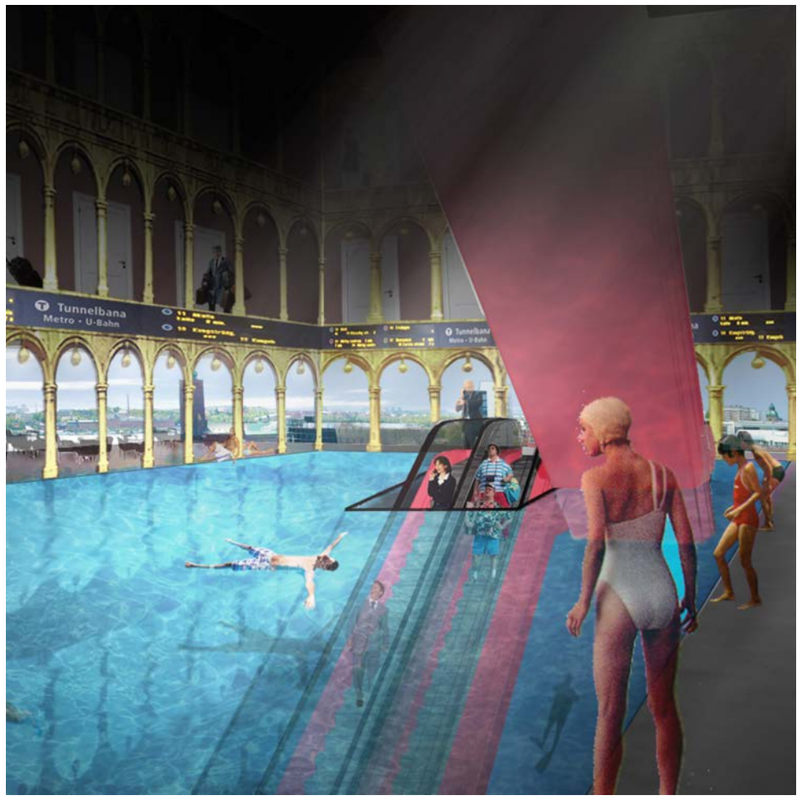
CHARACTER GOAL: ACTIVITY AND VISIBILITY



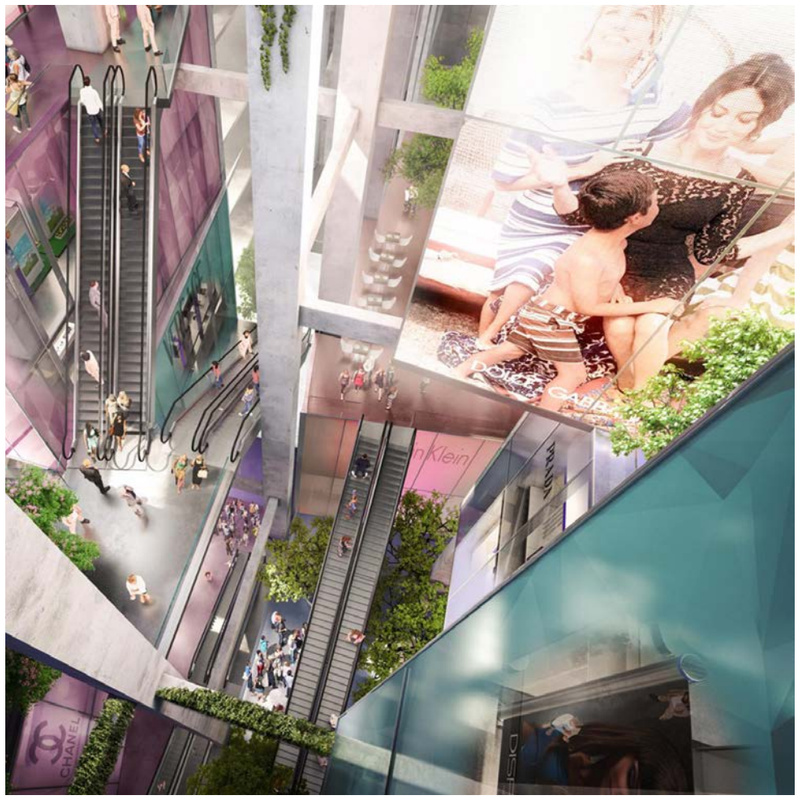
Transparancy of activities

Station City, Stockholm, 2010, OMA (left)

CHARACTER GOAL: ACTIVITY AND VISIBILITY



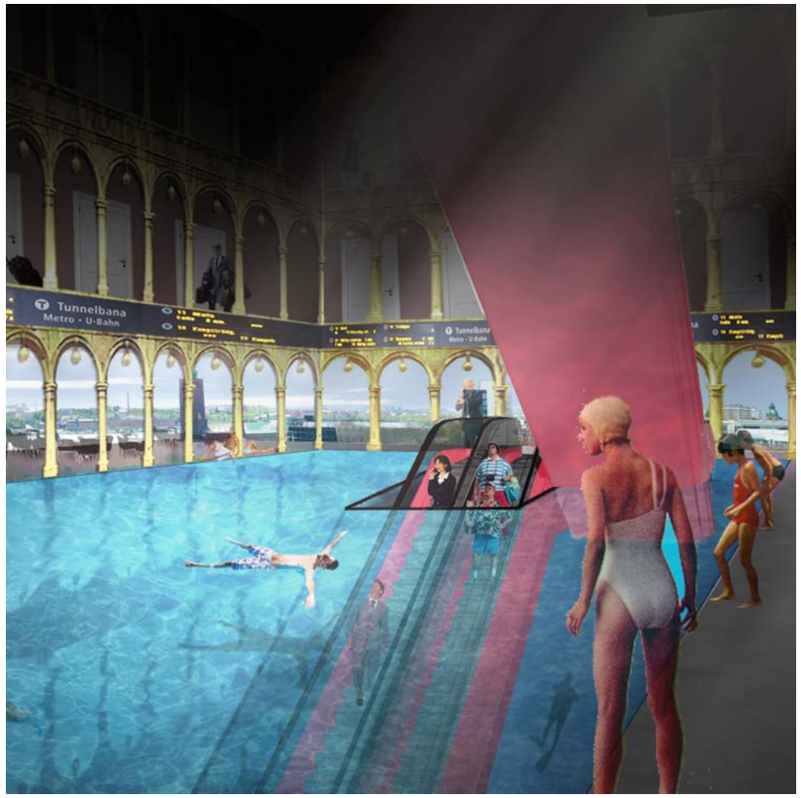
Transparancy of activities



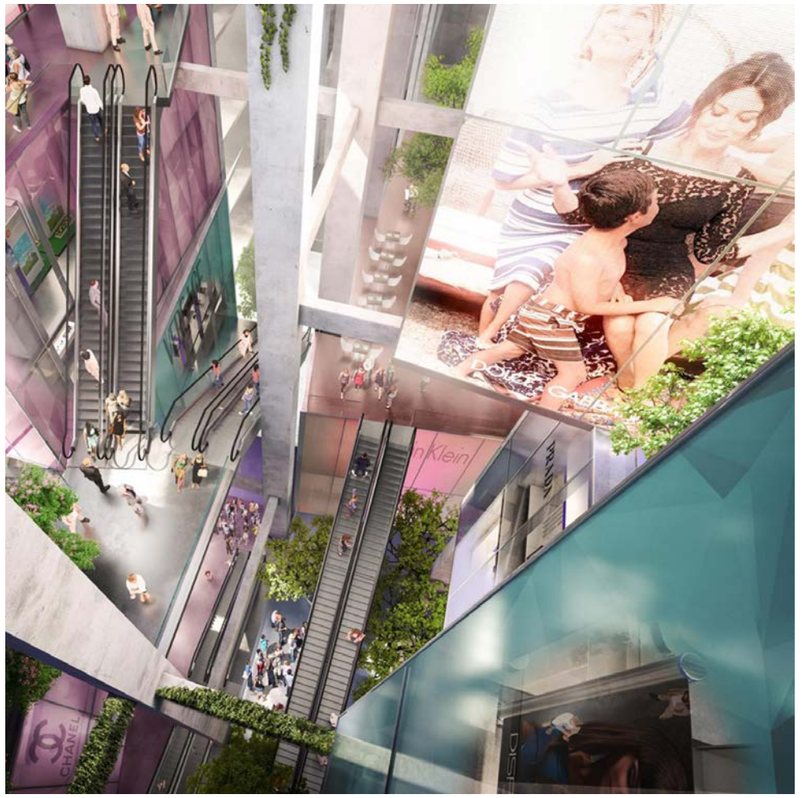
Visibility and sight lines

Station City, Stockholm, 2010, OMA (left)
Taipei Twin Towers, Taipei, 2018, MVRDV (middle)

CHARACTER GOAL: ACTIVITY AND VISIBILITY



Transparancy of activities



Visibility and sight lines

Interactive & dynamic media

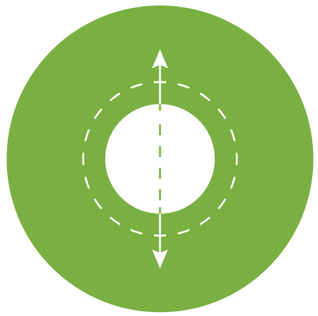
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Station City, Stockholm, 2010, OMA (left)
Taipei Twin Towers, Taipei, 2018, MVRDV (middle)
Startup City, London, 2011, - 00:/ and Space Station (right)

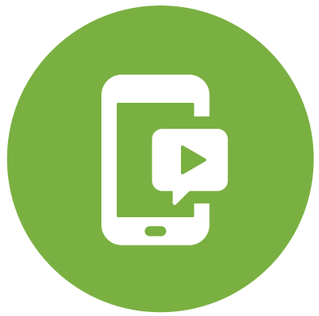
CONCULSION: DESIGN PRINCIPLES

SITE

Surface to land



City routing through

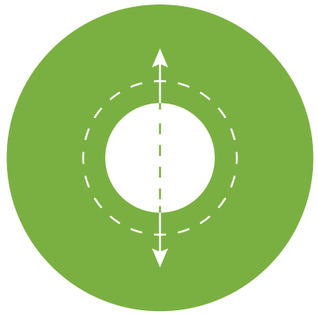


Interactive media facade

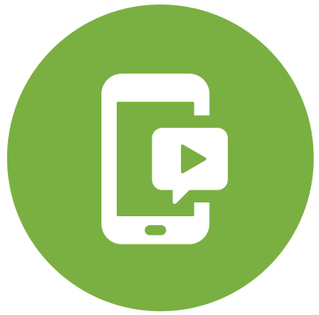
CONCULSION: DESIGN PRINCIPLES

SITE

Surface to land

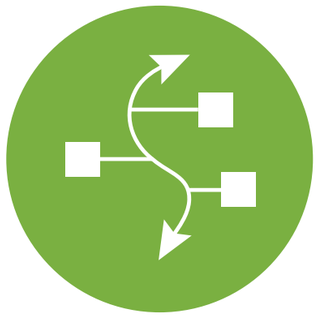


City routing through



Interactive media facade

PROGRAM



Relation circulation & program

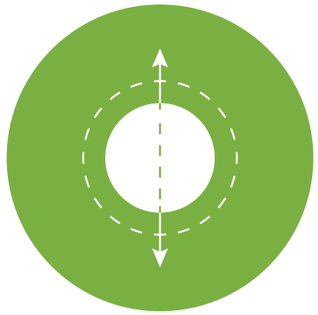
Flexibility of program

Relation density & routing

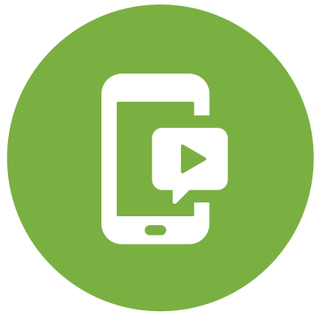
CONCULSION: DESIGN PRINCIPLES

SITE

Surface to land

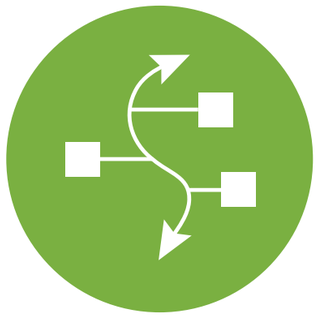


City routing through



Interactive media facade

PROGRAM

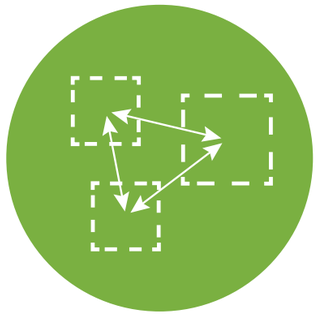


Relation circulation & program

Flexibility of program

Relation density & routing

CHARACTER



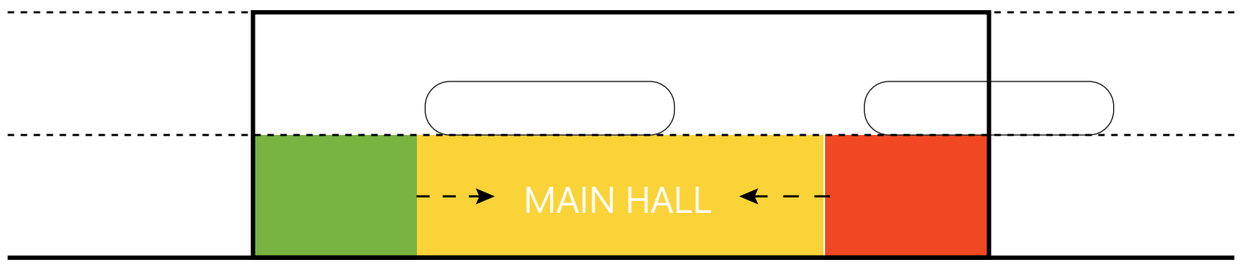
Transparancy of activities

Influencing human senses

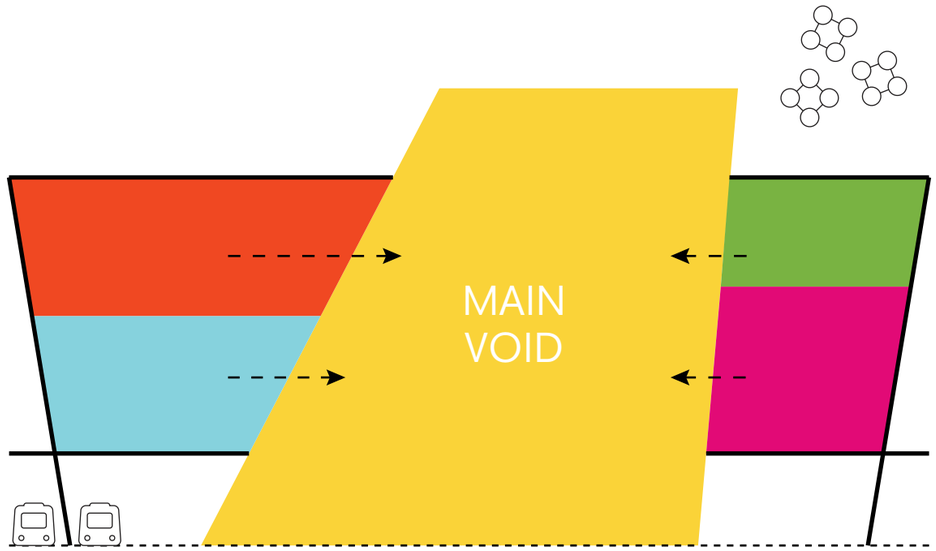
Interior transition

CONCEPT DEVELOPMENT

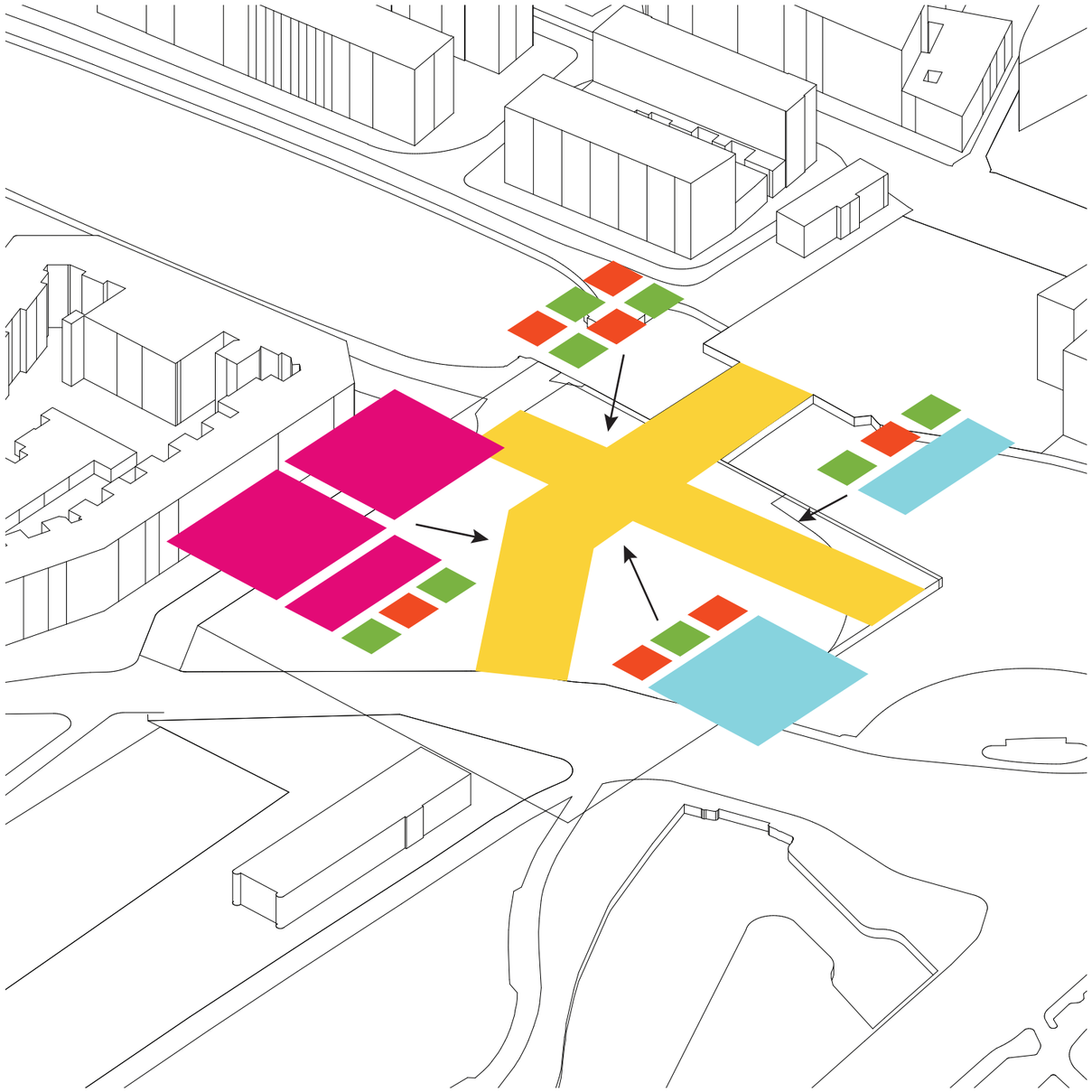
CONVENTIONAL ORGANISATION OF A STATIONHALL



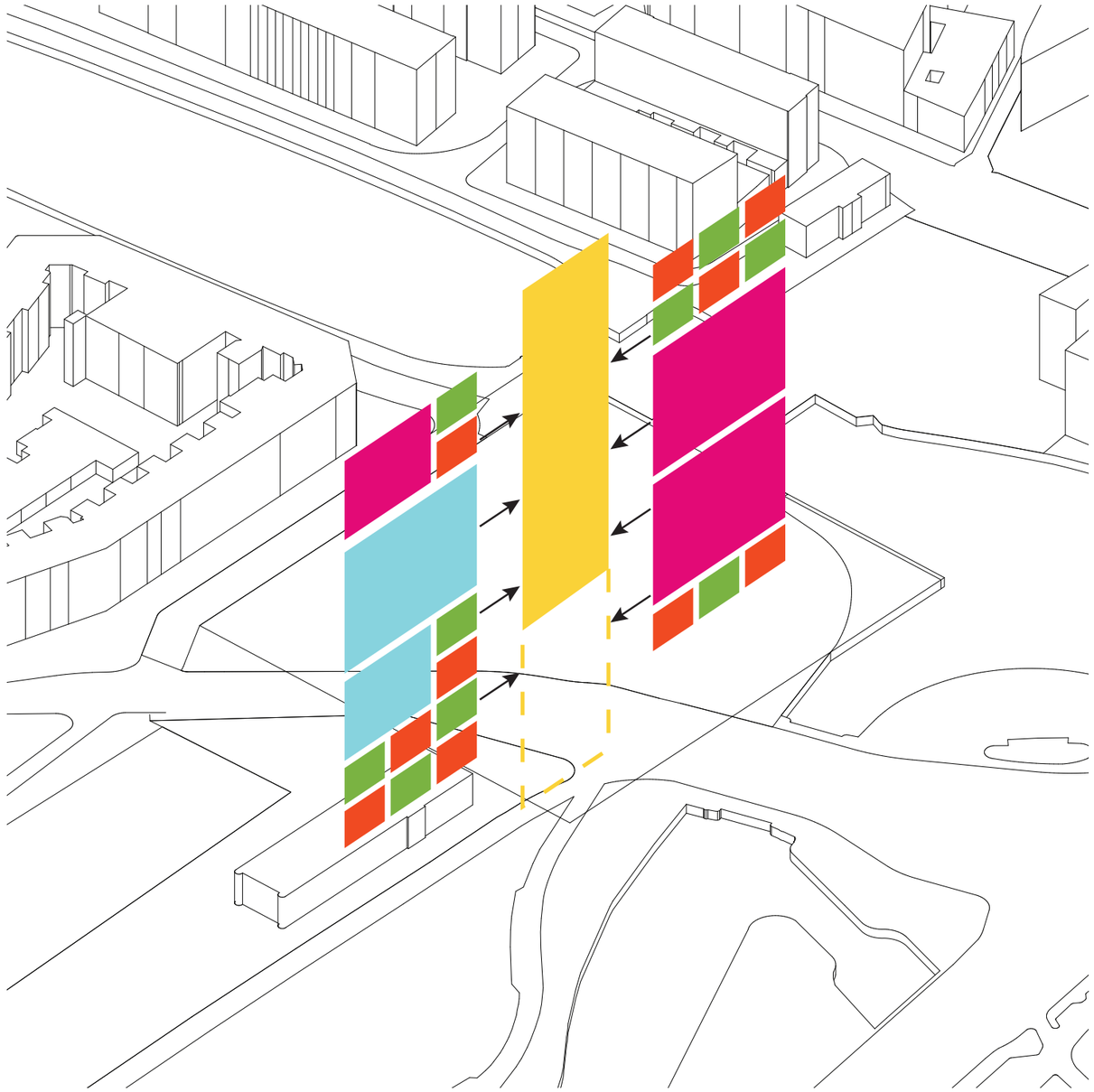
ORGANISATION OF PROGRAM AROUND VERTICAL VOID



