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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PAST: CROSSROADS
NOW: URBAN NODE / MOBILITY HUB

330,000 visitors each day (Times Square)  
750,000 visitors each day (Grand Central New York)

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Grand Central, New York, https://www.grandcentralterminal.com/about/
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

PAST: PHONE CALL

The Payphone, Cuba, 1967, Ed van der Elsken
NOW: SOCIAL MEDIA PLATFORM

More than 2.000.000.000 worldwide users (Facebook)
DENSITY = FOCAL POINT FOR ACTIVITY
OFFERING CONVENIENCE AND FACILITIES
CHALLENGE 1: ACTIVITY IS DISAPPEARING ONLINE
CHALLENGE 1: ACTIVITY IS DISAPPEARING ONLINE

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Author
WHAT IF... DIGITAL ACTIVITY PREVAILS?

2.2B
Facebooks

200MM
Pinterests

170MM
Spotify

125MM
Netflixs

Newsfeed

Discovery

Music

Video

Source: Facebook (5/18), Pinterest (5/18), Spotify (5/18), Netflix (5/18).

Note: Facebook Q1:18 MAU (4/18), Pinterest MAU (9/17), Spotify Q1:18 MAU (5/18), Netflix Q1:18 global streaming memberships (4/18).
CHALLENGE 2: DIGITAL LIFESTYLES AFFECT BEHAVIOUR IN PHYSICAL ENVIRONMENT
CHALLENGE 2: DIGITAL LIFESTYLES AFFECT BEHAVIOUR IN PHYSICAL ENVIRONMENT
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
The in-between space of a physical transport hub with high density 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?
Total population in Amsterdam 2100

1,571,994
SCENARIO FOR 2100: DENSIFICATION

INTERSECTIONS: A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

Author
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

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

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)

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

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

INNER CITY

Transition of transport modes
(mobility)

OUTER CITY

Intersection of constant activity
(occupation)

Traveling can’t be done online
(lifestyle)
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

HISTORY OF STATIONHALL

Chicago Union Station Hall, 1925
Pennsylvania Station New York, 1958
Amsterdam Centraal, 1957
STATIONHALL HAS EVOLVED INTO A CONSUMING MACHINE

EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL

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

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL

1985
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL

http://www.mijnstation.nl/nl/amsterdam-centraal/het-station/de-ontwikkeling-door-de-jaren-heen
EXAMPLE: EVOLUTION OF AMSTERDAM CENTRAAL

2017
NATURAL CROWD FOR RETAIL, PERFORMERS, ADVERTISEMENT AND ARTISTS

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

IJhal Amsterdam Centraal, 2017, Jan Bitter (top left)
Piano at Amsterdam Centraal, unknown (top right)
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

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)
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

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

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
ACTIVITY ALSO ATTRACTS NON-TRADELLERS
...however nowadays density is also exploited online
THEREFORE DENSITY OFFLINE SHOULD ATTRACT NON-VIRTUAL Activity
PHYSICAL ENVIRONMENT
DESIGN BRIEF
PROGRAM DEFINITION: PHYSICAL ACTIVITY ON THE GO

Discover, Exercise, Learn, Act

Transport
EXAMPLES OF PHYSICAL ACTIVITIES

WORM, Rotterdam, 2012
Architectuen (top left)
Xiaomi Showroom, Beijing (top right)
http://artisticthings.com/theres-a-robot-among-us/ (bottom left)
Digital Art Museum, Tokyo, teamLab (bottom right)
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

SIZE

Rotterdam Centraal, Benthem & Crouwel Architects (left)
Delft Station, Mecanoo (middle)
Arnhem Centraal, UN Studio (right)
LOCATION: DRONE/CAR FREE CITY CENTRE
SURROUNDINGS

INTERSECTIONS  A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
ANALYSIS: CAR FREE INNER CITY
ANALYSIS: PARK
USERS

COMMUTER
Using the hub as transfer point to work
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)

Urban passage
HIERARCHY

Transfer (flying-underground)

Urban passage

Arrival/Departure
INTERSECTIONS
A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
CONSTRAINTS: DIGITAL COCOON
CHARACTER GOAL: ACTIVITY AND VISIBILITY

Transparancy of activities

Station City, Stockholm, 2010, OMA (left)
CHARACTER GOAL: ACTIVITY AND VISIBILITY

Transparency 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

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

SITE
Surface to land

City routing through

Interactive media facade
CONCLUSION: DESIGN PRINCIPLES

SITE
- Surface to land
- City routing through
- Interactive media facade

PROGRAM
- Relation circulation & program
- Flexibility of program
- Relation density & routing
**CONCLUSION: 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
“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”
REFERENCE: COMPRESSION AND EXPANSION
BASIC VOLUME
CARVING A HORIZONTAL PASSAGE
ADJUSTING THE LINE OF SIGHT
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
RESULT IN MODEL
INTERIOR PRINCIPLE
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

REFERENCE BOARD

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

FOCAL POINT
Program configures around void
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

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
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

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

SHARP CLOSED SQUARE

SMOOTH OPEN CIRCULAR

STRUCTURE - TECHNICAL - CLIMATE

CIRCULATION
DESIGN IMPLEMENTATION
STATIC ACCESS RINGS
INNER MAIN STRUCTURE

300 Ø steel tension rod
&
1800 Ø steel/concrete column
OUTER MAIN STRUCTURE

900x3000 concrete fins
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CLIMATESECTION NATURAL

SECTION C-C

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INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
ARRIVAL/DEPARTURE OF UNDERGROUND

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

THIRD FLOOR (+ 21.25m)
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
ARRIVAL/DEPARTURE OF PASSENGER DRONES
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GROUND FLOOR (0m)
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ATTRACTION
PEAK THROUGH

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experience different sensory activity
open. smell of food. accesible from