CONFIGURATION OF PROGRAM

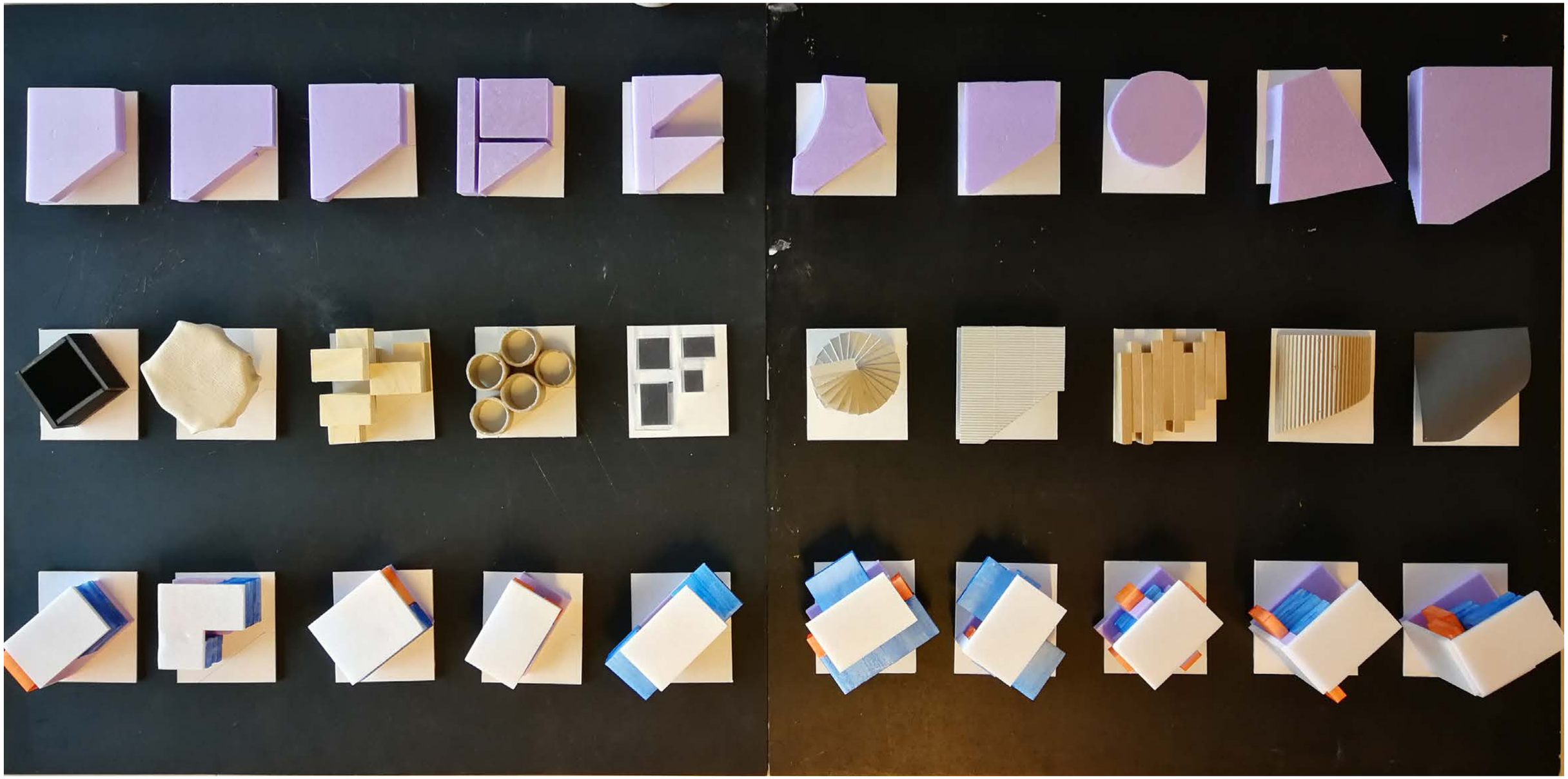


Option A

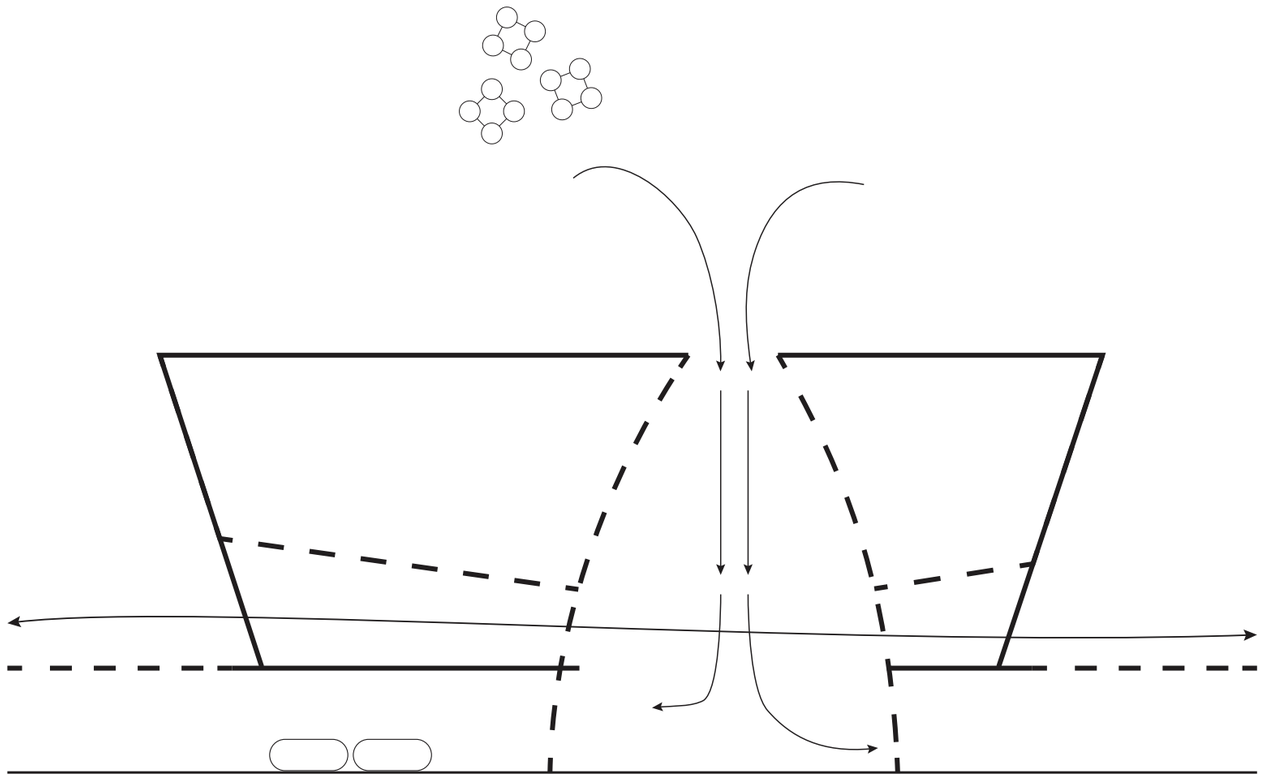


Option B

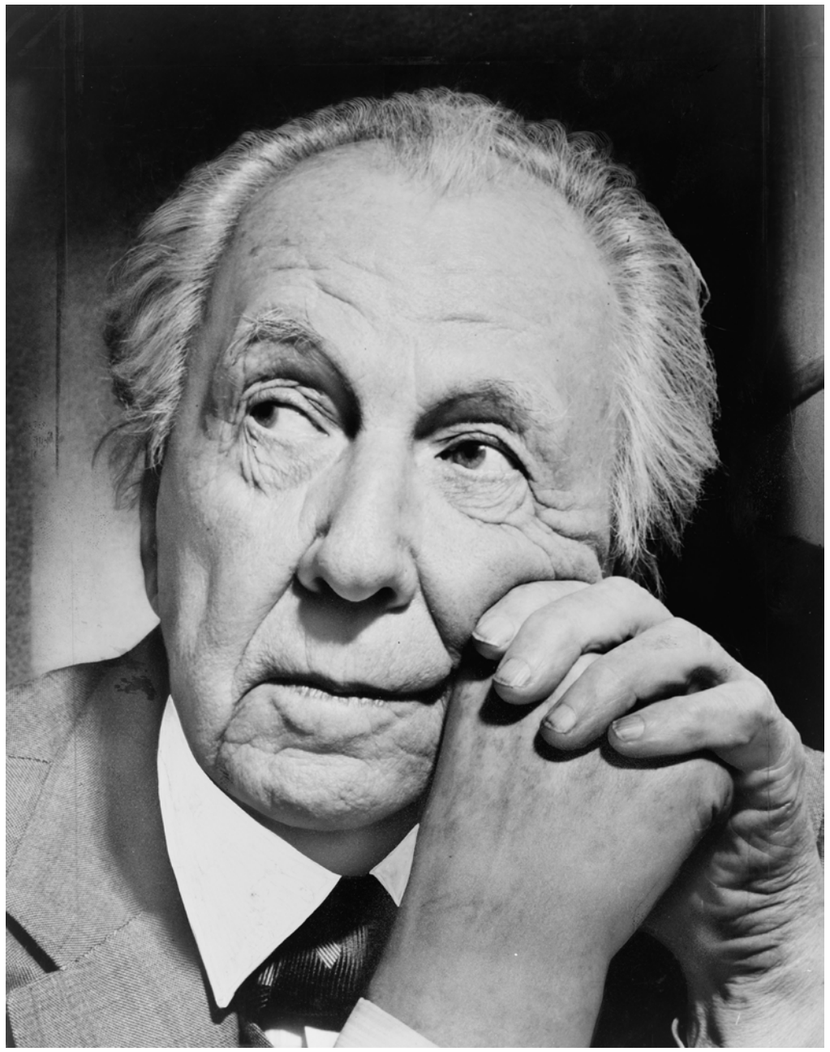
30 MODELS



INTERSECTION AS VOID IN BUILDING



INFLUENCING HUMAN SENSES



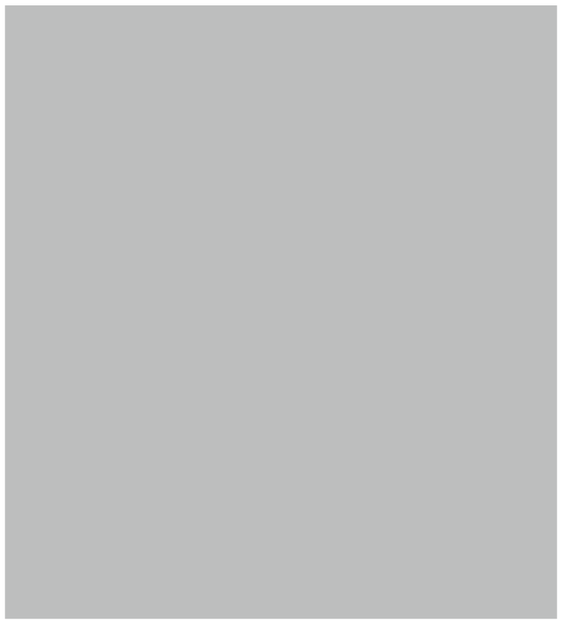
"FLW used variations in color, ceiling heights and hallway widths to alternately compress and expand the sense of space as a person moved through the building he created"

https://www.mprnews.org/story/2007/01/19/flwrightprofile

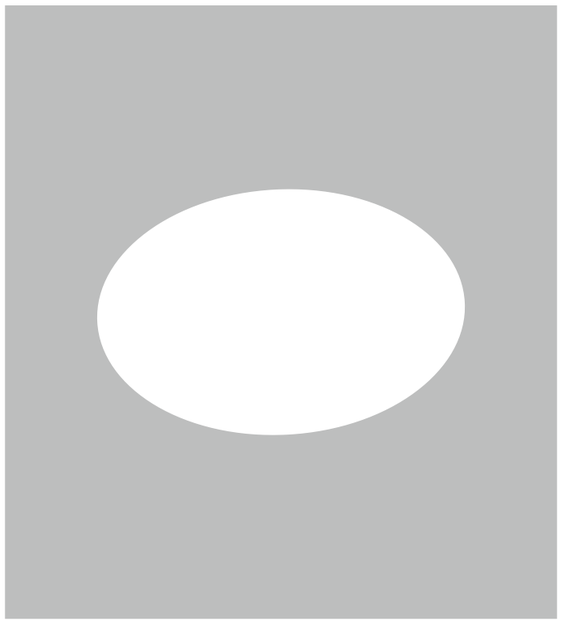
REFERENCE: COMPRESSION AND EXPANSION

Solomon R Guggenheim, New York, 1959, Frank Loyd Wrigh

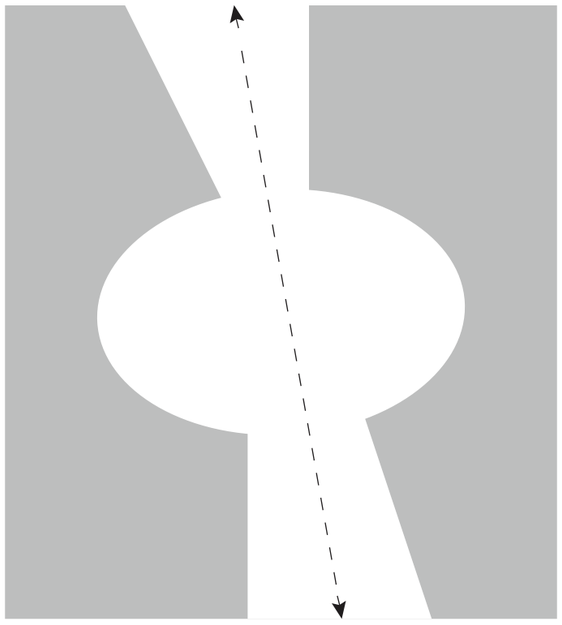
BASIC VOLUME



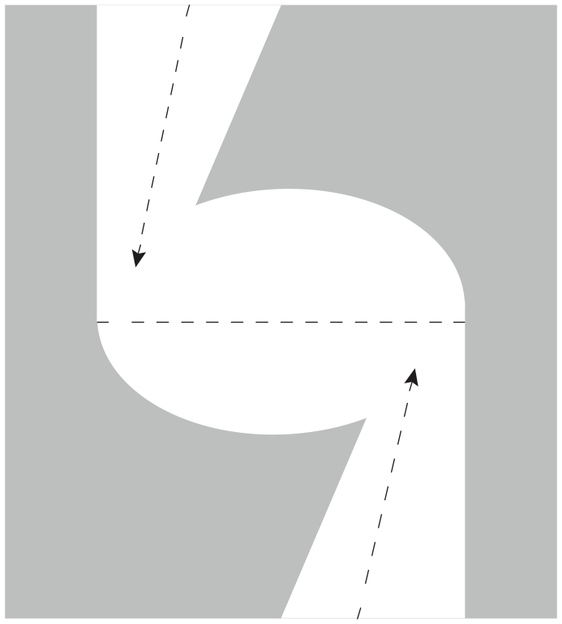
CARVING A VERTICAL VOID AS TRANSITION



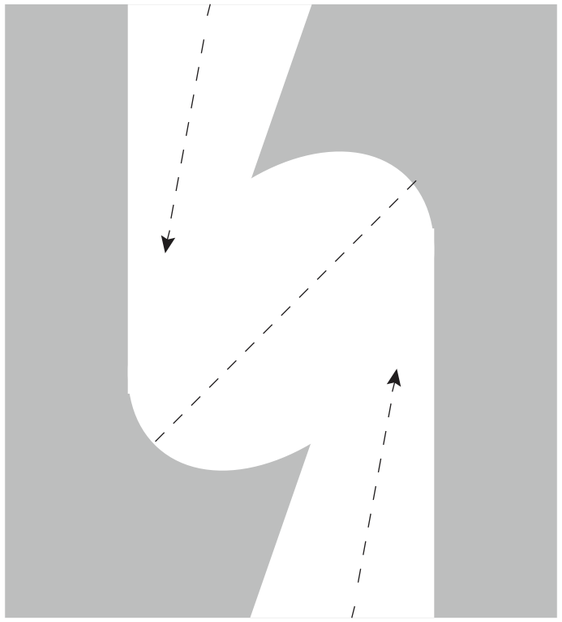
CARVING A HORIZONTAL PASSAGE



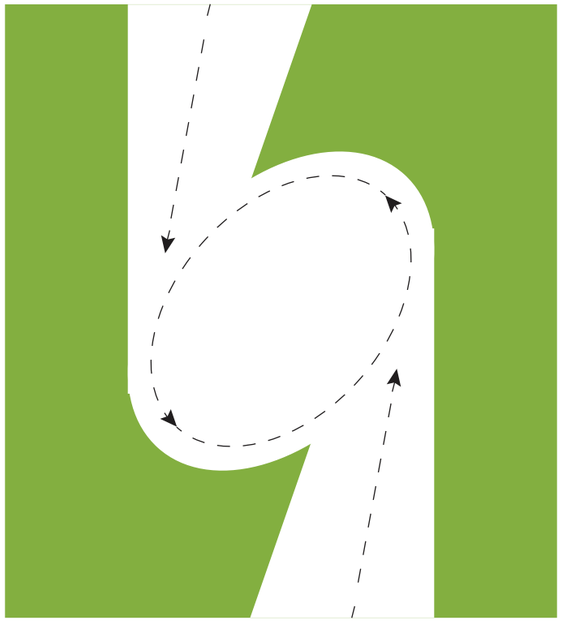
ADJUSTING THE LINE OF SIGHT



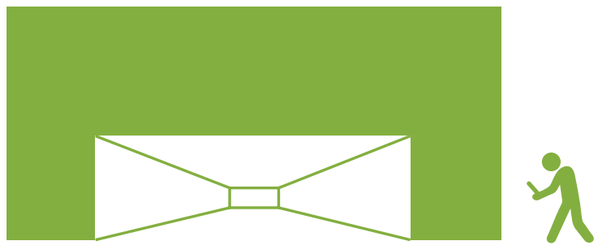
GENERATING A VORTEX



RESULT

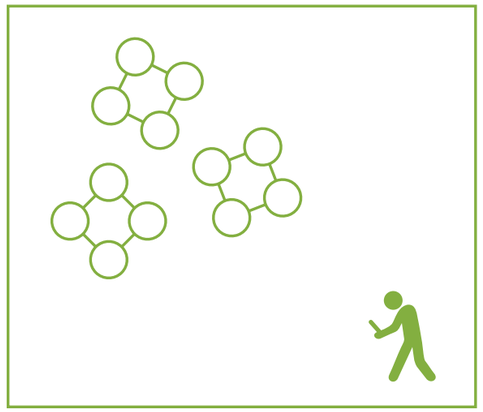


ATTRACTION

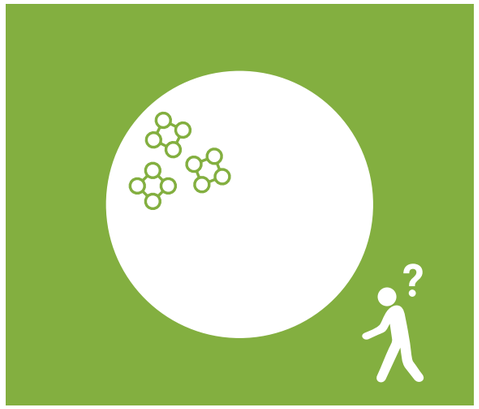


PASSAGE

VOID

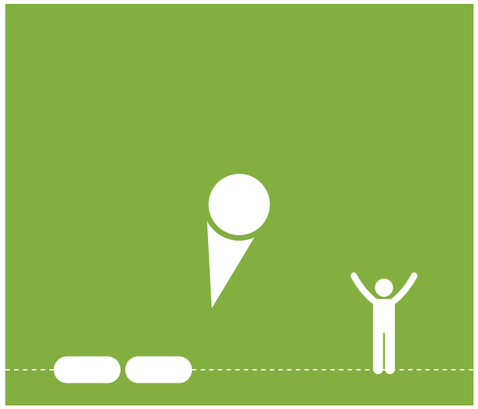


COMPRESSION



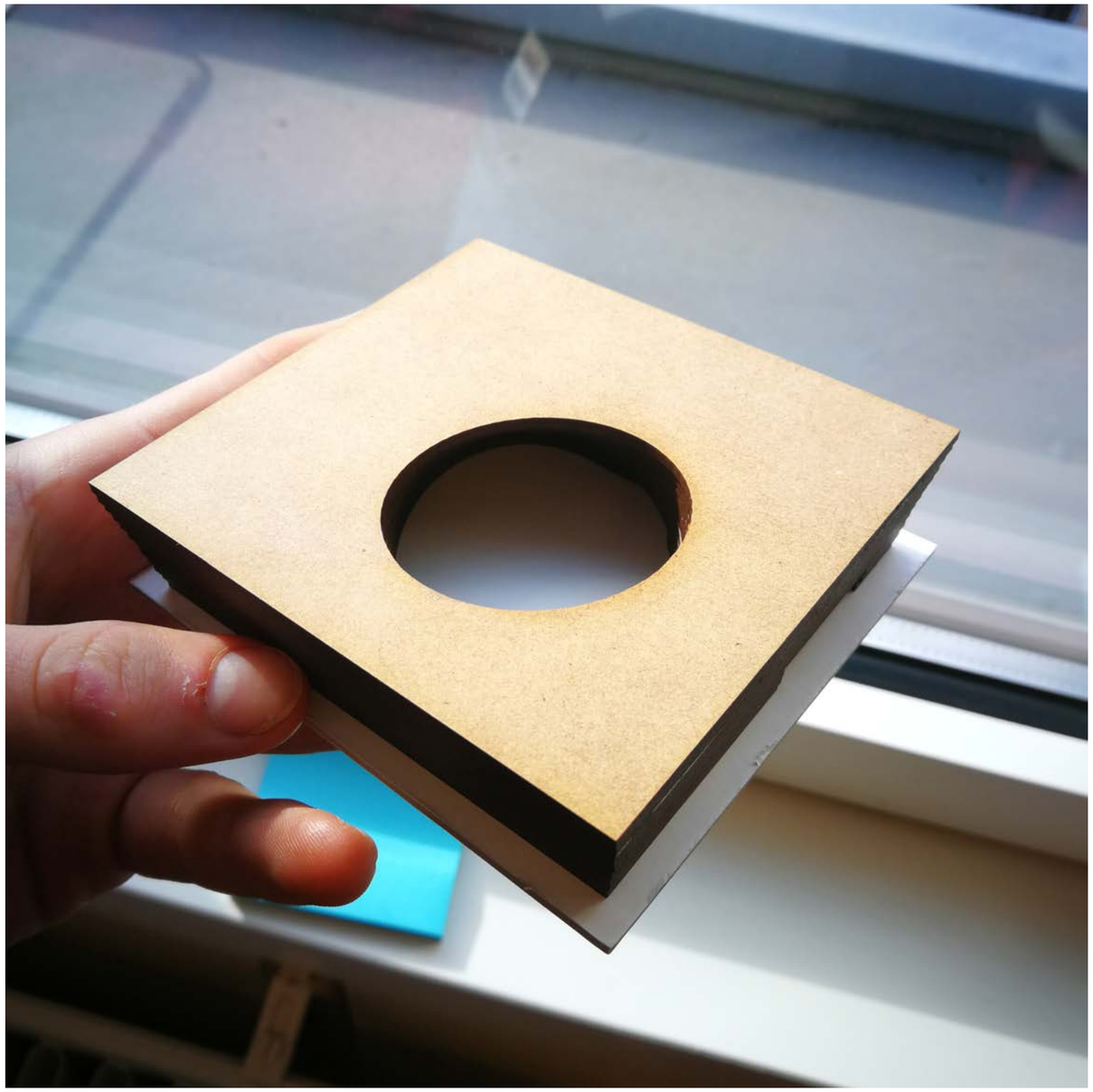
SURPRISE

PASSAGE

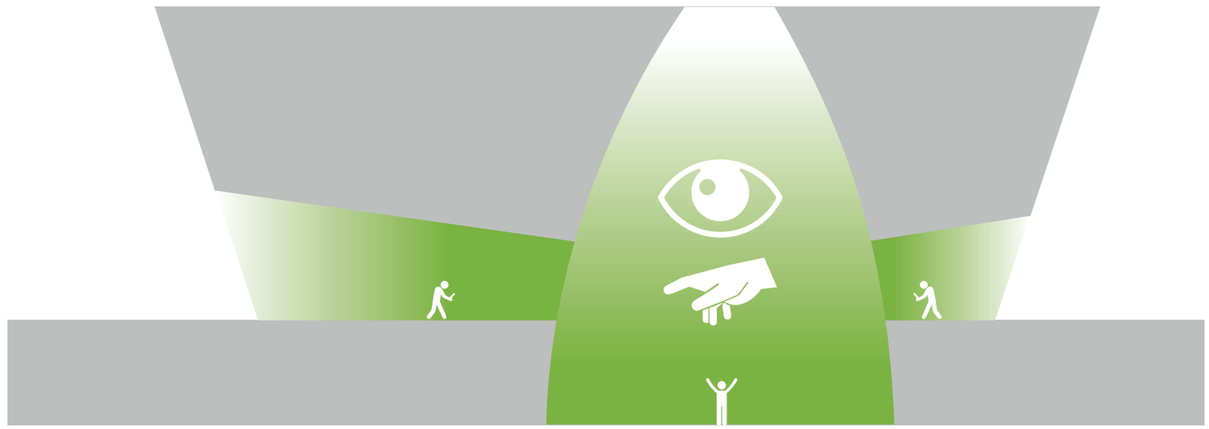


VOID

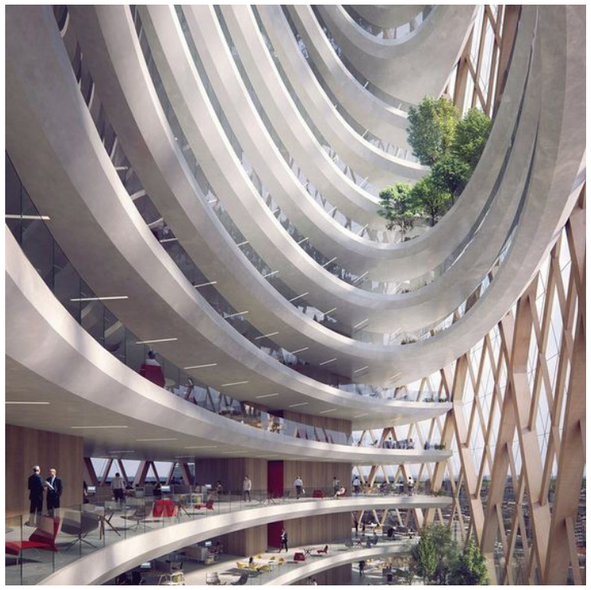
RESULT IN MODEL

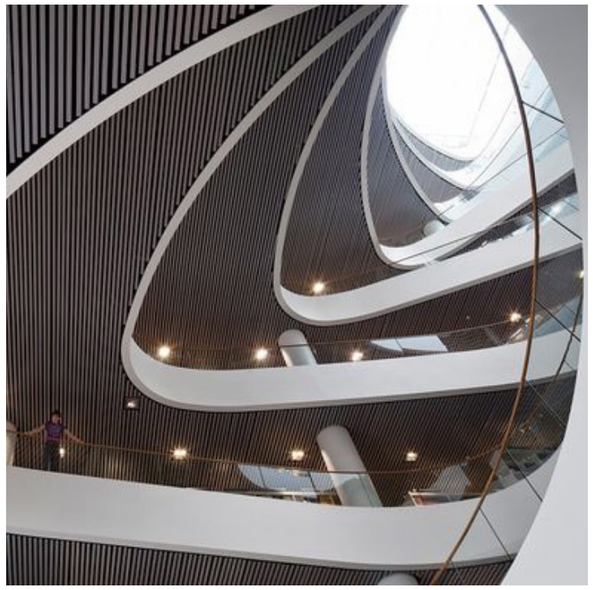


INTERIOR PRINCIPLE



REFERENCE BOARD

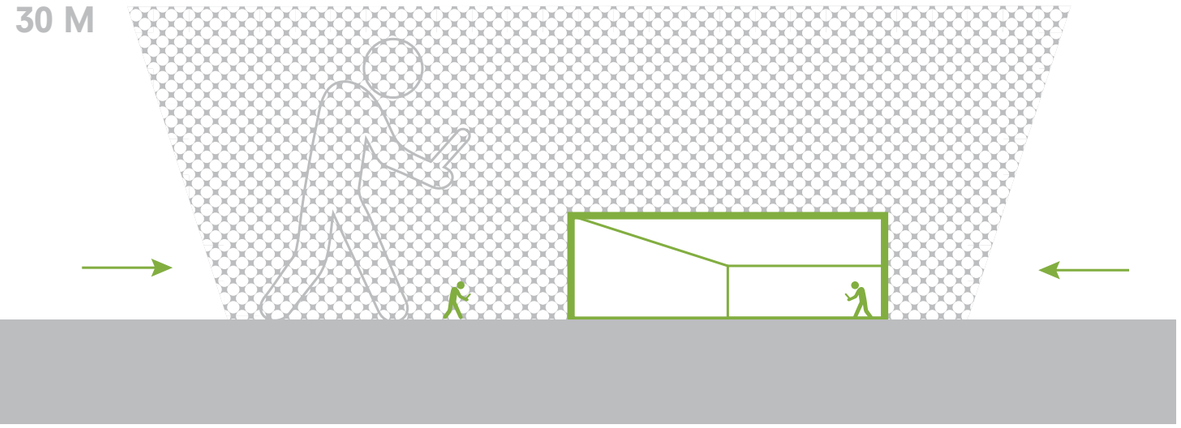




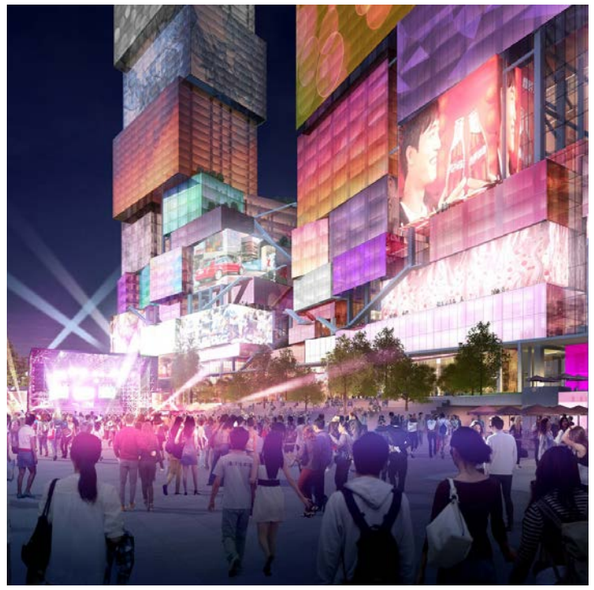
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Torre UnipolSai, Mario Cucinella Architects (left)
University Library, Aberdeen, SHL (middle)
Amaravati masterplan, Andhra Pradesh, Foster & Partners (right)

EXTERIOR PRINCIPLE

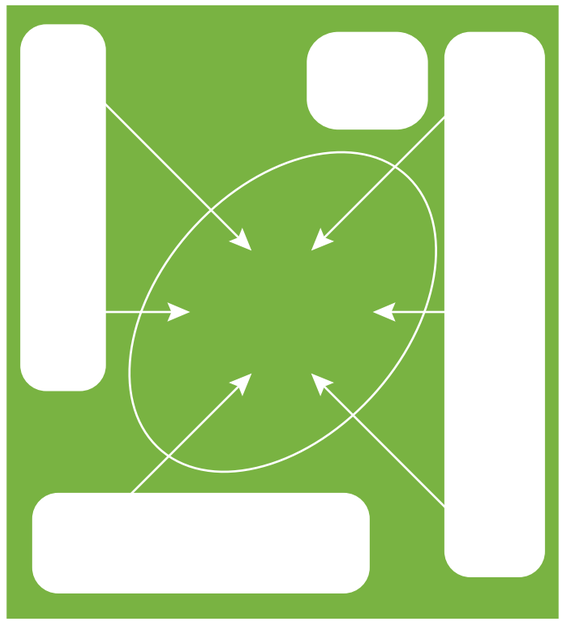


REFERENCE BOARD



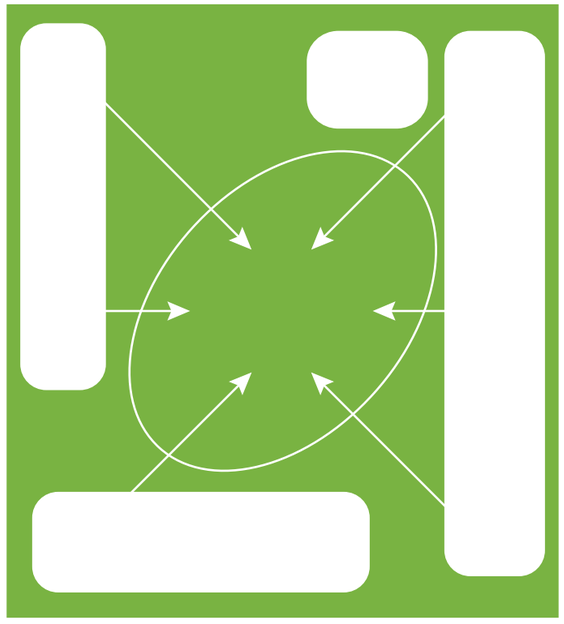
Taipei Twin Towers, Taipei, 2018, MVRDV (left)
Exhibition Hall, Dornbirn, 2017, Marte.Marte Architects (right)

CIRCULATION PRINCIPLE

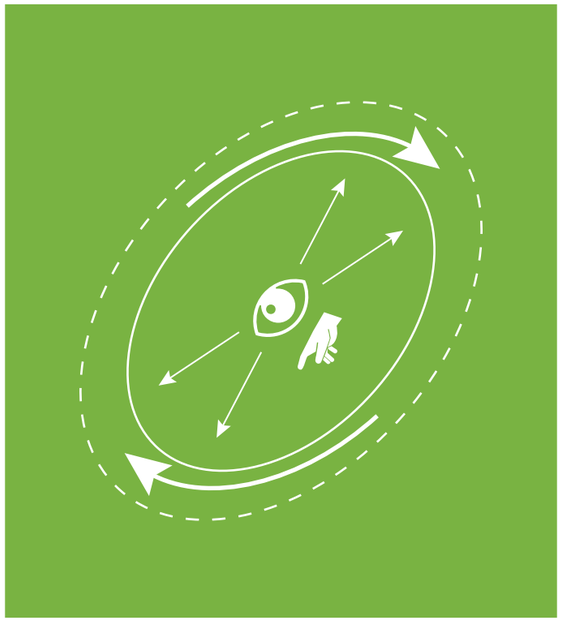


FOCAL POINT
Program configures around void

CIRCULATION PRINCIPLE

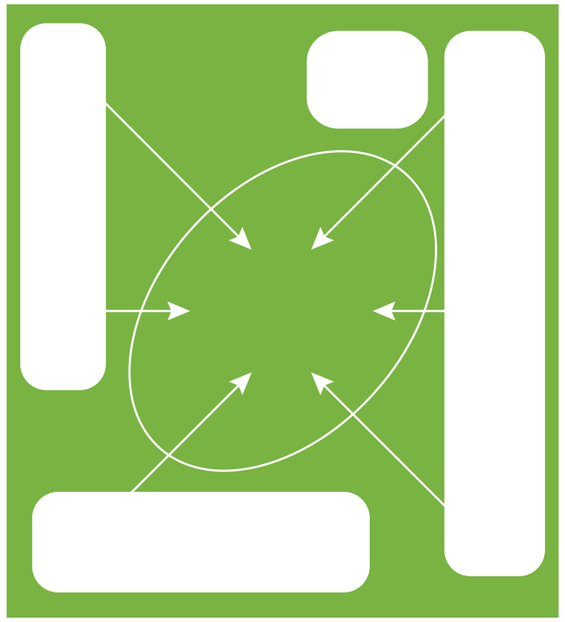


FOCAL POINT
Program configures around void

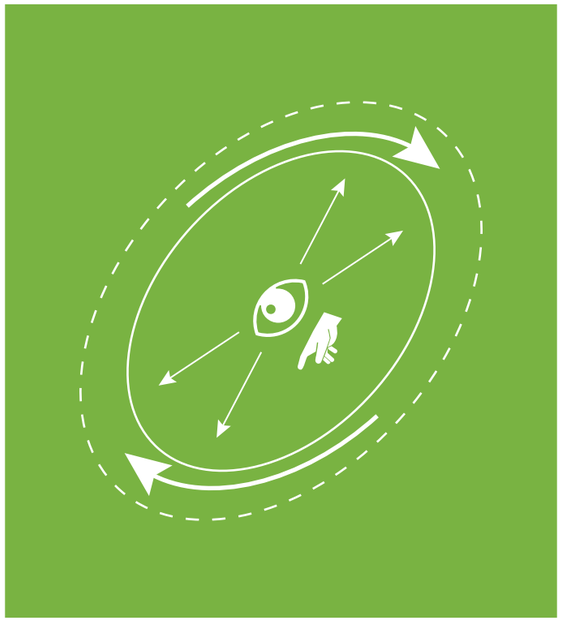


VISUAL ARTICULATION
Unobstructable void

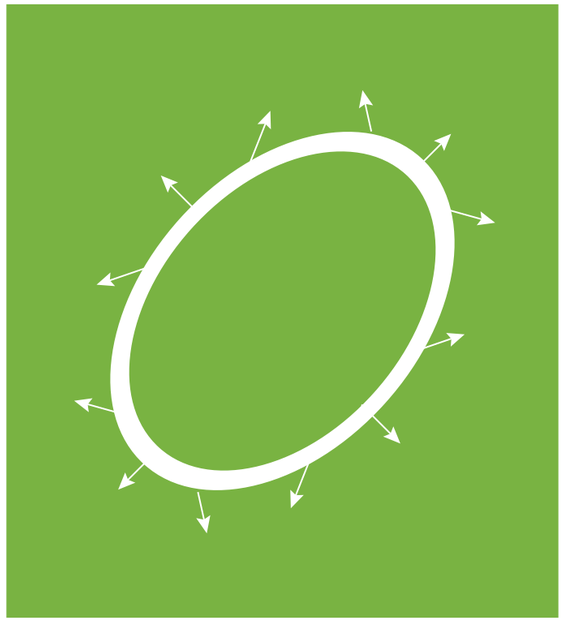
CIRCULATION PRINCIPLE



FOCAL POINT
Program configures around void

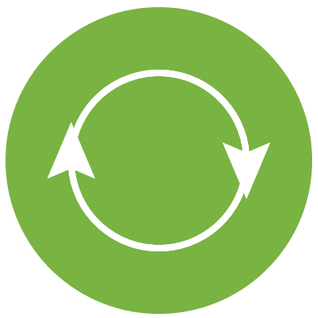


VISUAL ARTICULATION
Unobstructable void



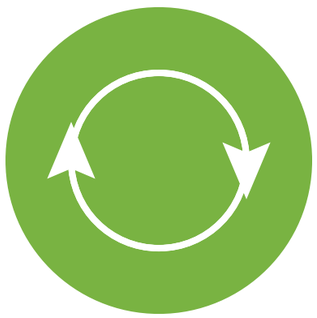
SENSORY EXPERIENCE
Experience of activities

CIRCULATION CRITERIA



ONGOING ROLLERBAND

CIRCULATION CRITERIA



ONGOING ROLLERBAND

COMPLEMENT SHAPE
OF VOID

CIRCULATION CRITERIA

ONGOING ROLLERBAND

COMPLEMENT SHAPE OF VOID

MULTIPLE ACCESS POINTS

CIRCULATION CRITERIA

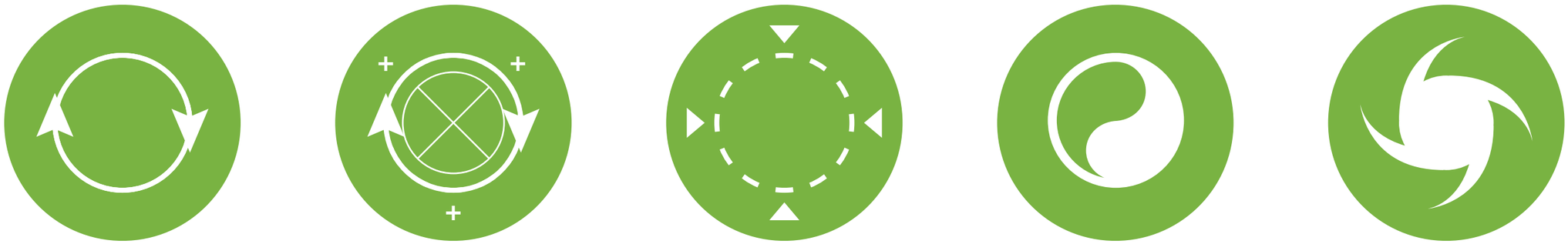
ONGOING ROLLERBAND

COMPLEMENT SHAPE OF VOID

MULTIPLE ACCESS POINTS

EQUAL BALANCE OF FLOWS

CIRCULATION CRITERIA



ONGOING ROLLERBAND

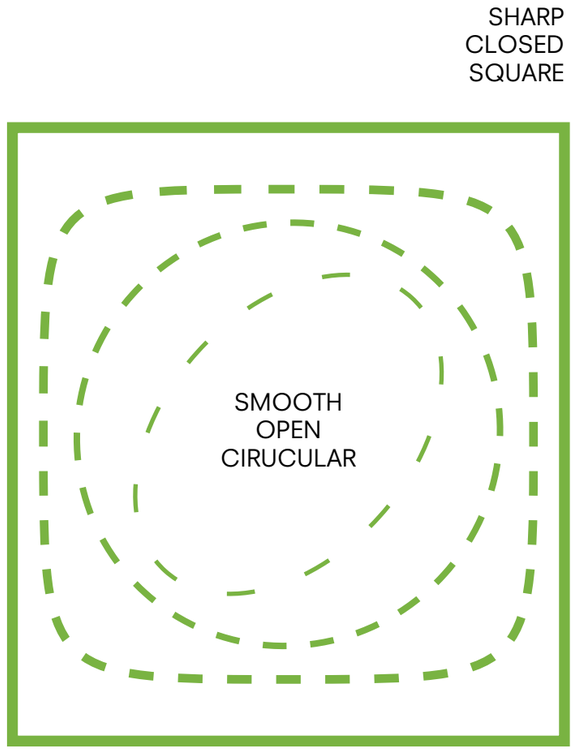
COMPLEMENT SHAPE OF VOID

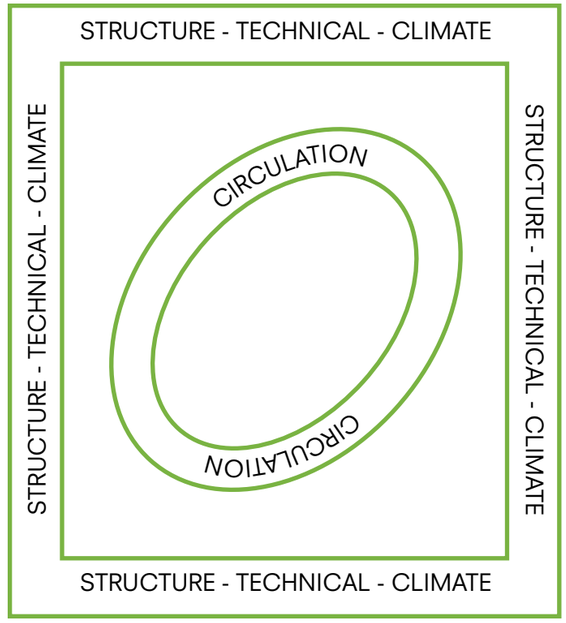
MULTIPLE ACCESS POINTS

EQUAL BALANCE OF FLOWS

SWIRL OF ACTIVITY

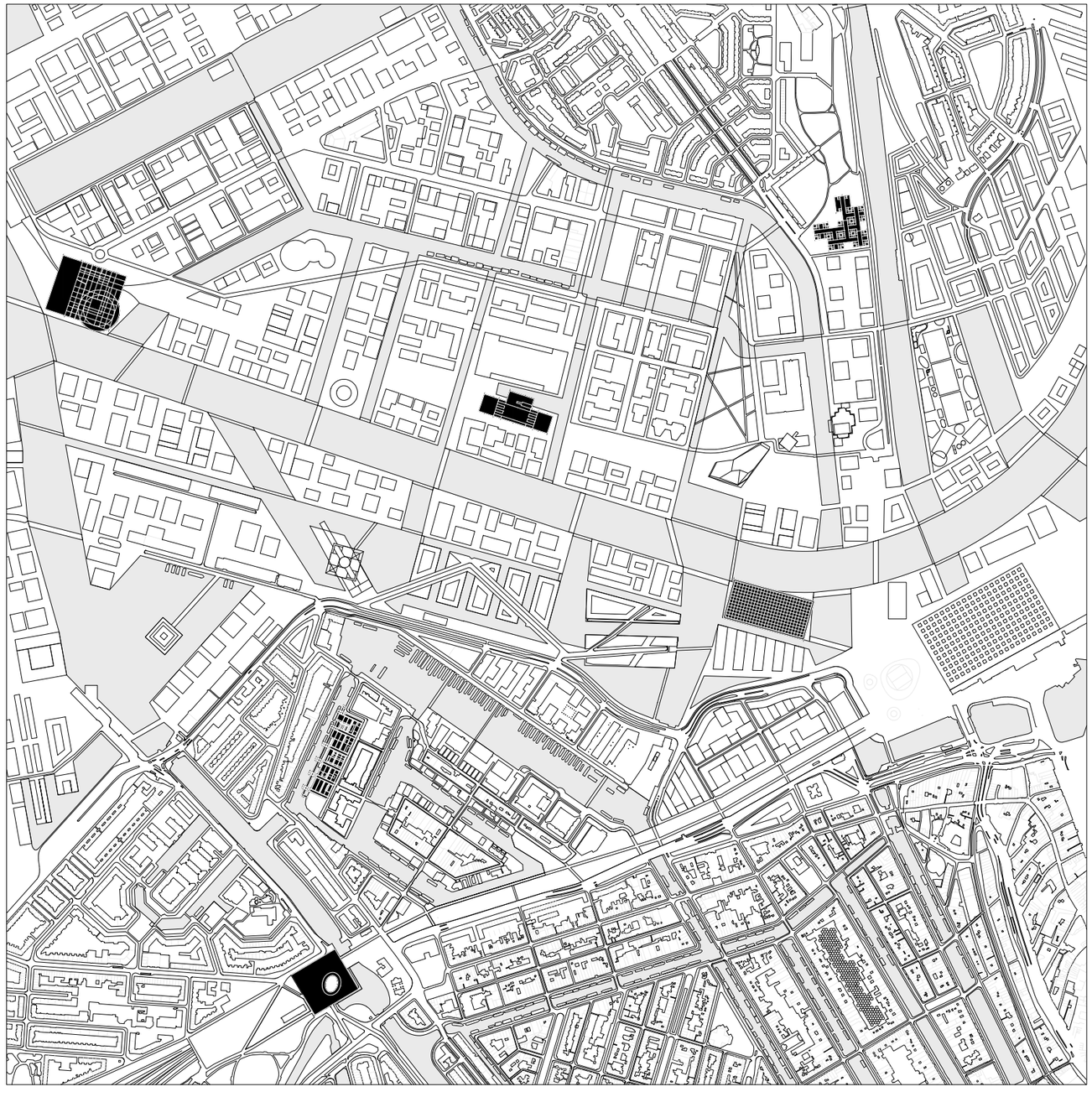
PROGRAM MEDIATES BETWEEN FACADE AND VOID





DESIGN IMPLEMENTATION

URBAN PLAN



LOCATION

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Author

N

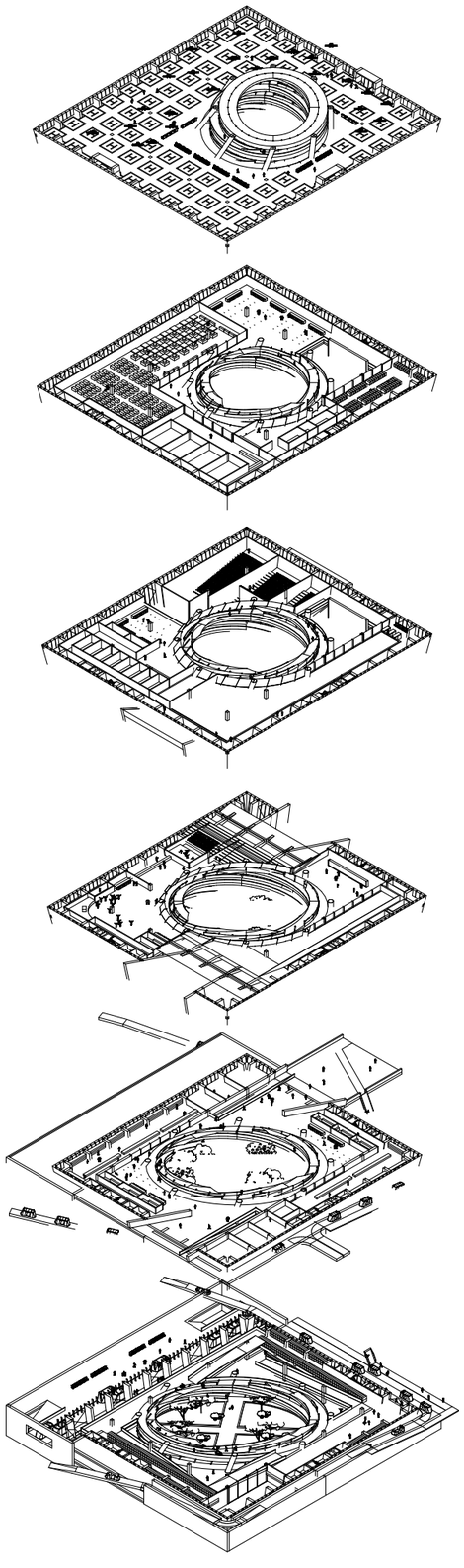
URBAN IMPLEMENTATION

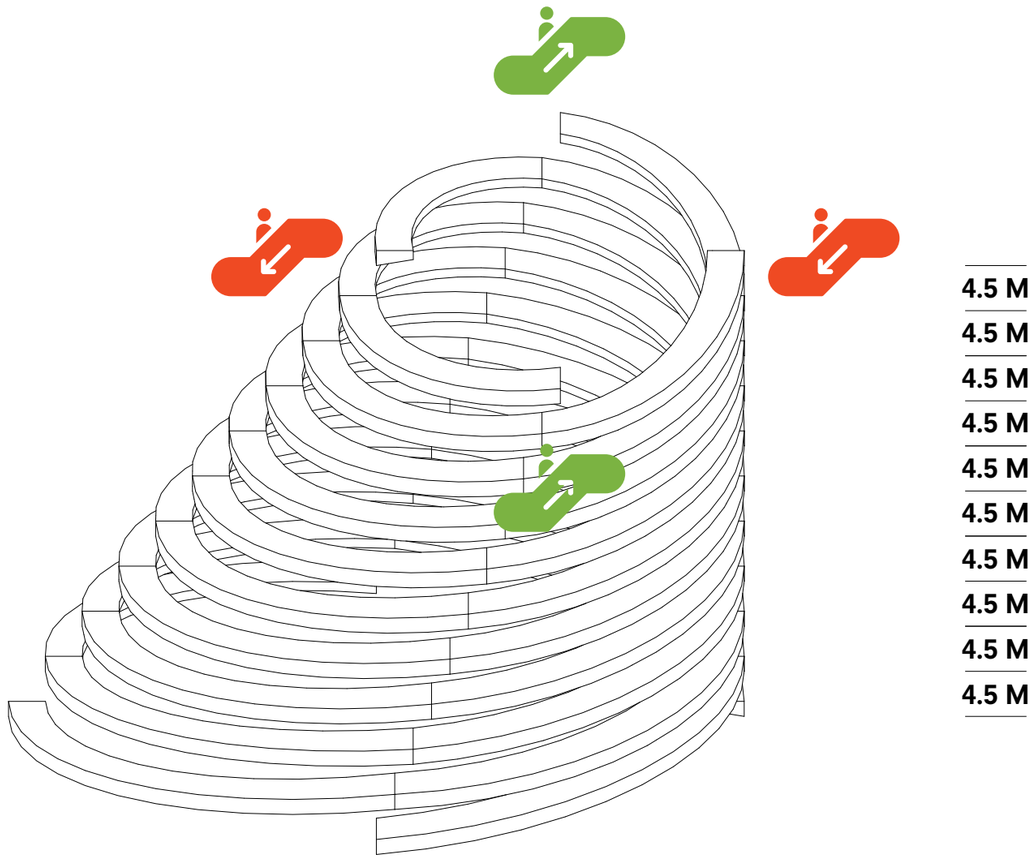
URBAN IMPLEMENTATION

Houtmanstraat
Westzaanstraat
Schermerstraat
Haarlemmer Houttuinen
Spaarndammerstraat
Spaarndammerstraat
Domela Nieuwenhuisplantsoen
Westerpark
Willemsburg

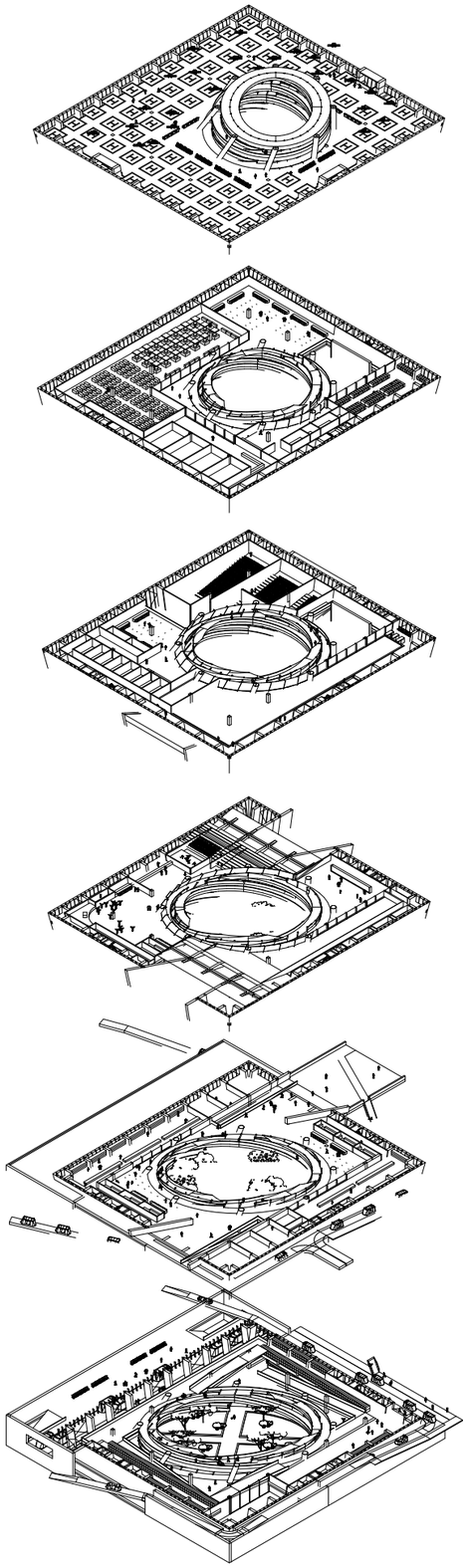
URBAN IMPLEMENTATION

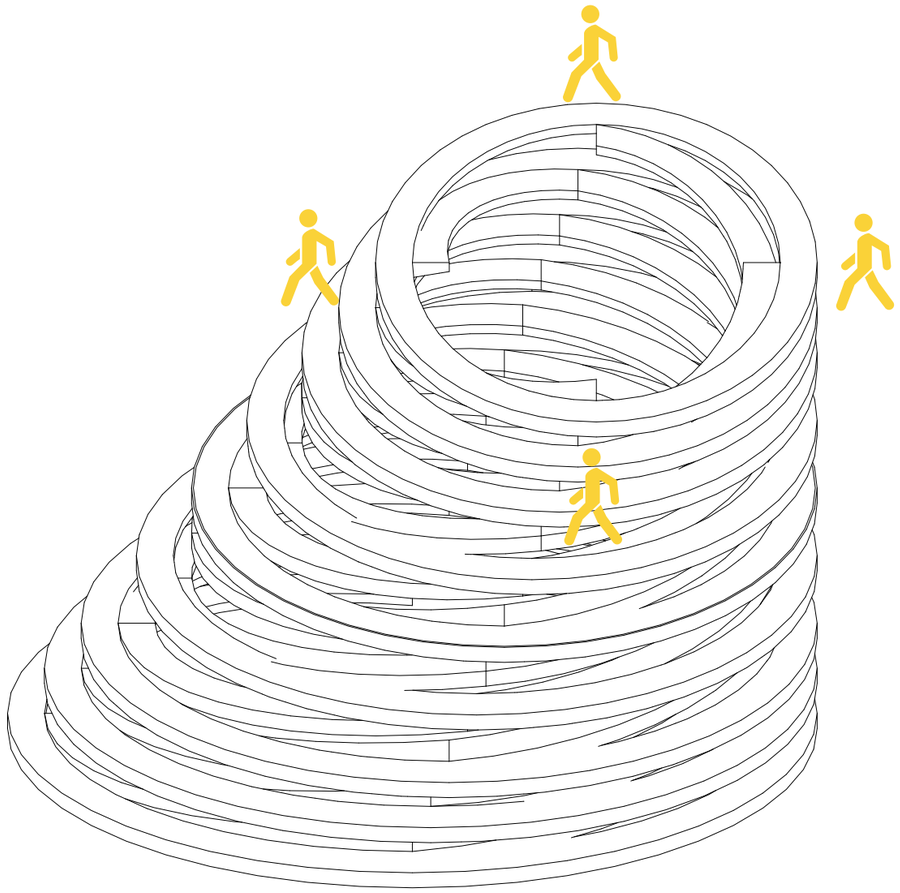
DYNAMIC LOOP



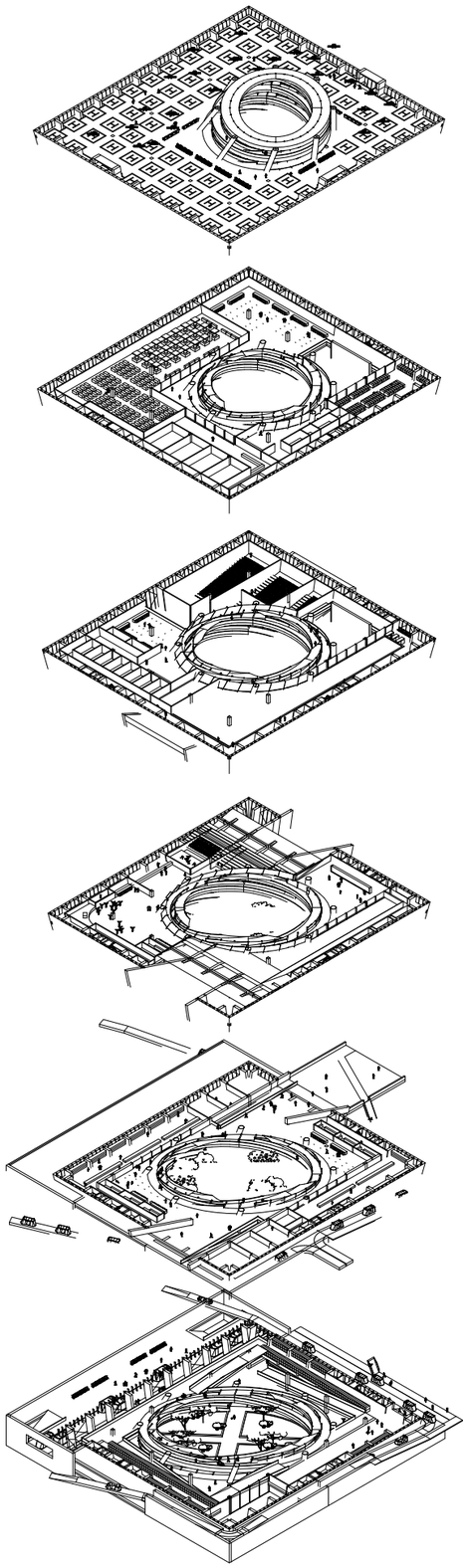


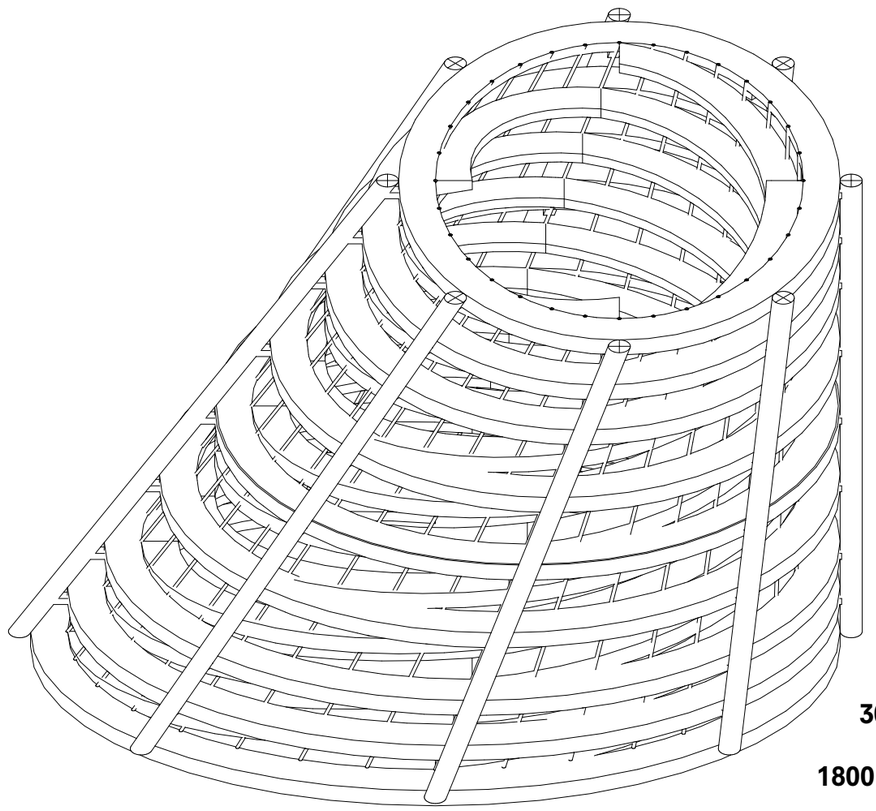
STATIC ACCESS RINGS





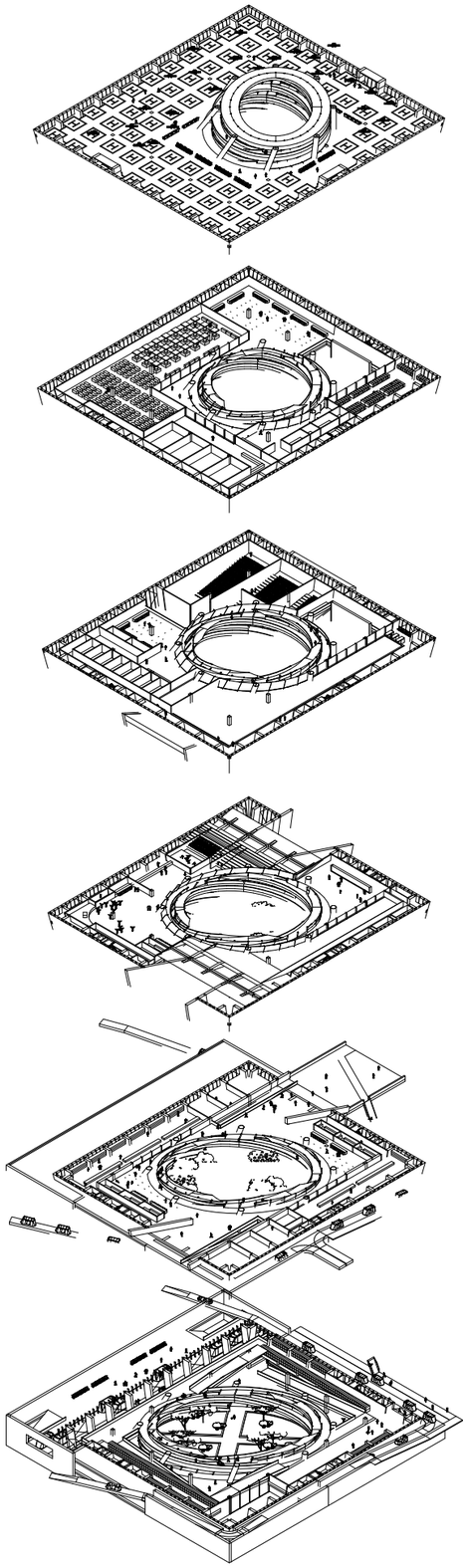
INNER MAIN STRUCTURE

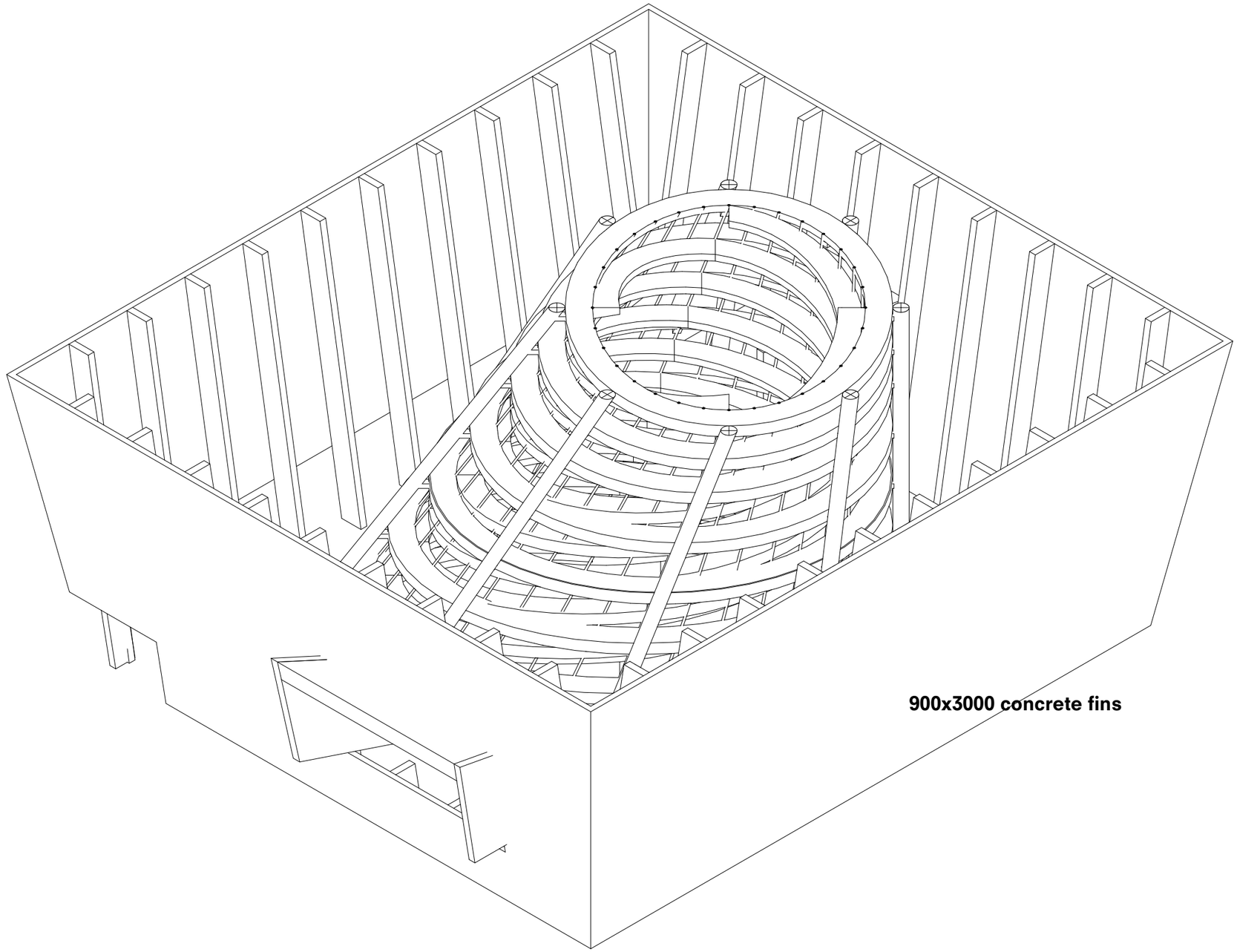




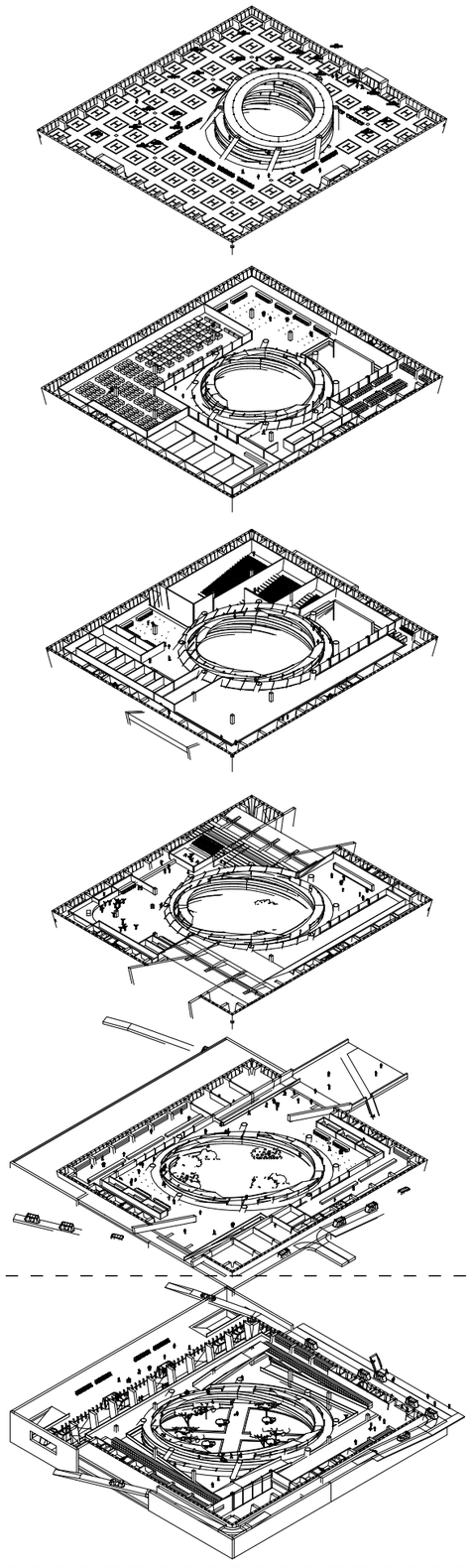
300 Ø steel tension rod
&
1800 Ø steel/concrete column

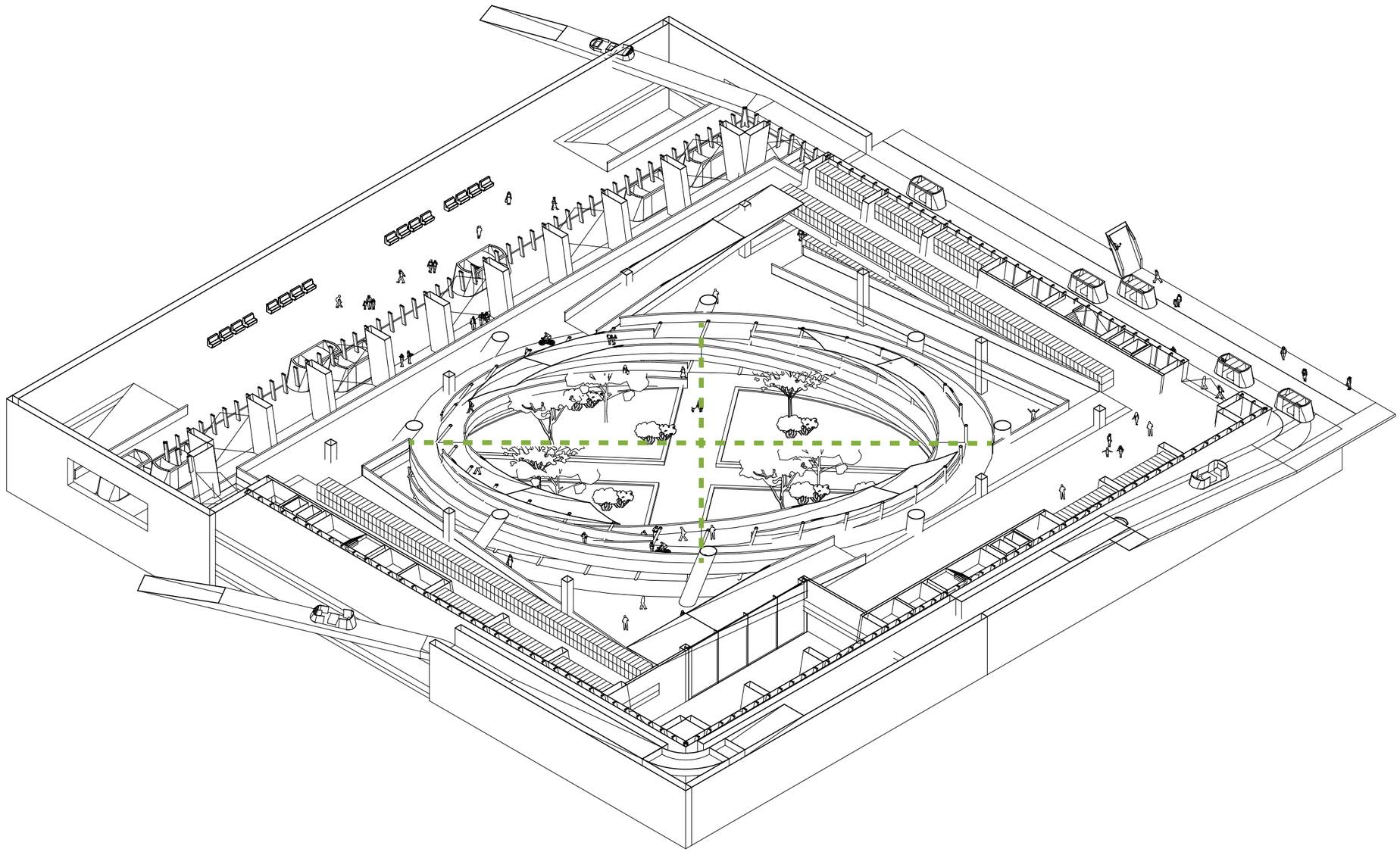
OUTER MAIN STRUCTURE



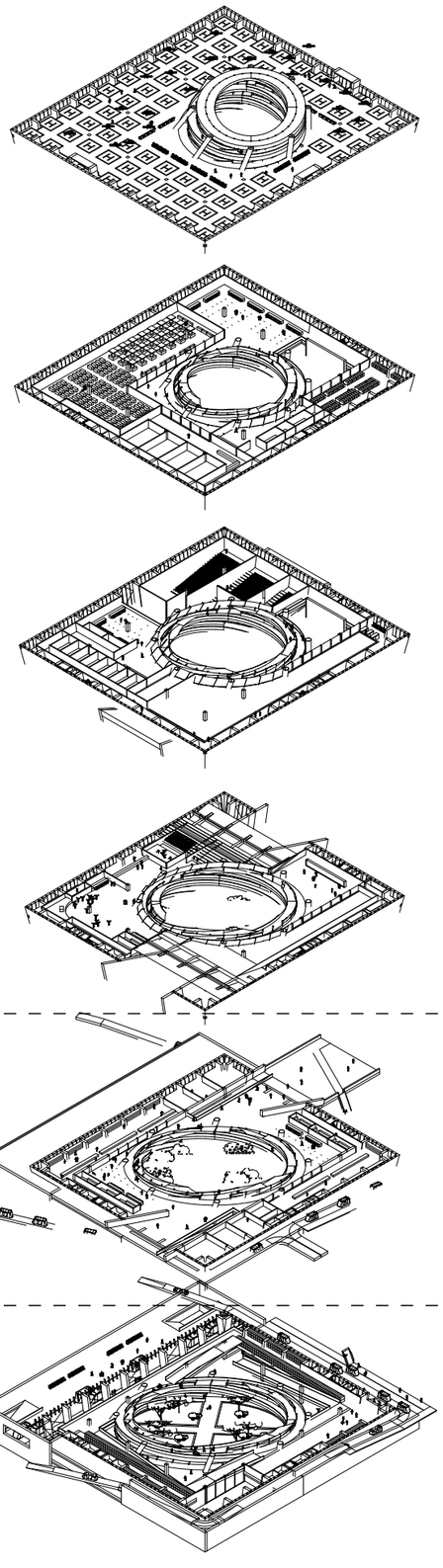


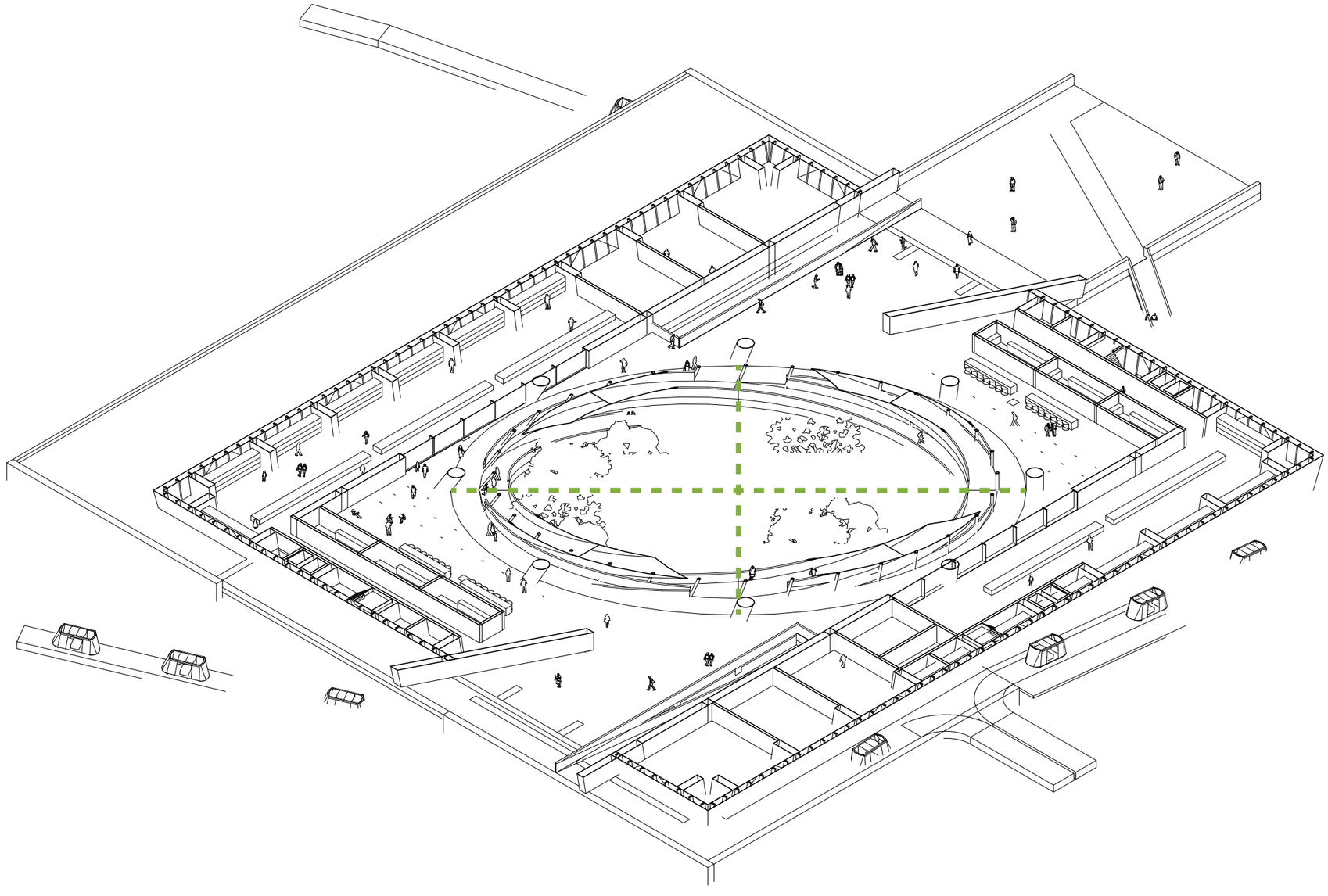
CIRCULATION & PROGRAM: BASEMENT



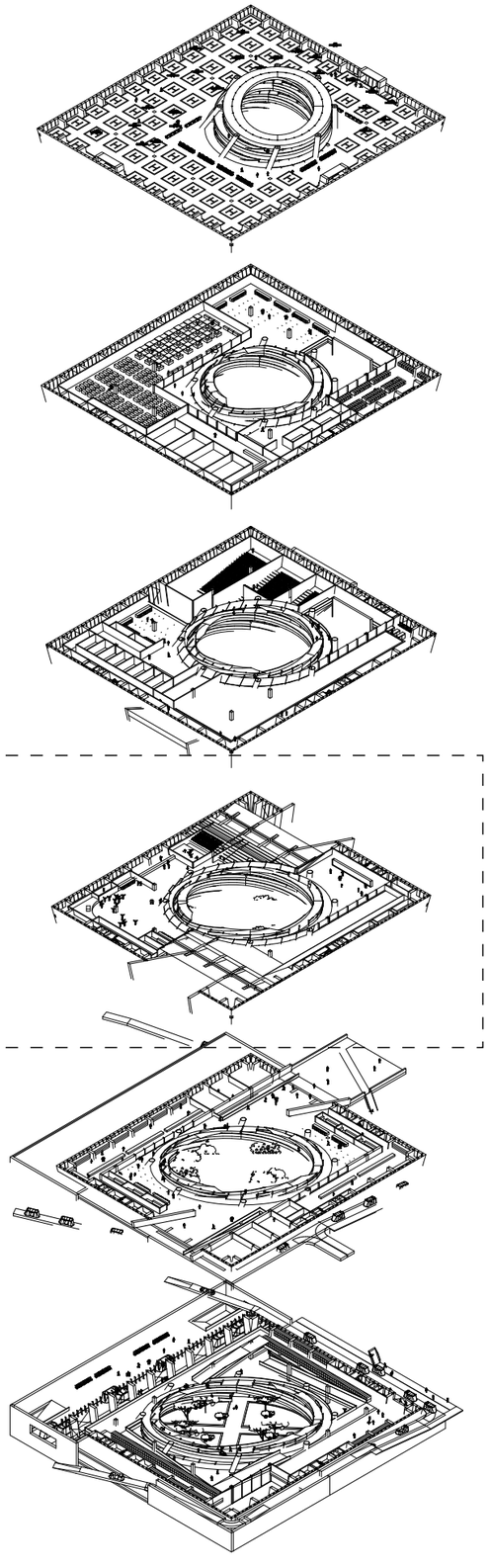


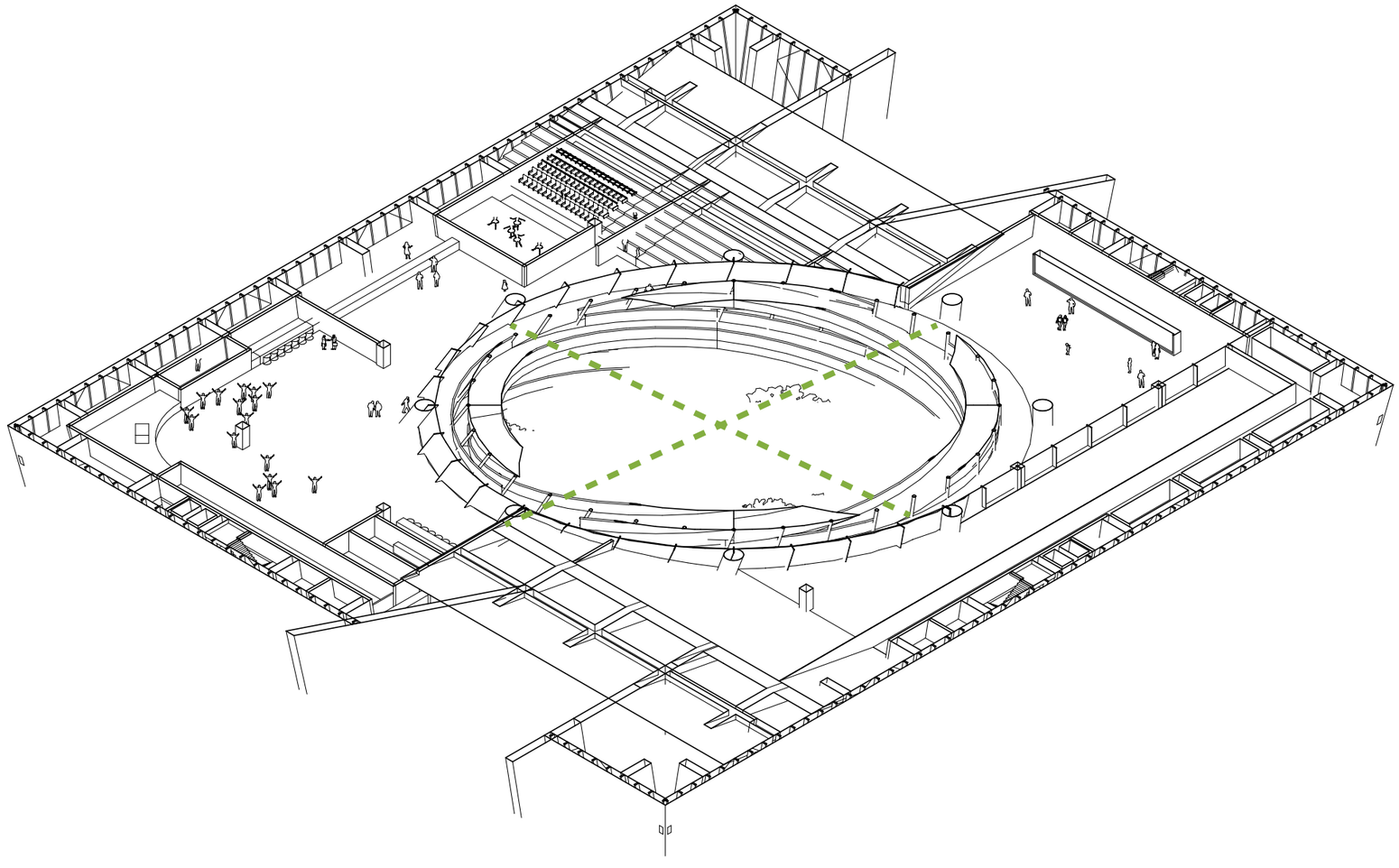
CIRCULATION & PROGRAM: GROUND FLOOR



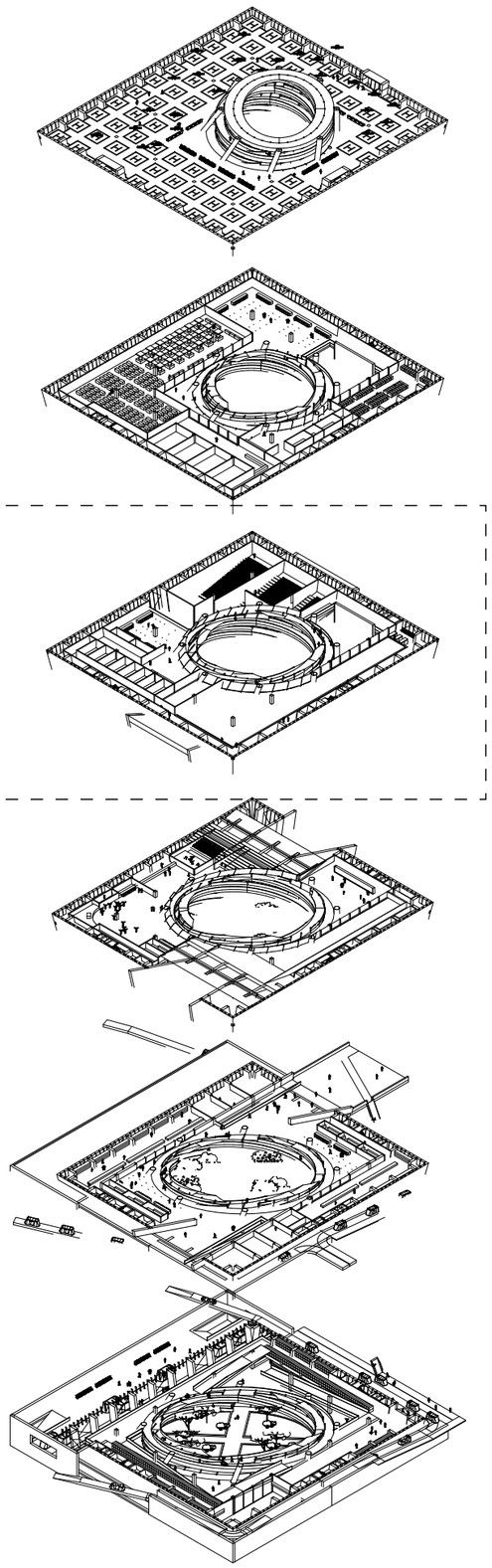


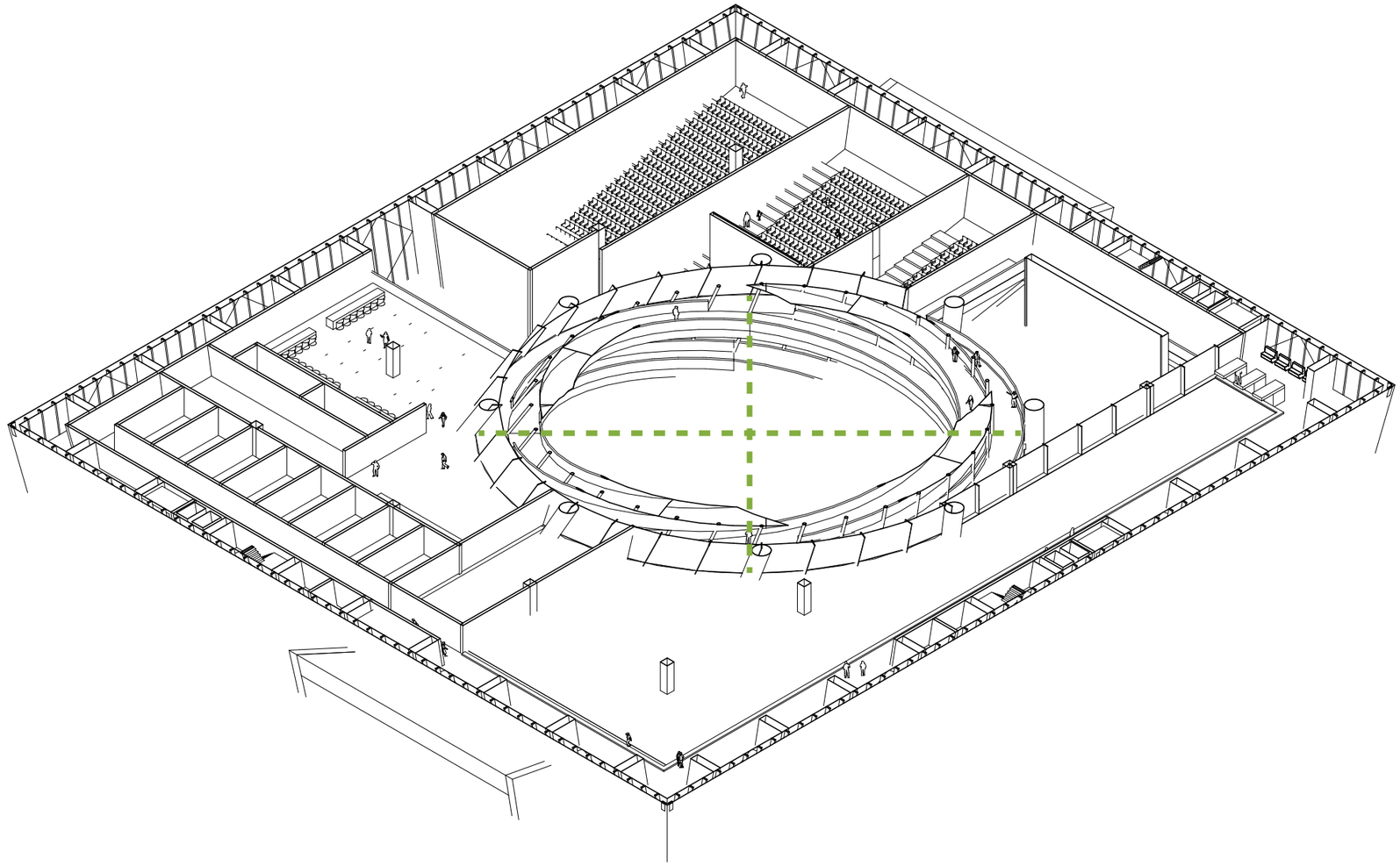
CIRCULATION & PROGRAM: 1st FLOOR



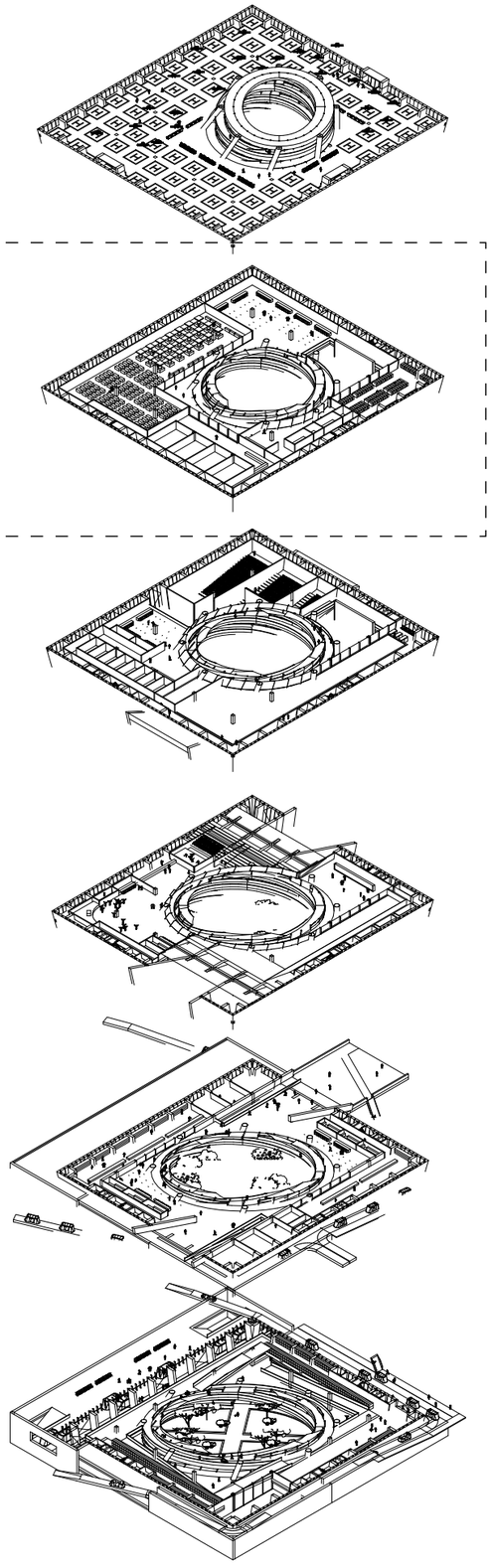


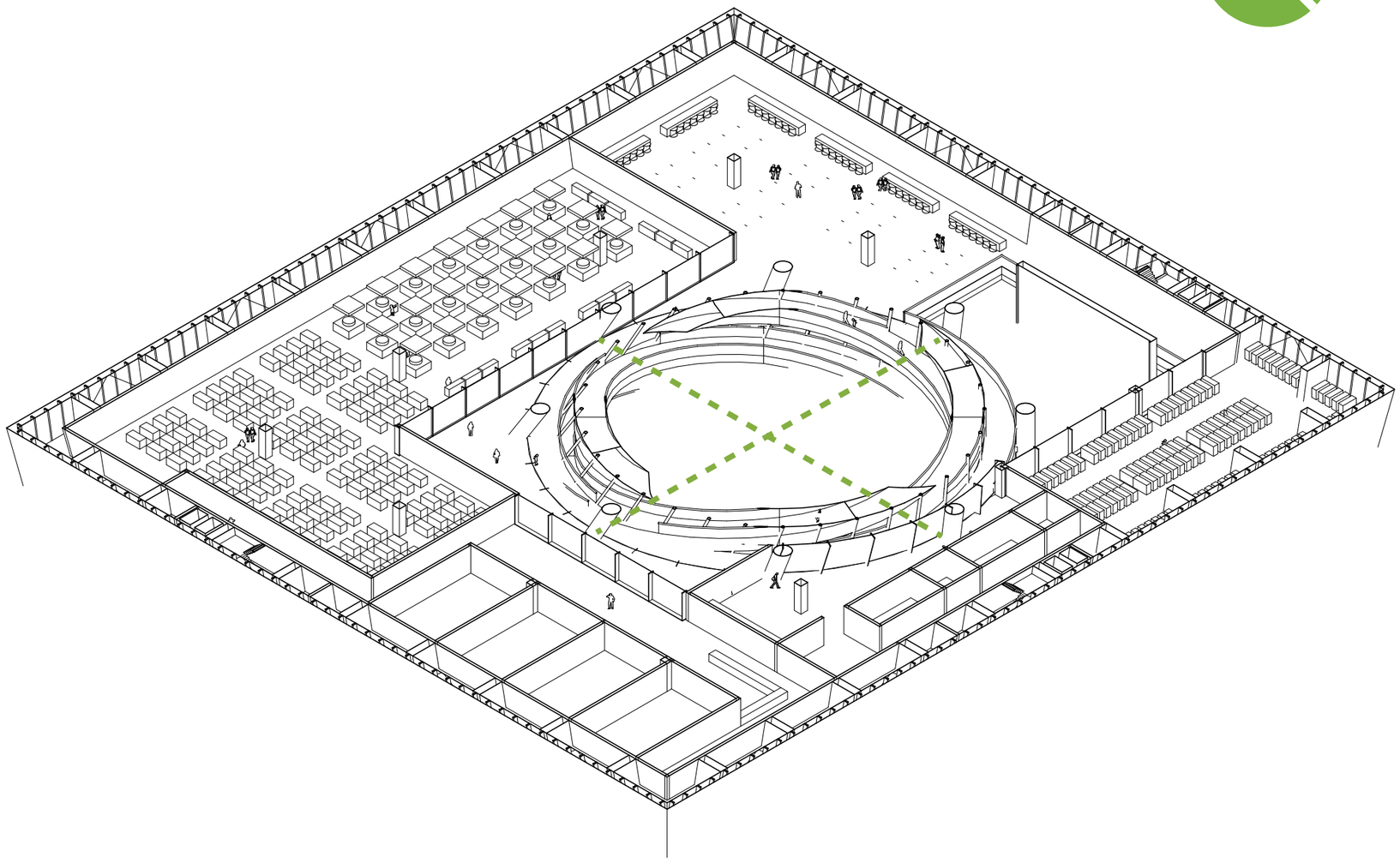
CIRCULATION & PROGRAM: 2nd FLOOR



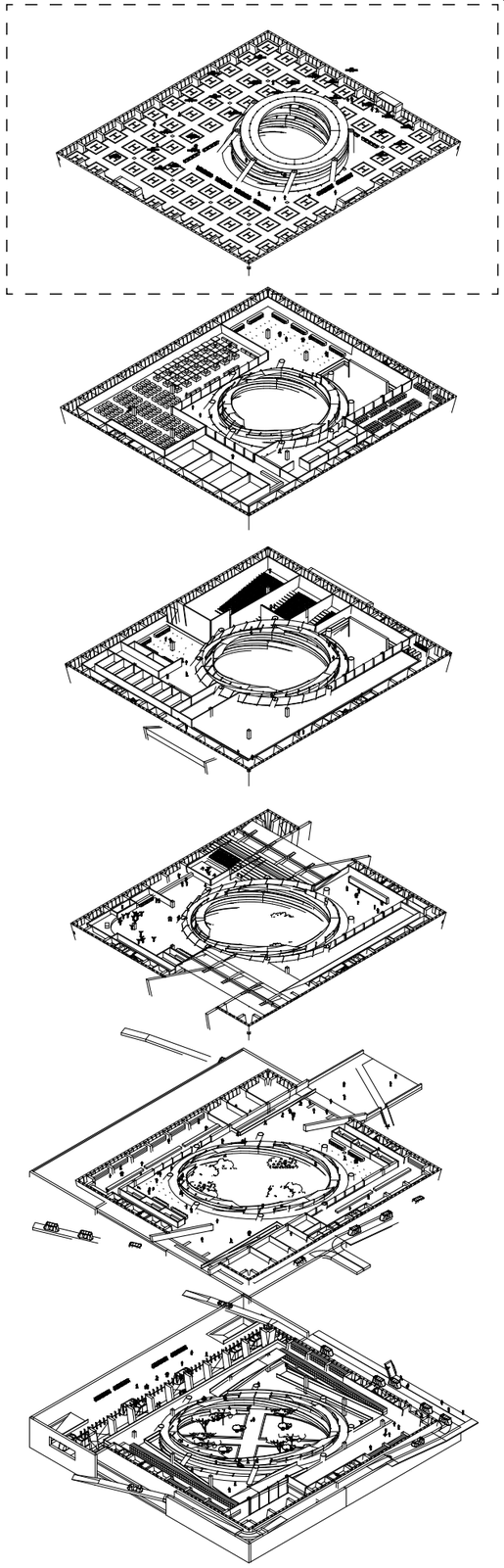


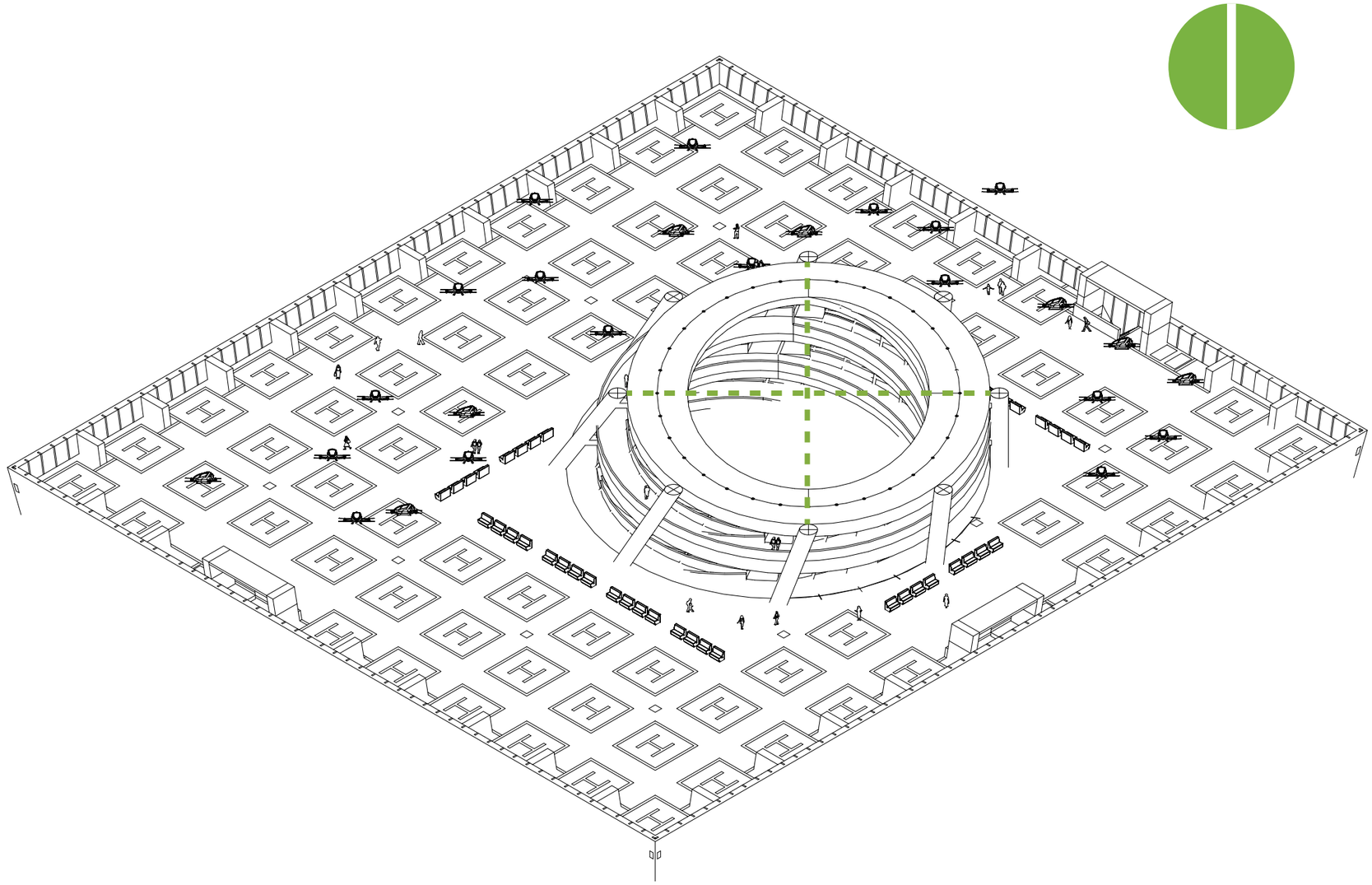
CIRCULATION & PROGRAM: 3rd FLOOR



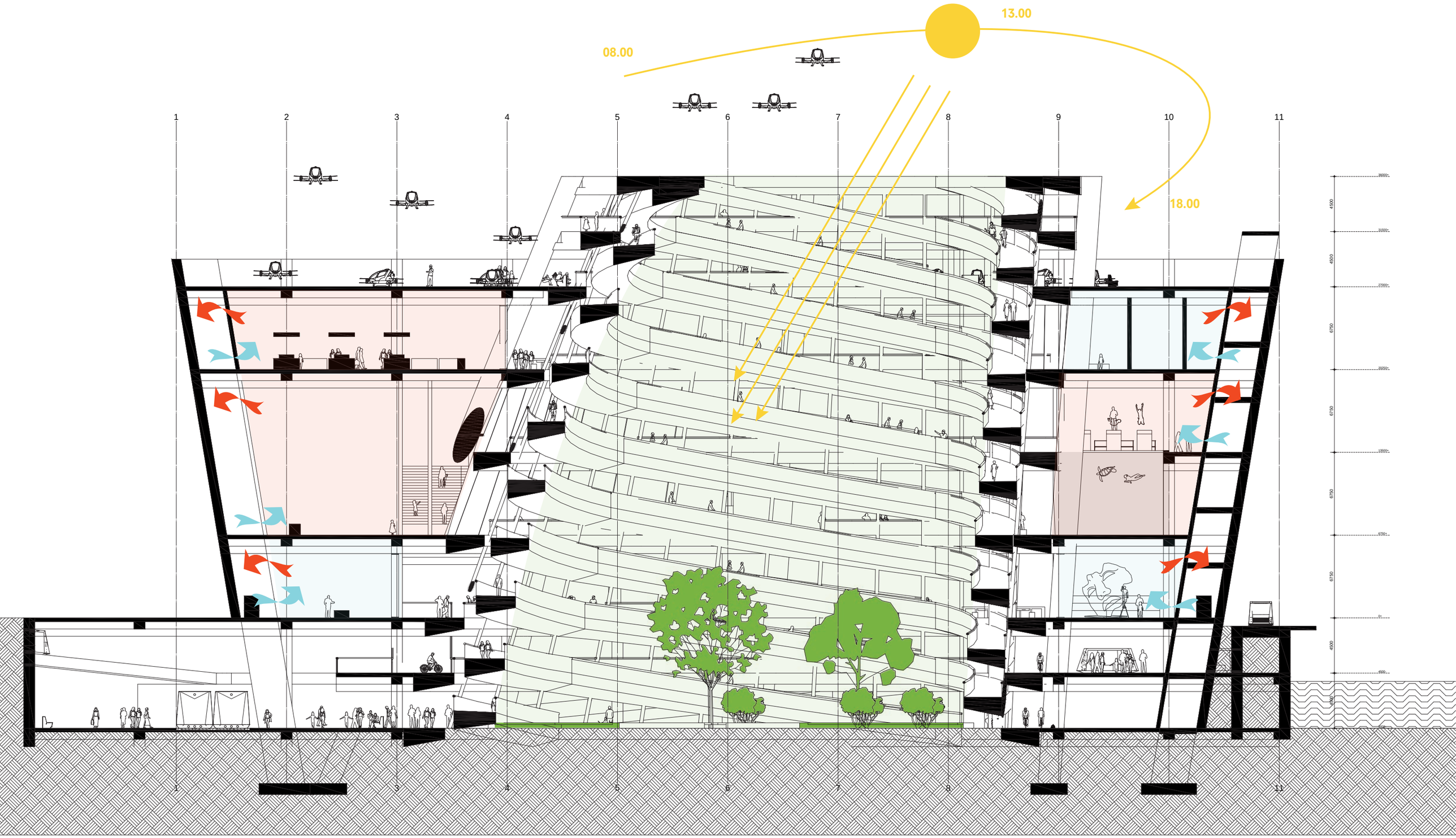


CIRCULATION & PROGRAM: ROOF AND OBSERVATION RING





CLIMATESECTION MECHANICAL

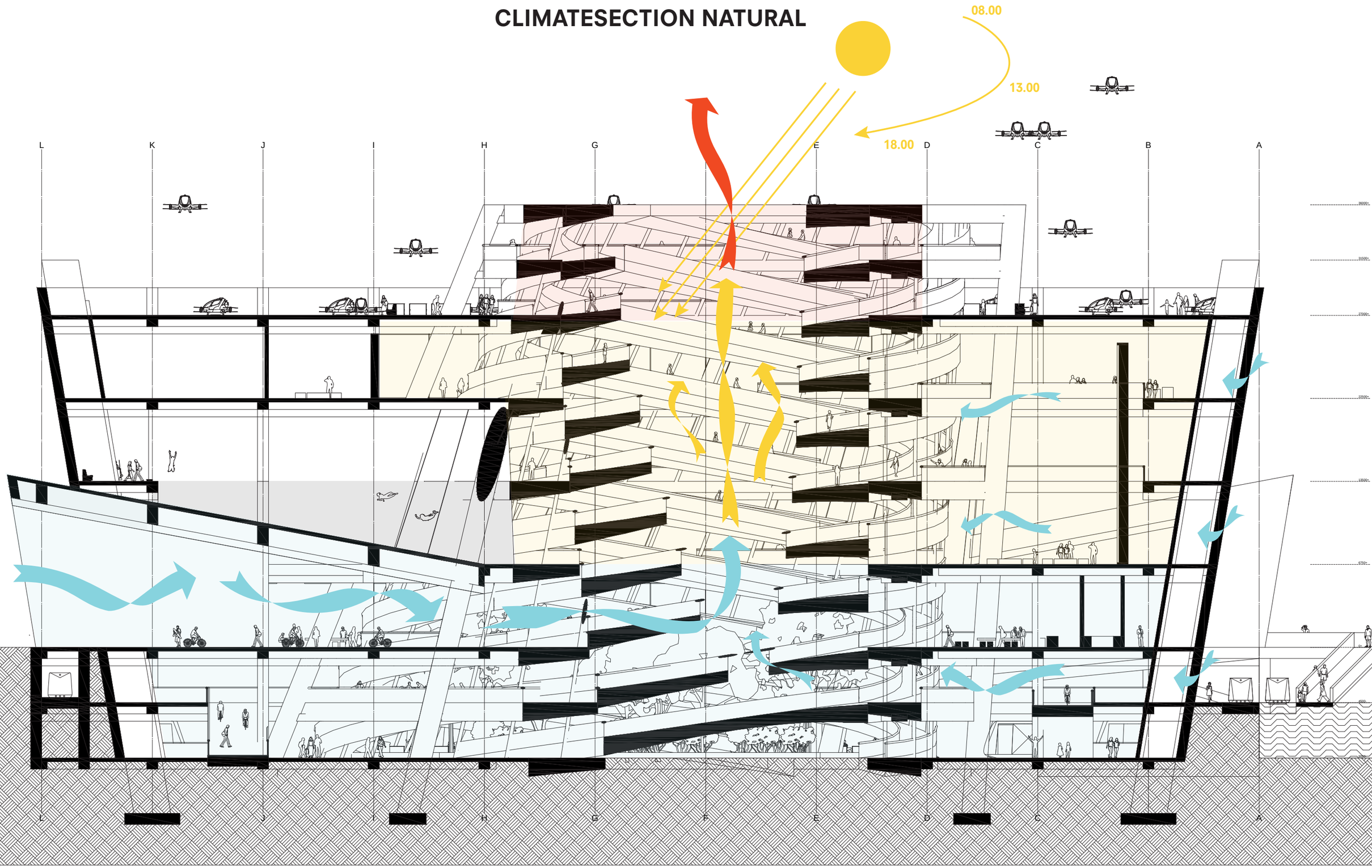


SECTION B-B

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

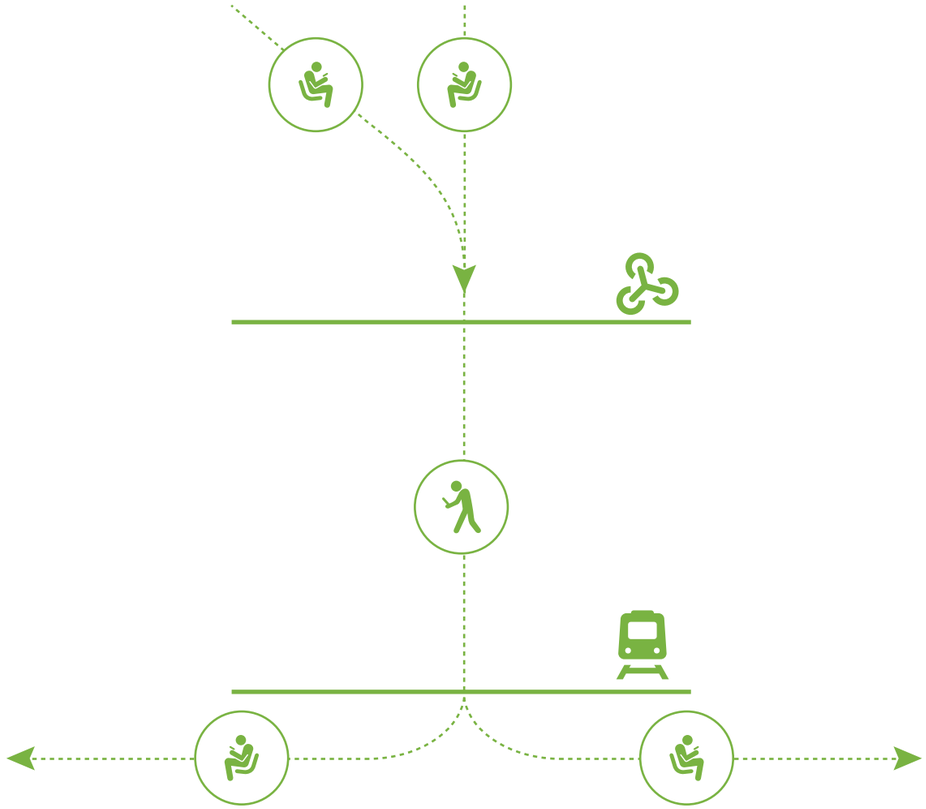
Author

CLIMATESECTION NATURAL

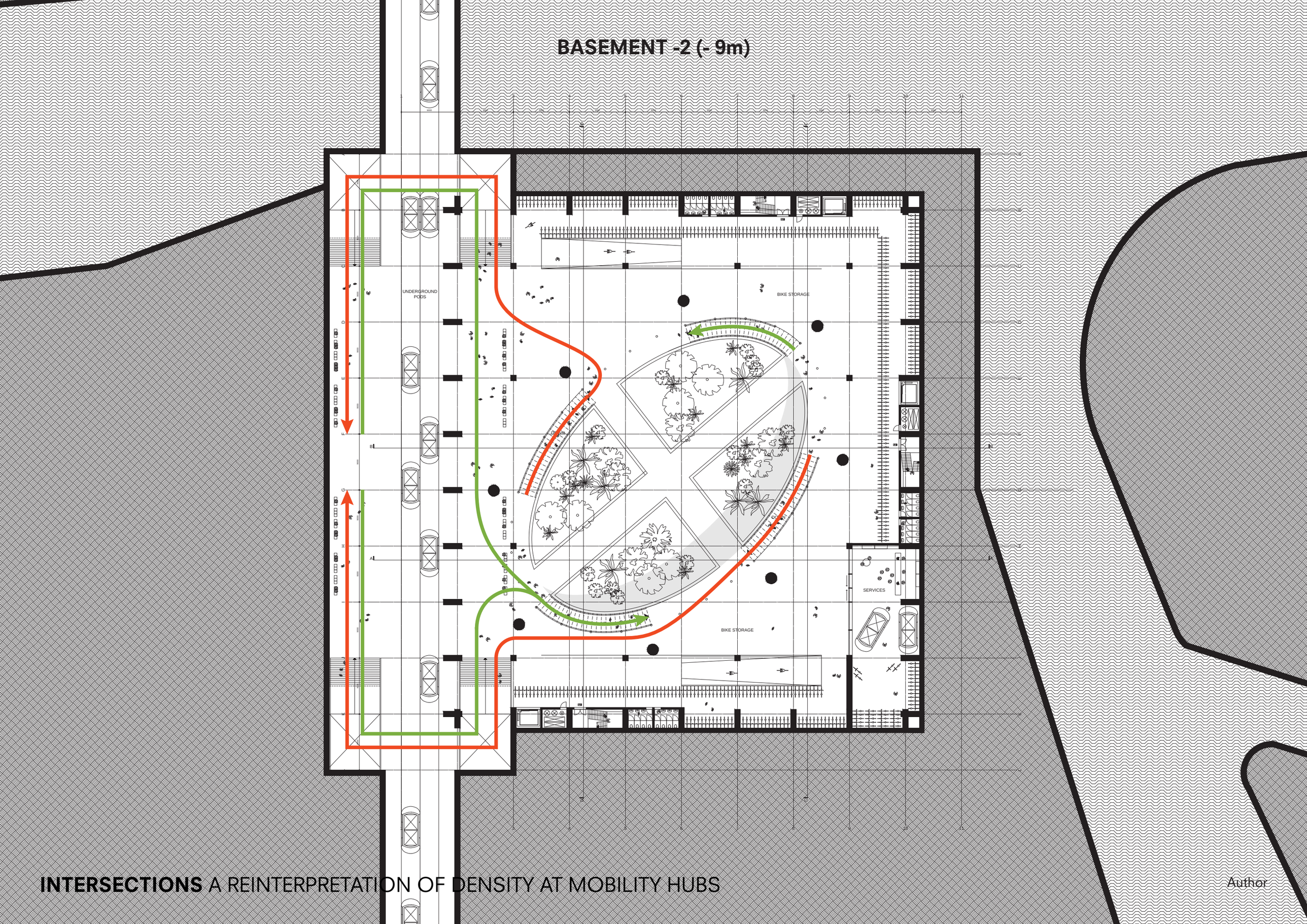


SECTION C-C

COMMUTER / TRANSIT

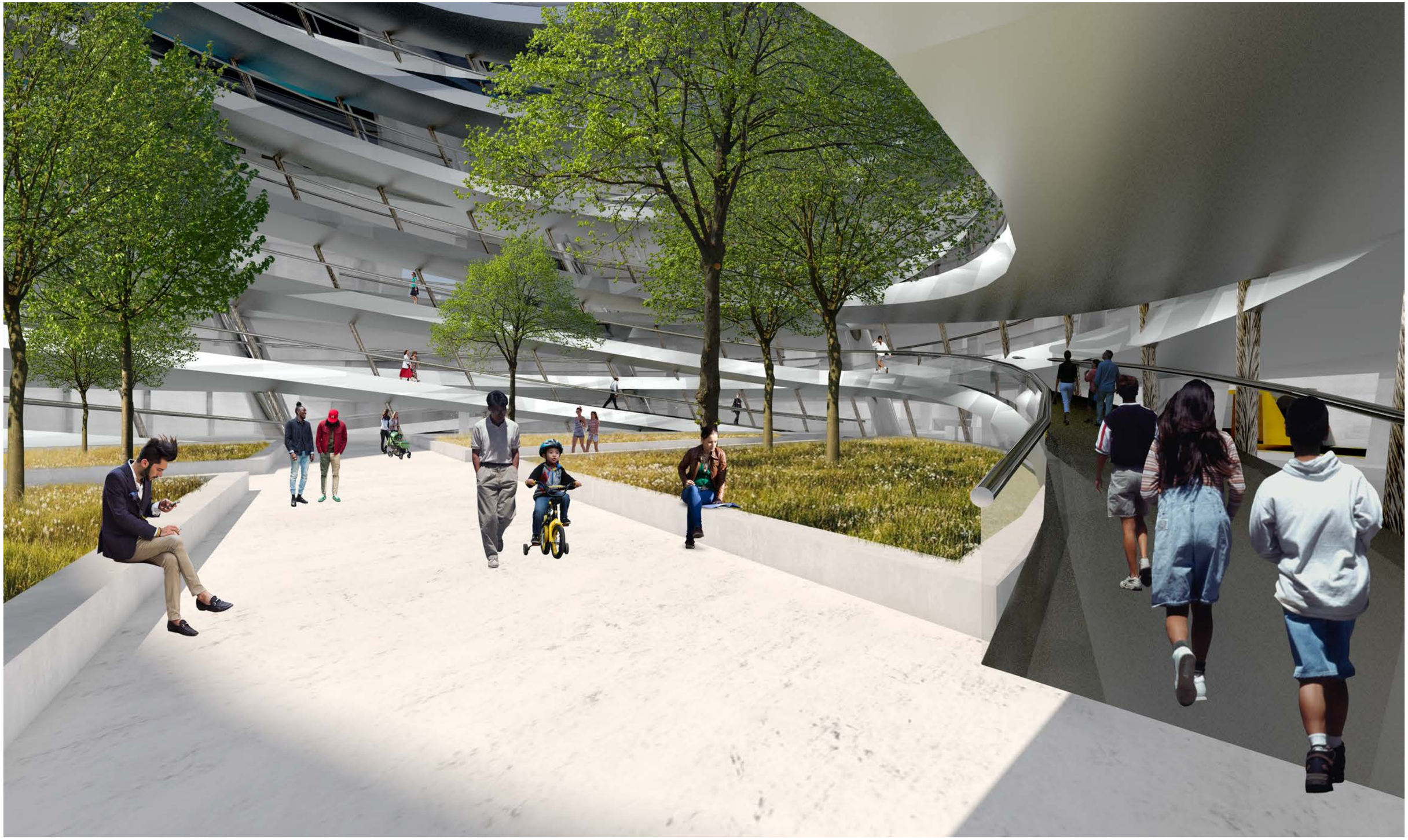


BASEMENT -2 (- 9m)

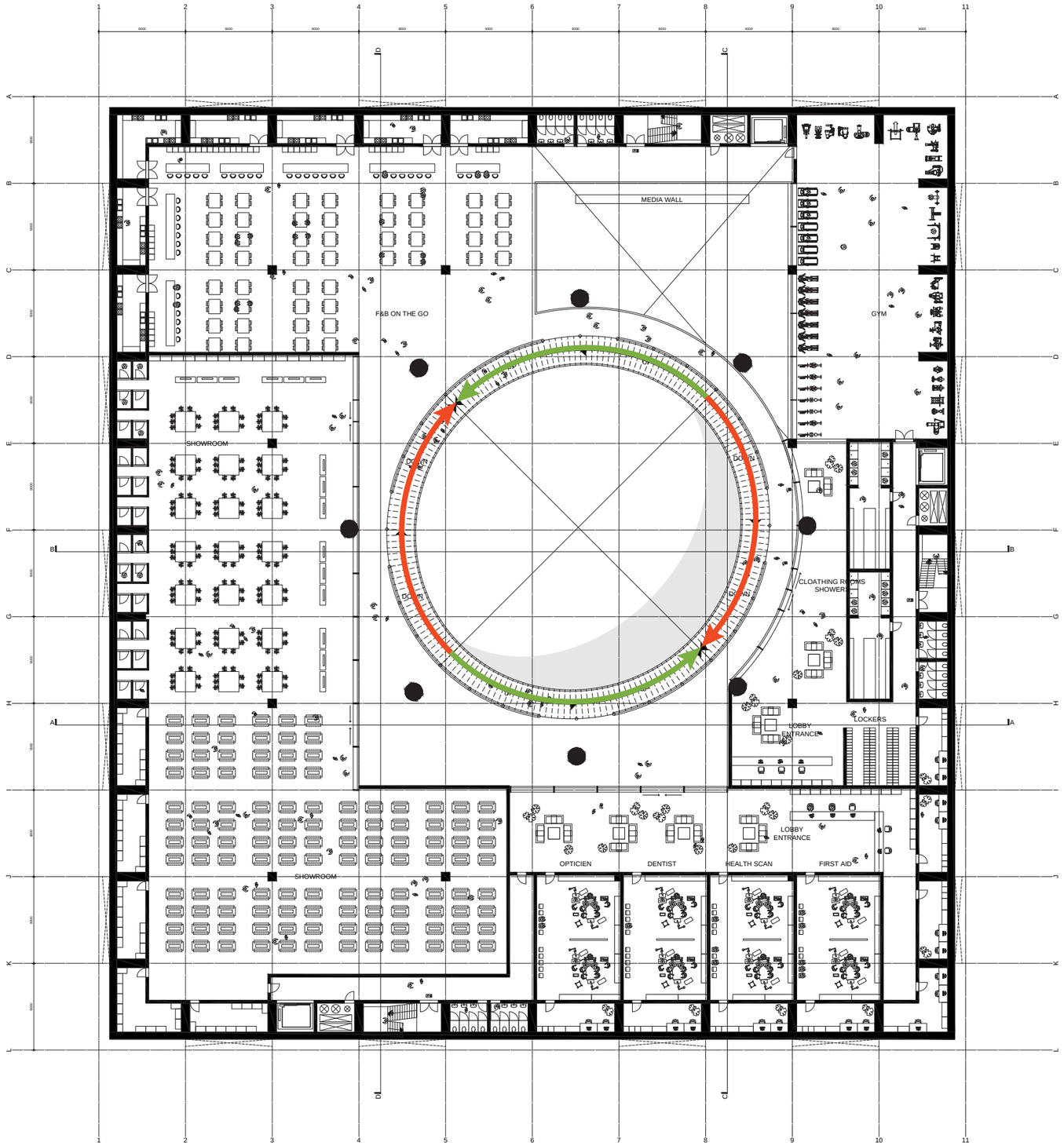


ARRIVAL/DEPARTURE OF UNDERGROUND

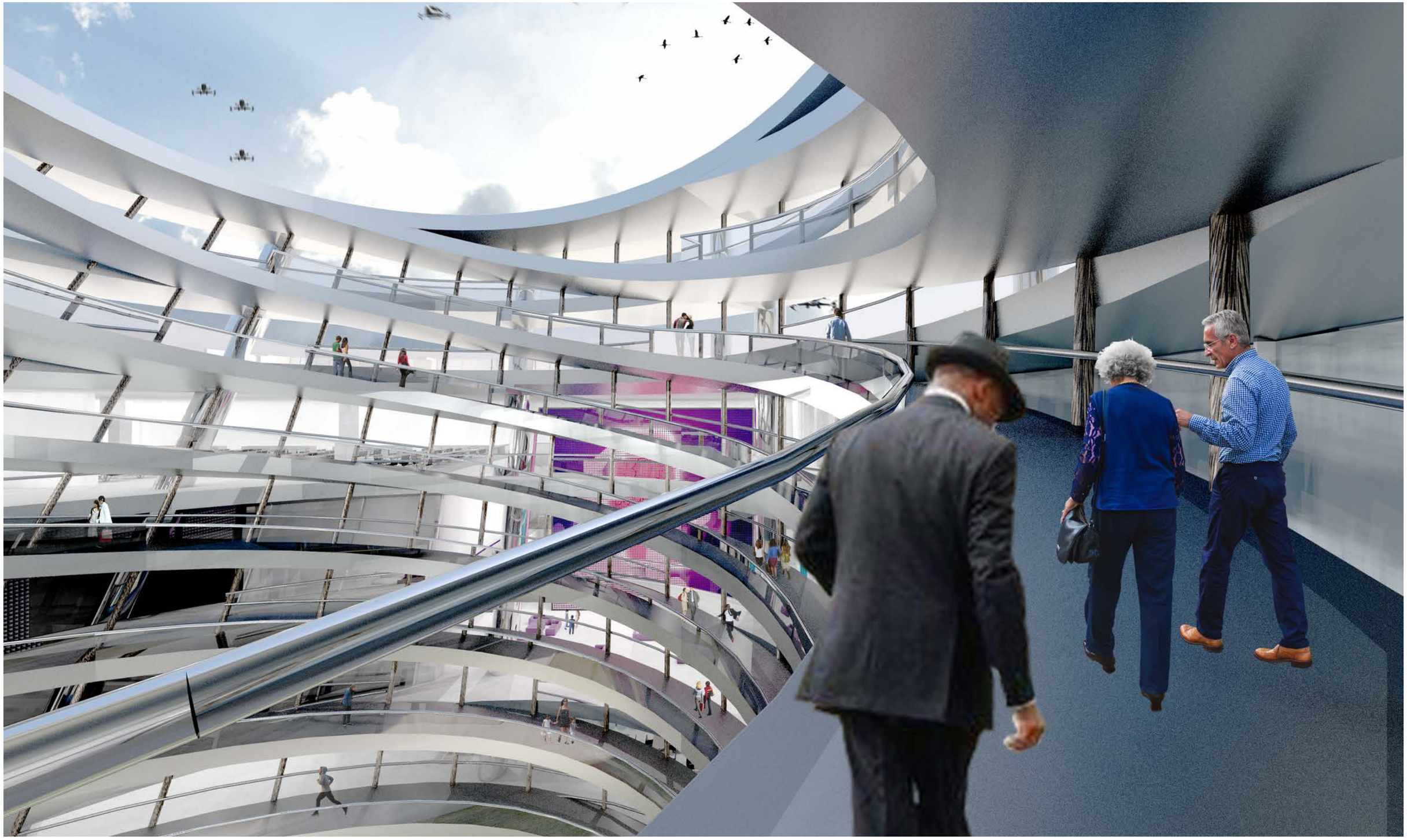
ENTERING THE LOOP



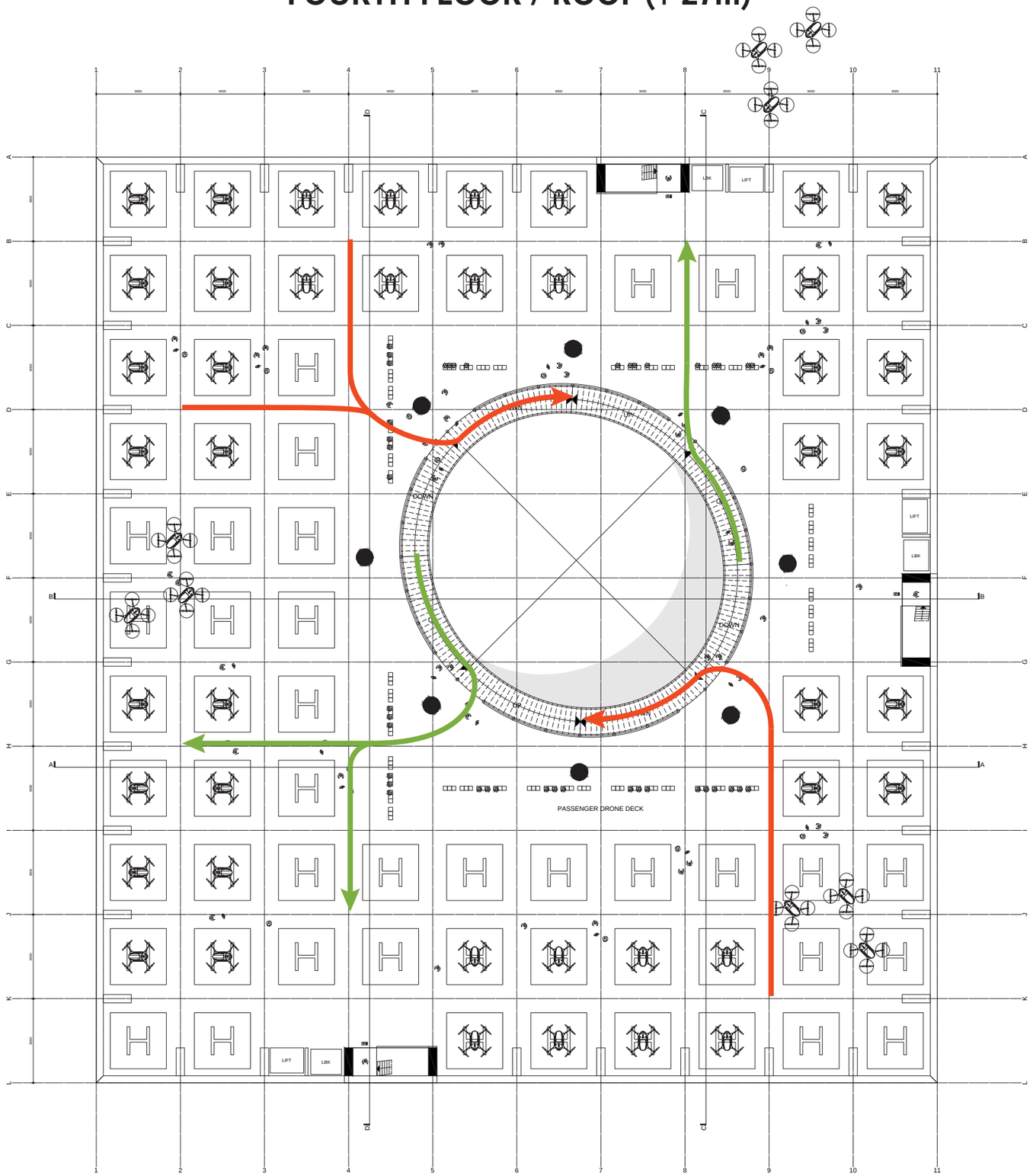
THIRD FLOOR (+ 21.25m)



THE VOID

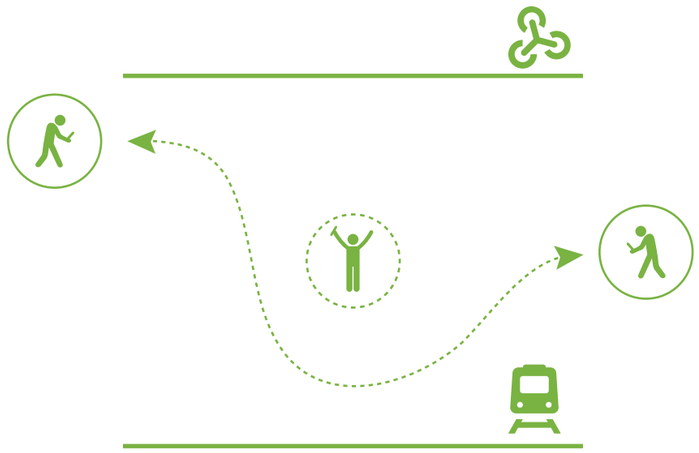


FOURTH FLOOR / ROOF (+ 27m)

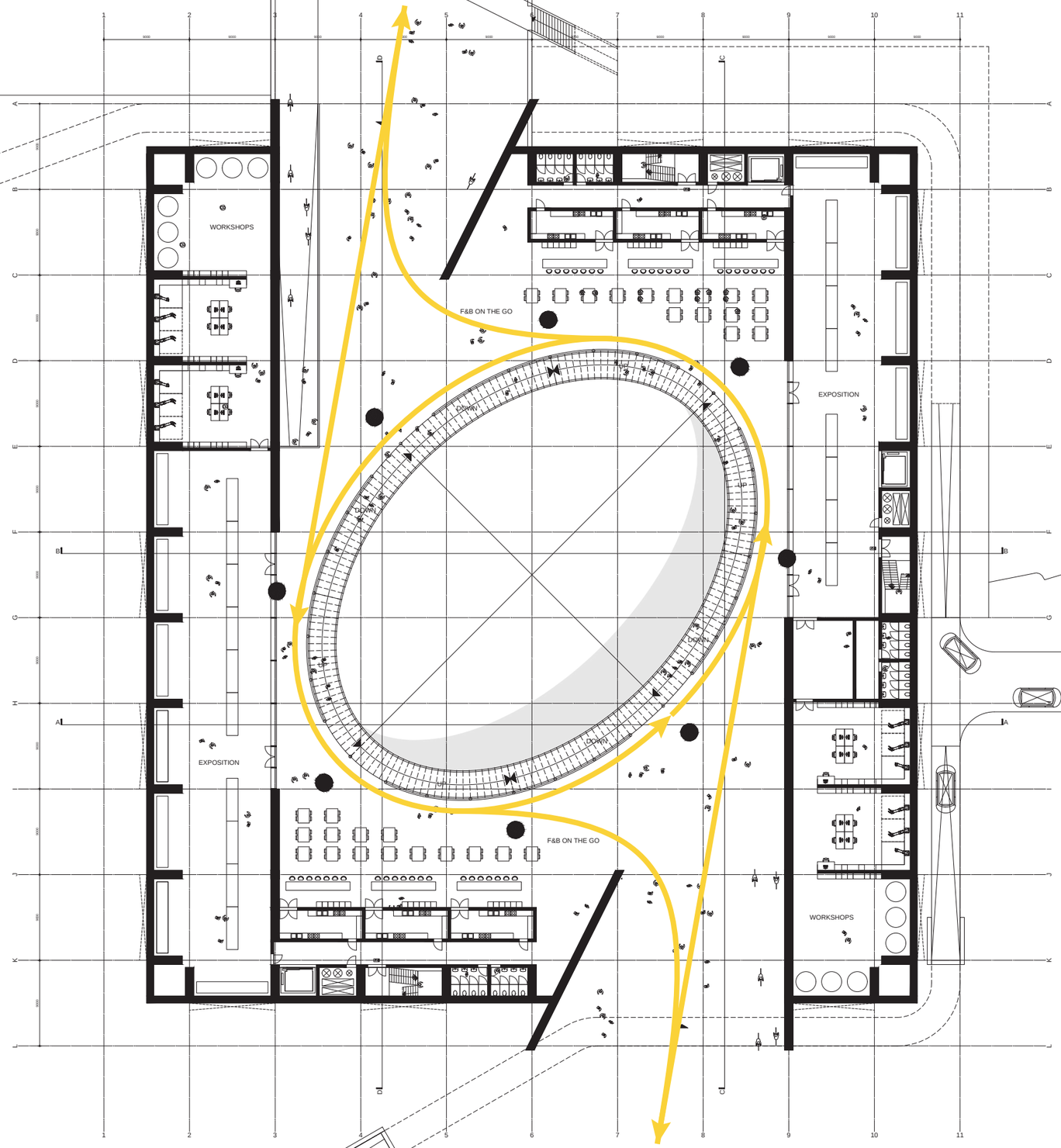


ARRIVAL/DEPARTURE OF PASSENGER DRONES

ACTOR/SPECTATOR - PASSAGE



GROUND FLOOR (0m)



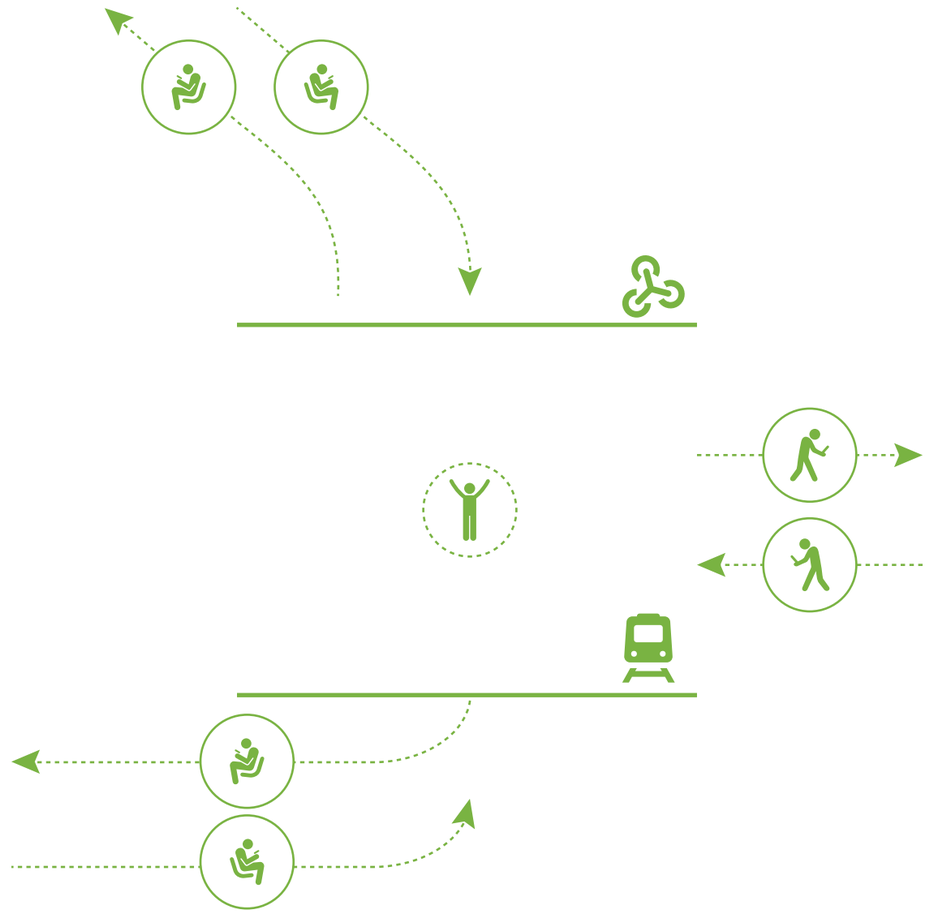
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Author

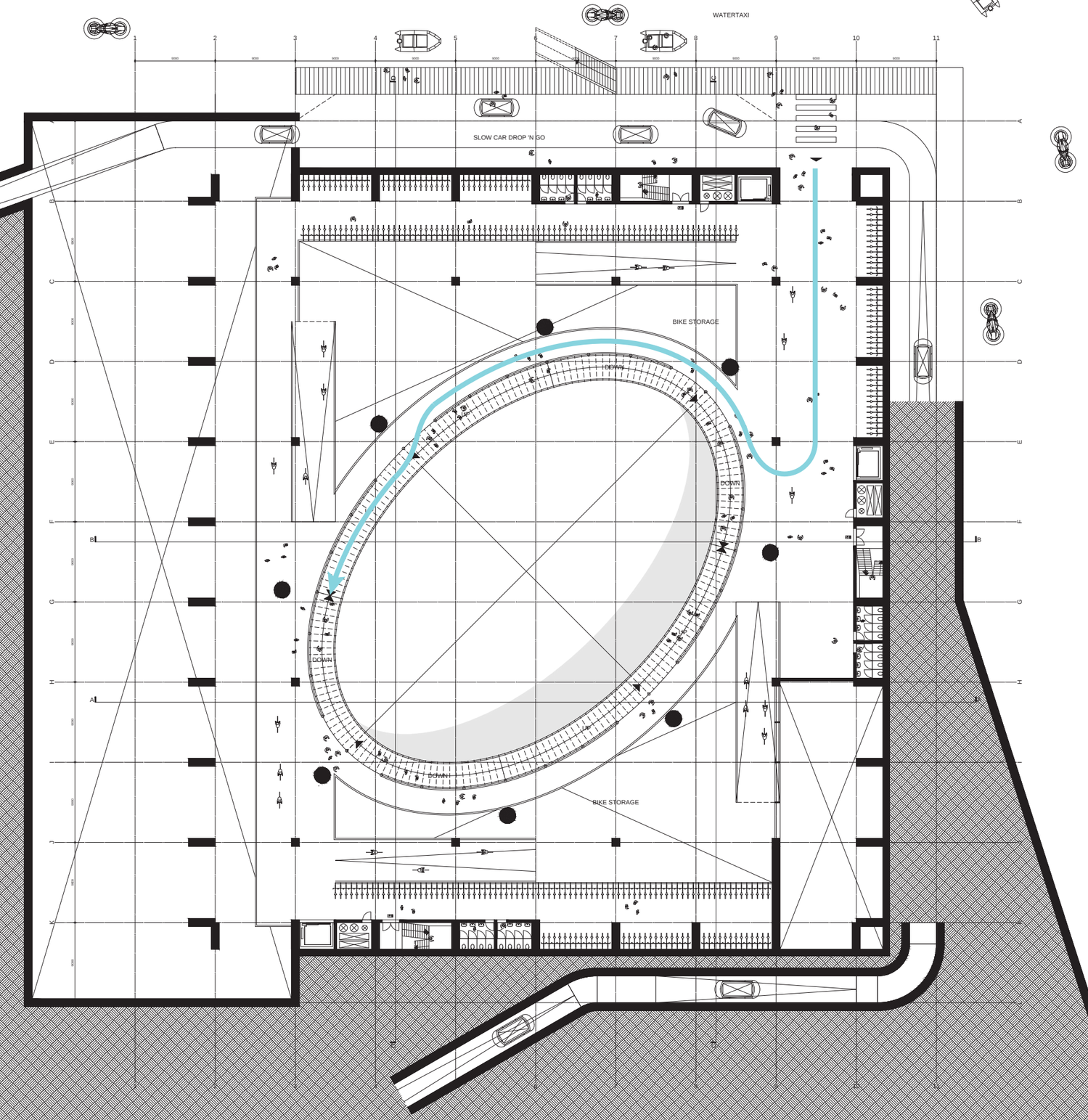
ATTRACTION

PEAK THROUGH

FACILITY USER - ARRIVAL/DEPARTURE



BASEMENT -1 (- 4.5m)



INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

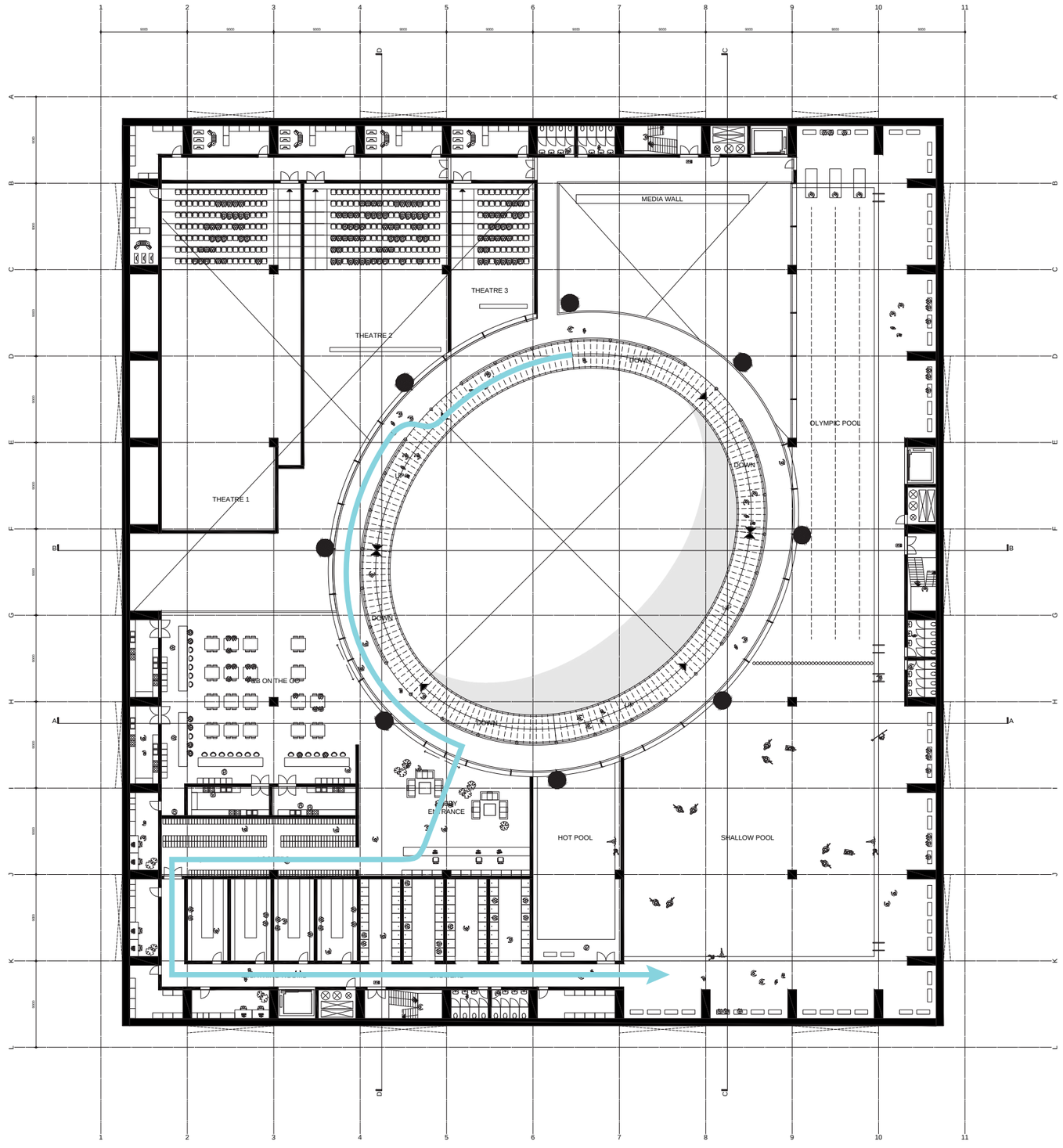
Author

ARRIVING FROM THE WATER

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

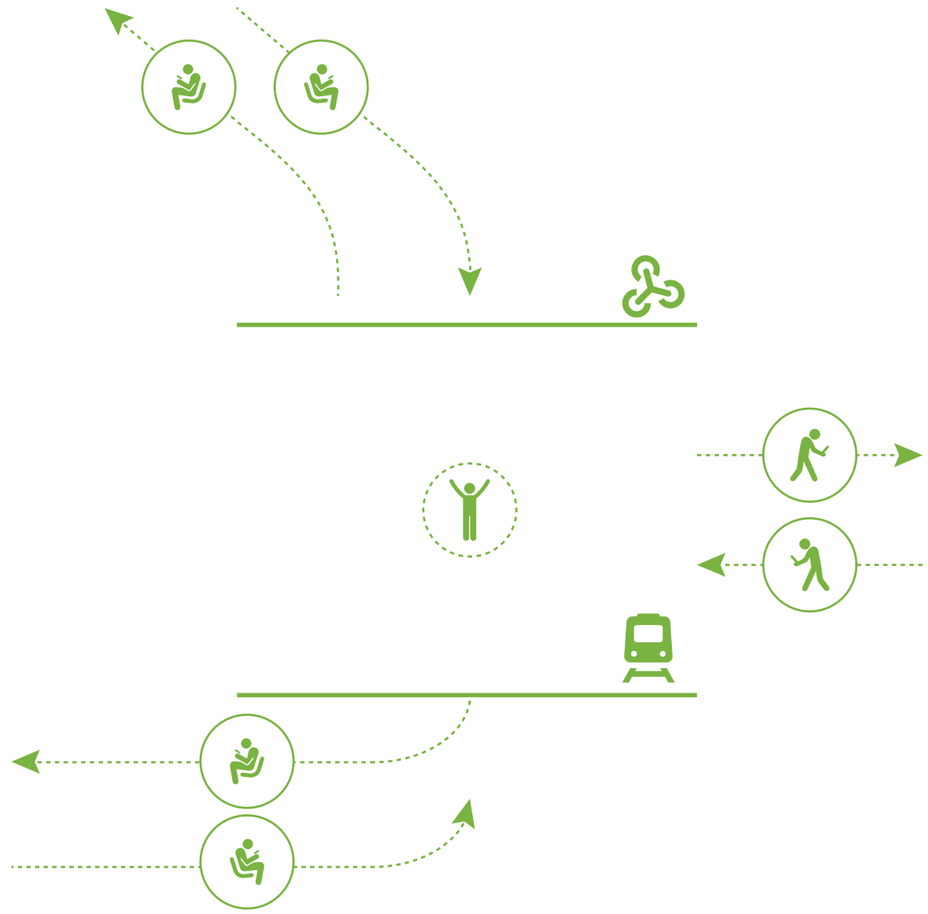
Author

SECOND FLOOR (+ 13.5m)

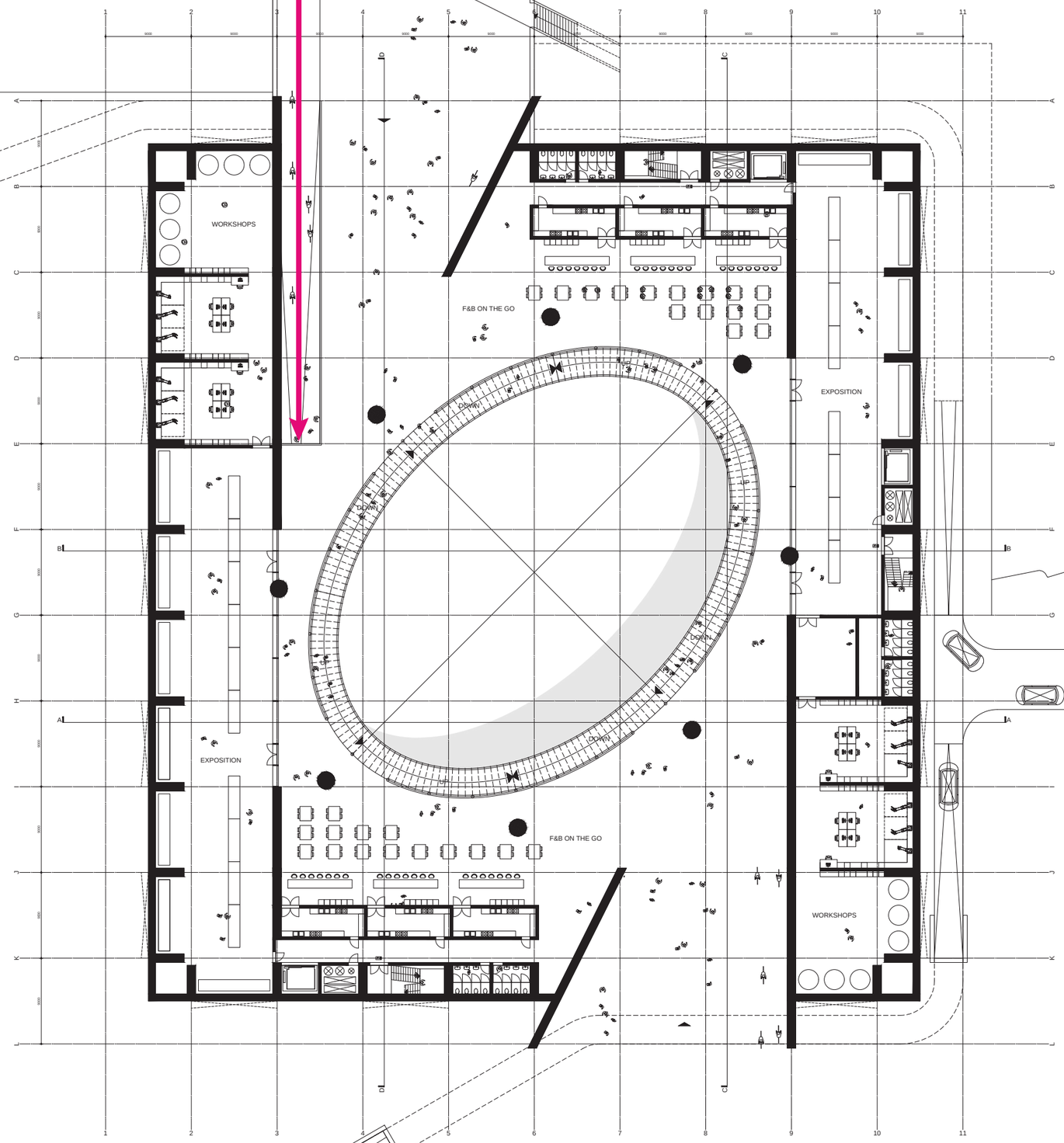


THE SWIMMING POOL

FACILITY USER - ARRIVAL/DEPARTURE



GROUND FLOOR (+ 0m)



INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

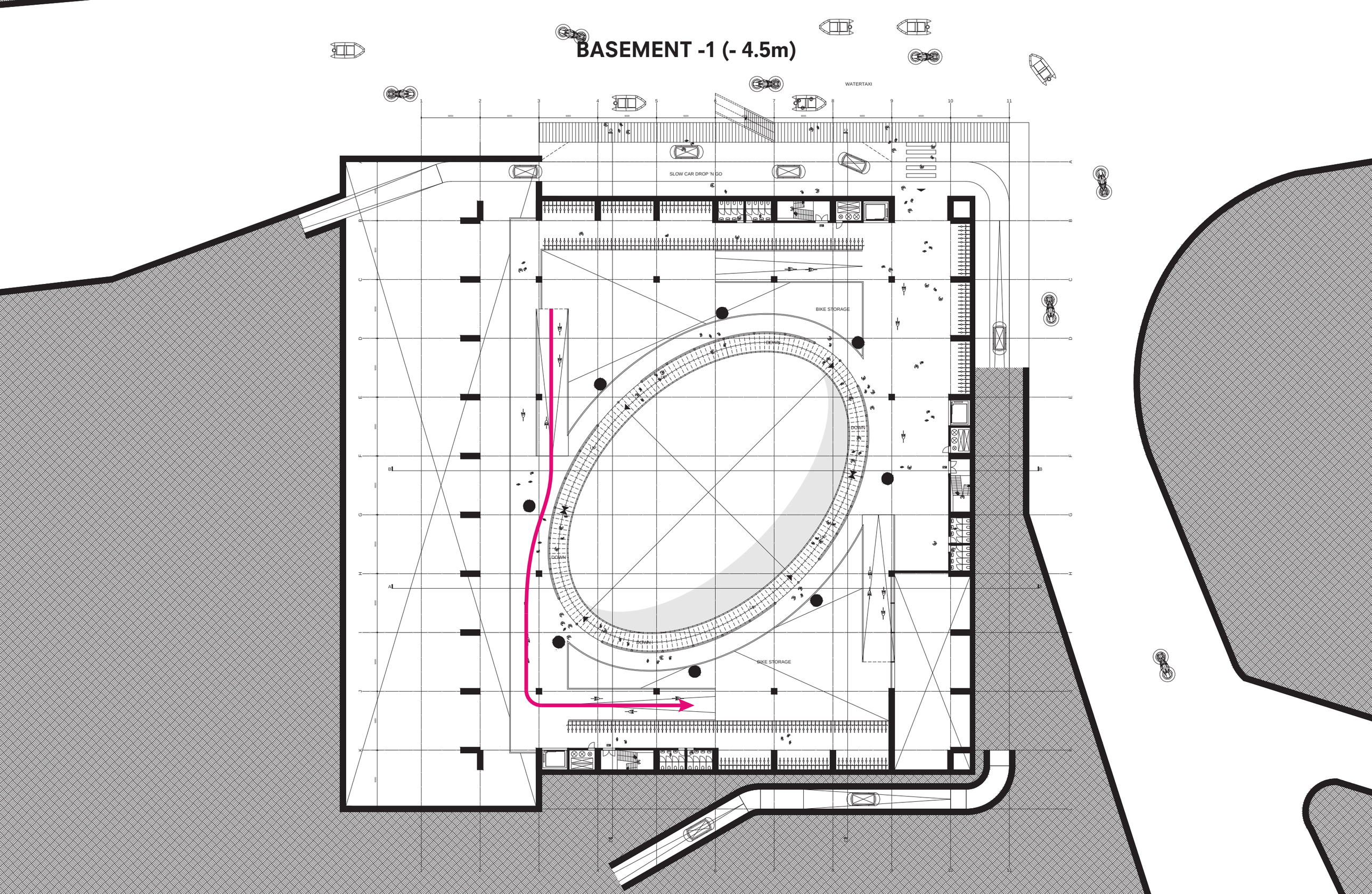
Author

ARRIVING FROM THE PARK

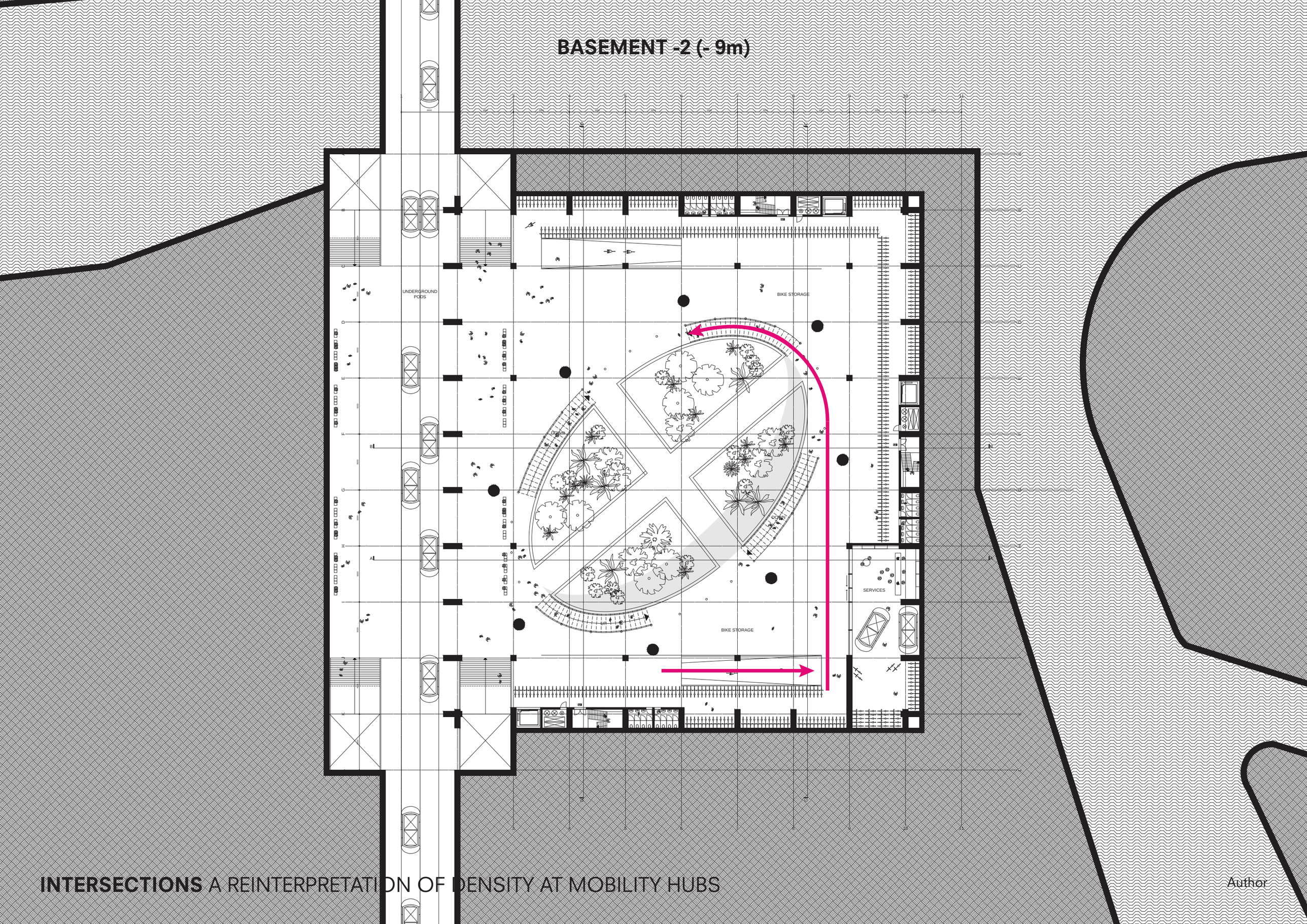
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Author

BASEMENT -1 (- 4.5m)

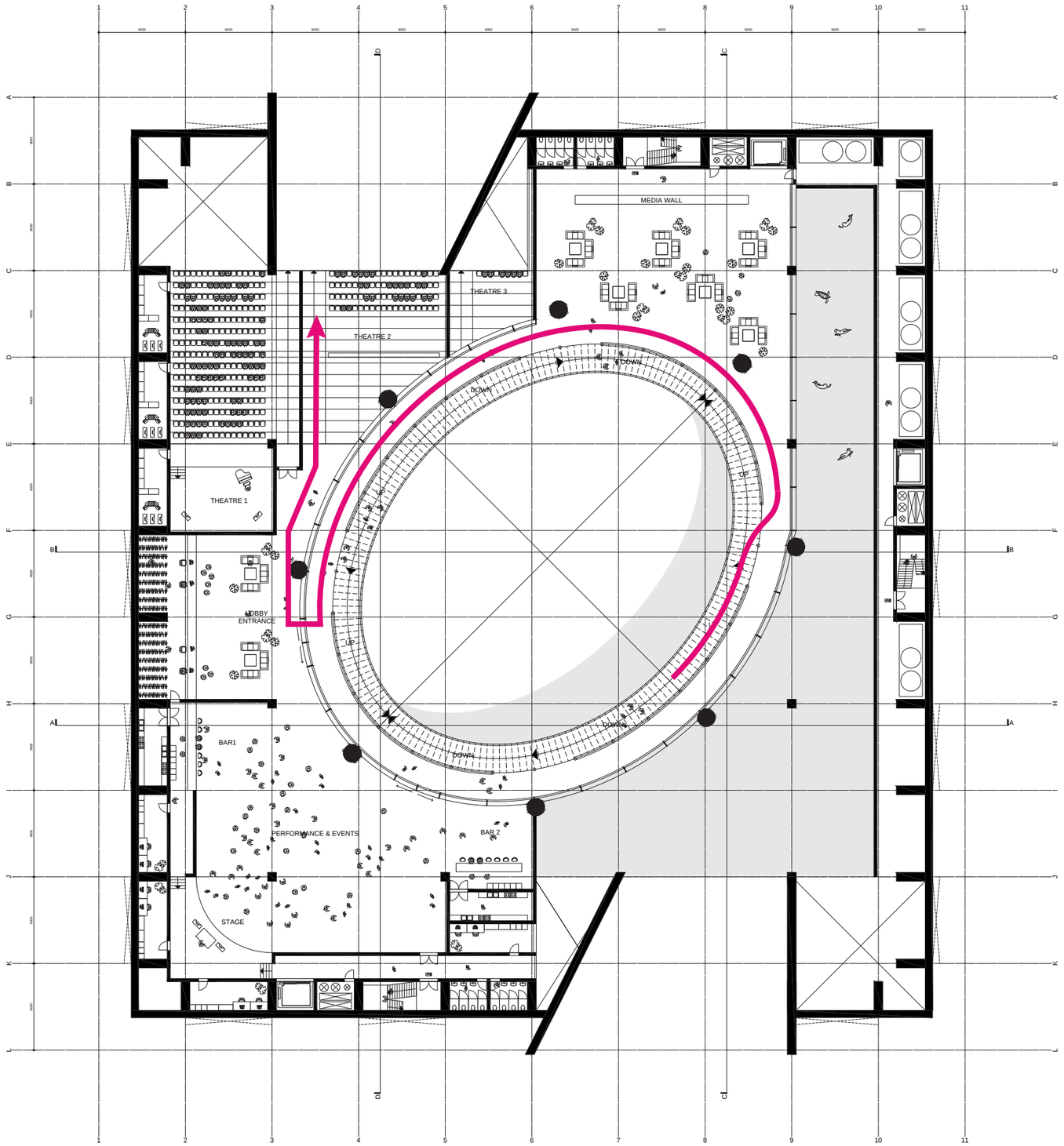


BASEMENT -2 (- 9m)



PARKING THE BIKE

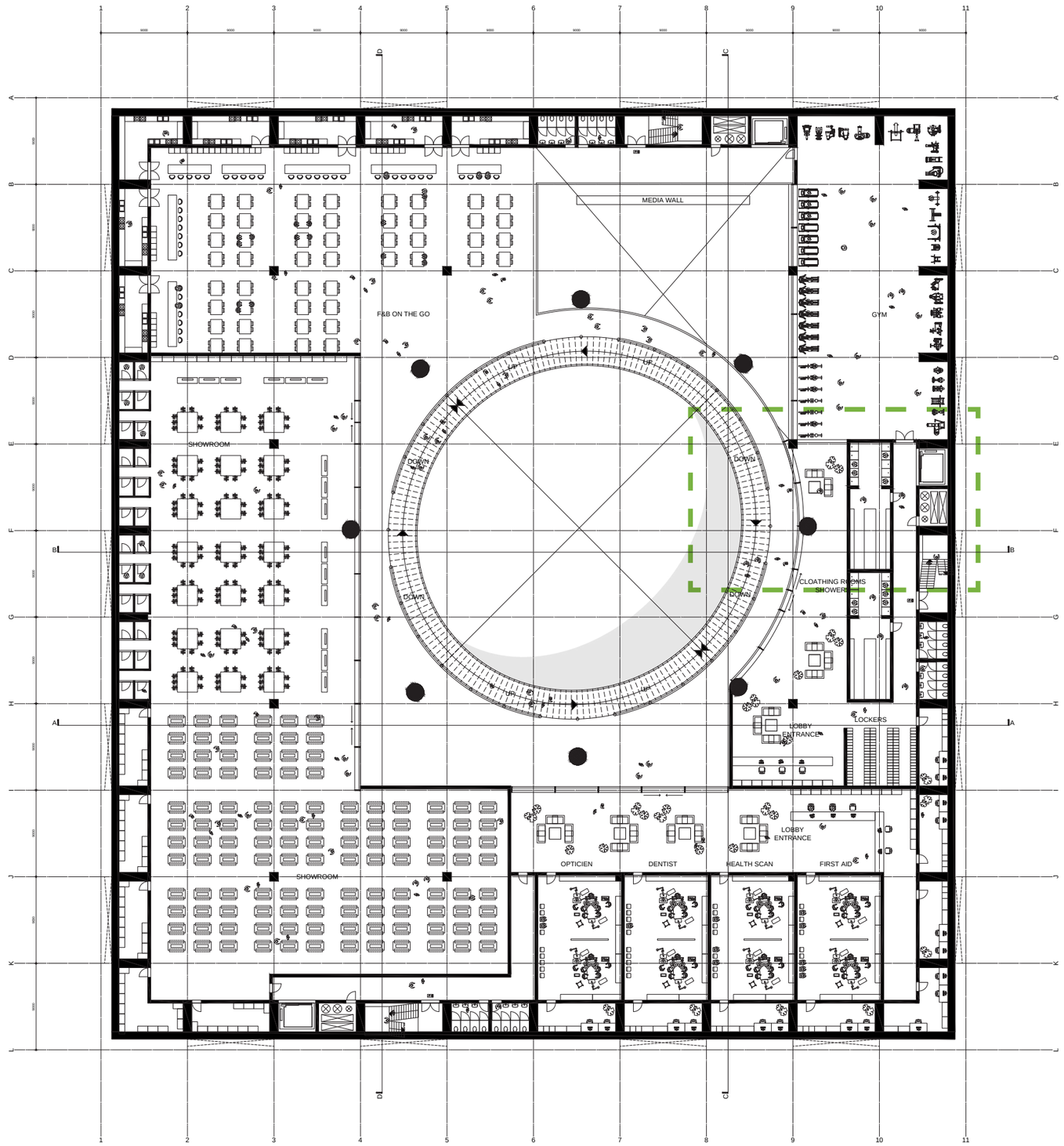
FIRST FLOOR (+ 6.75m)



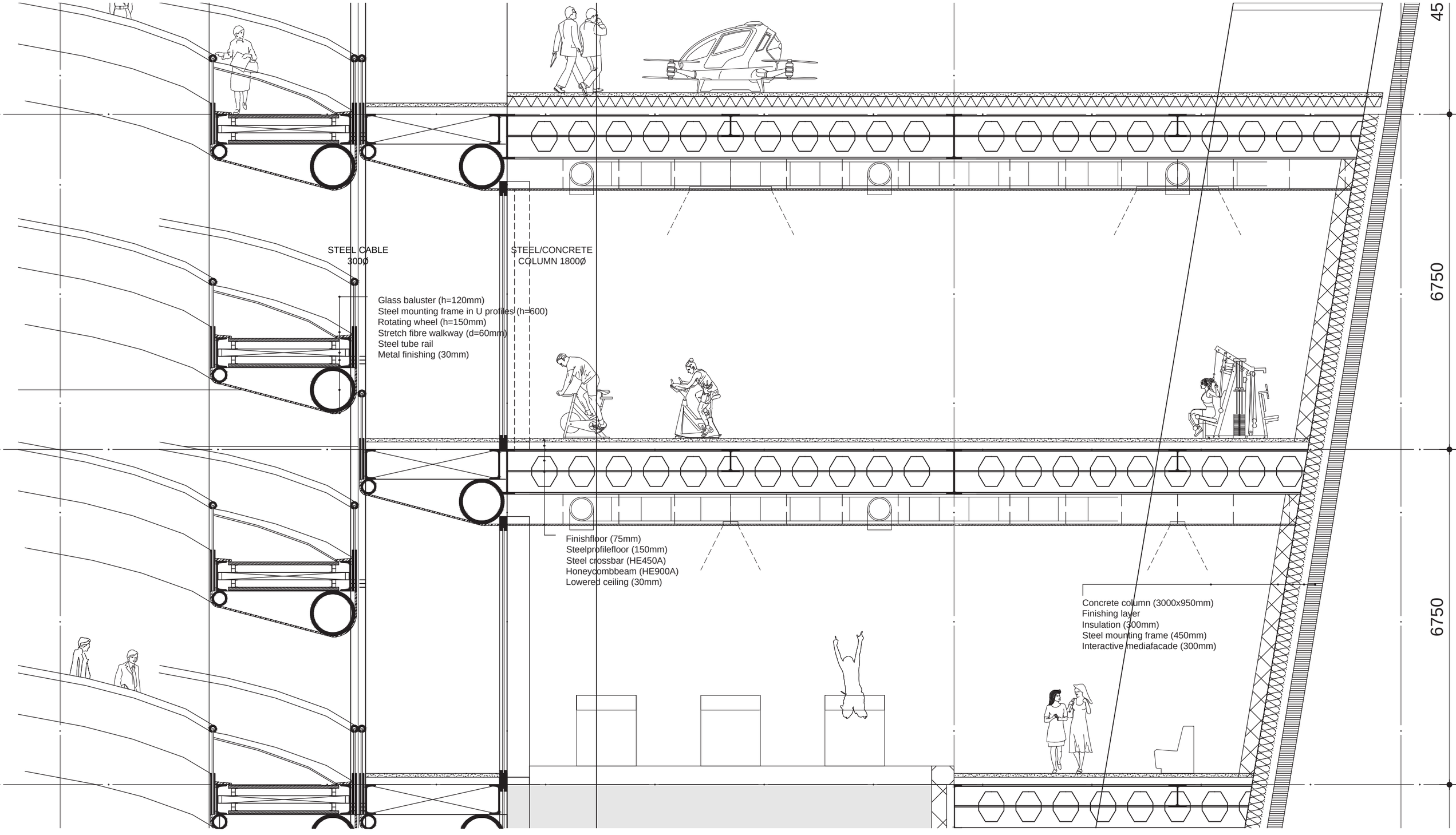
GLANCE AT MEDIAWALL AND GYM

THE THEATRE

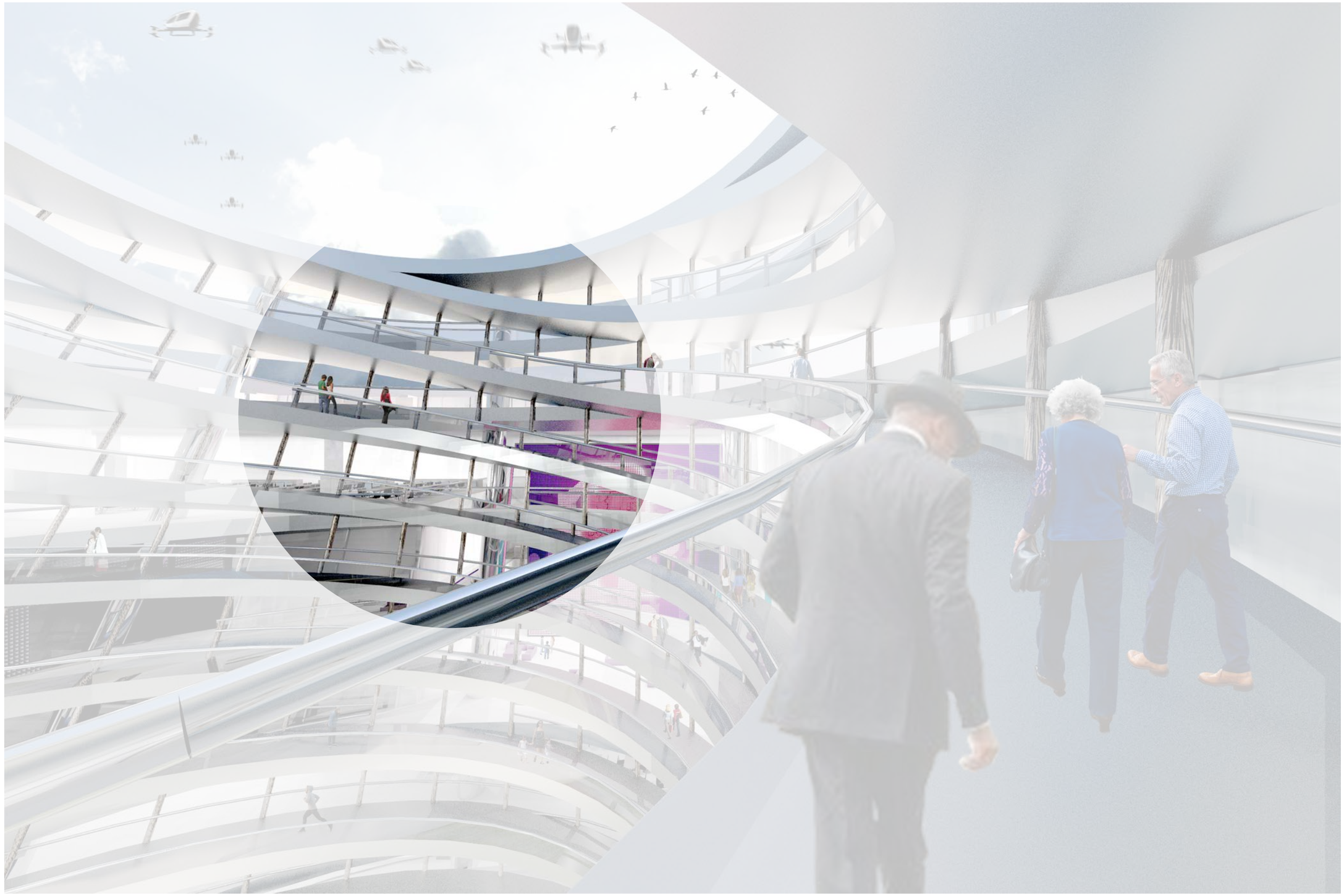
FRAGMENT (HORIZONTAL)



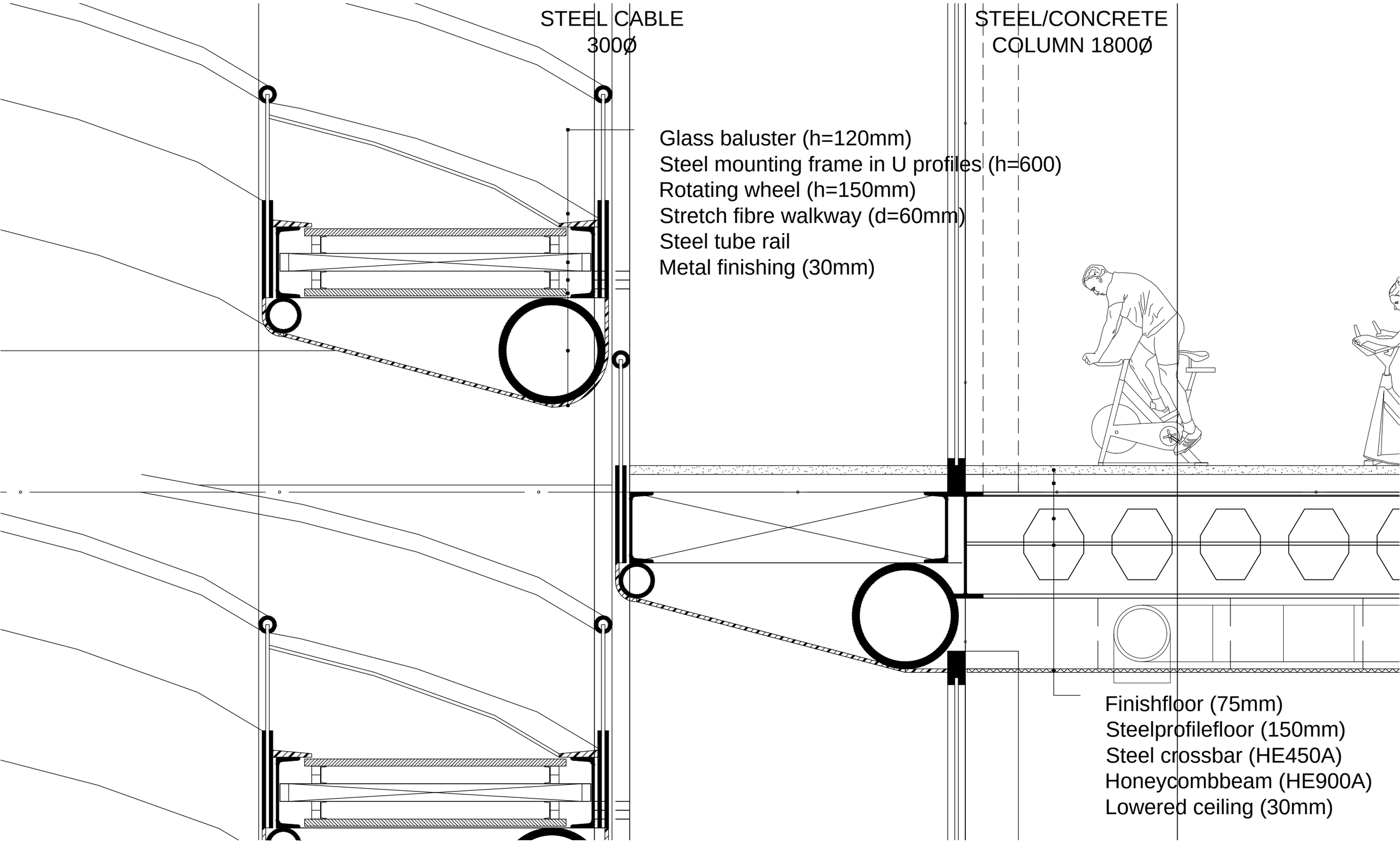
FRAGMENT (VERTICAL)



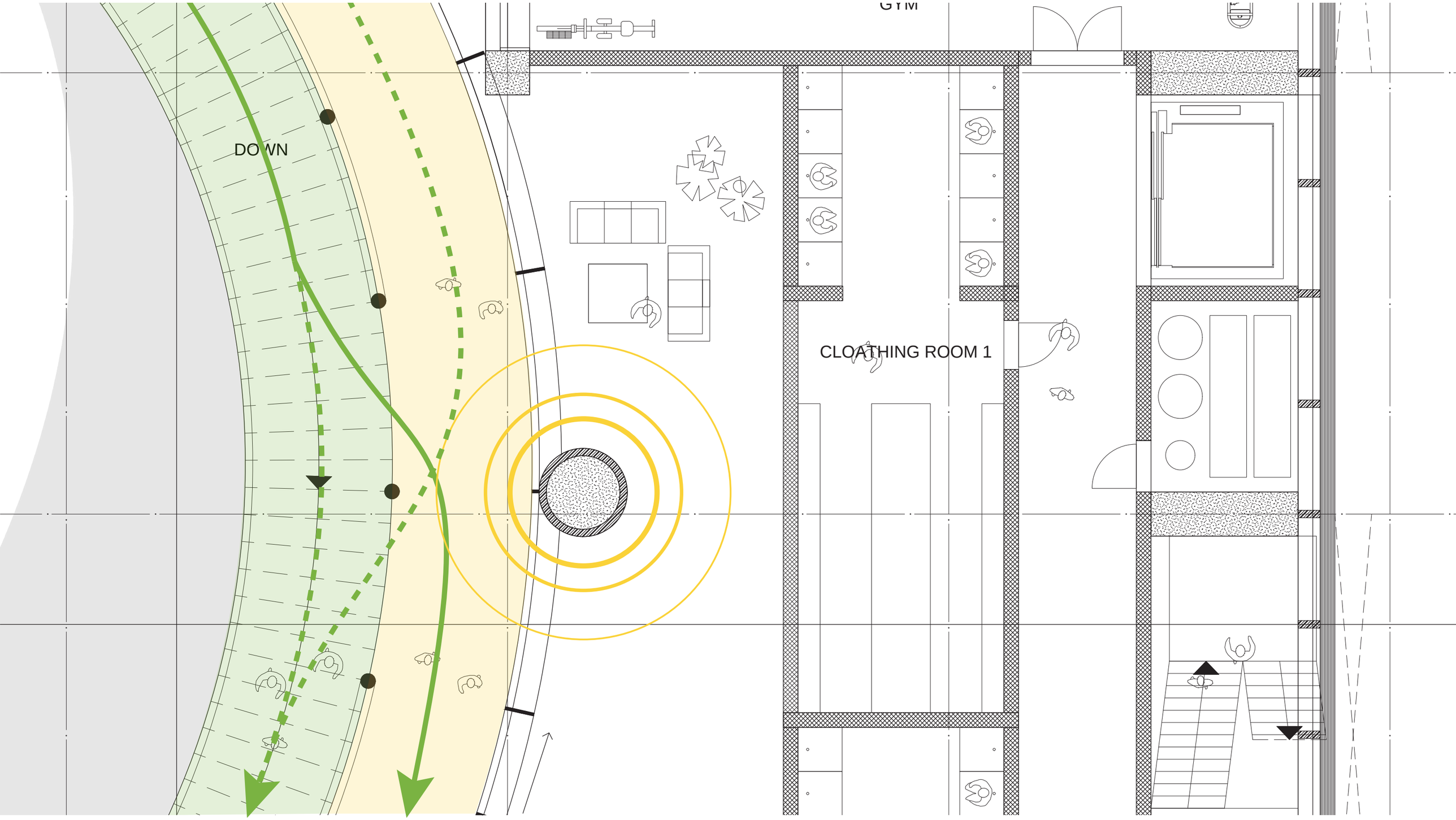
THE VOID AS PEOPLE MOVER



STEEL MACHINE

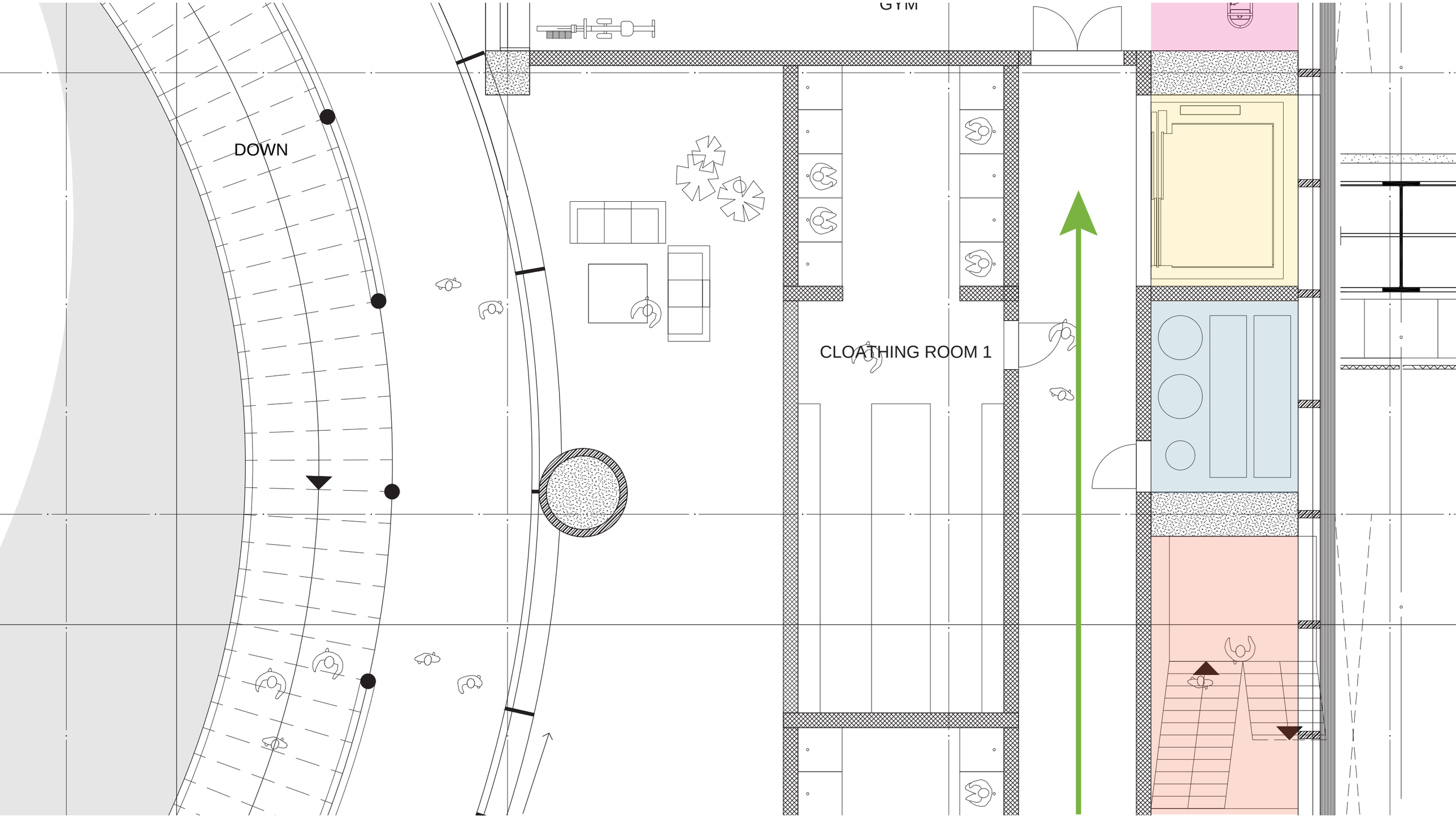


ACCESS POINTS OF THE LOOP



PHYSICAL ACTIVITY

MULTIFUNCTIONAL PURPOSE USE OF FACADE BAY



INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

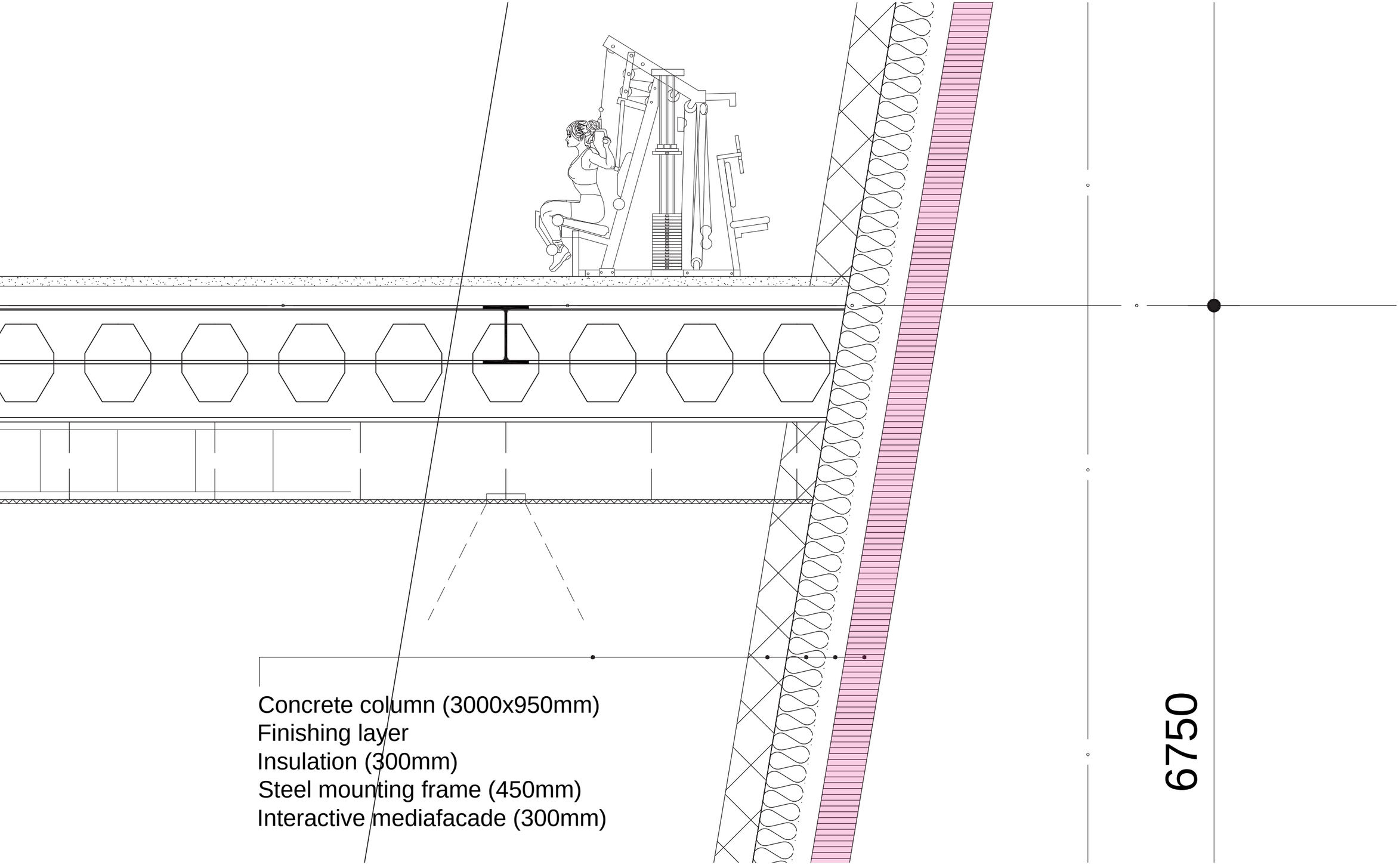
Author

INTERACTIVE MEDIA FACADE

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Author

DIGITAL MAKE UP



TO CONCLUDE

RESEARCH QUESTION

What is the future role of **space in-between transport modes as urban intersections with high density of users** influenced by new digital lifestyles?

CHALLENGES

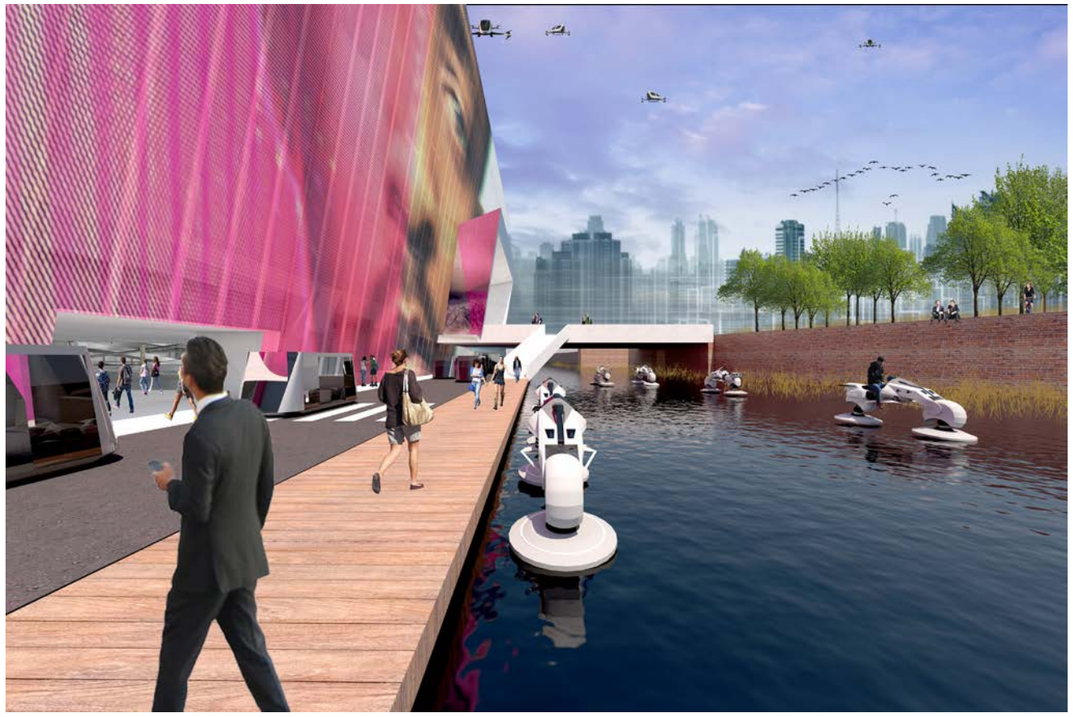
PHYSICAL
INFRASTRUCTURE
DIGITAL
INFRASTRUCTURE

PHYSICAL
HUB
DIGITAL
HUB

The in-between space of a **physical transport** hub with high densitiy of users **should make use of activity that can’t be done online** and **reflect on new digital lifestyles**

CONCLUSION

CONCLUSION



CONCLUSION

THANK YOU

QUESTIONS?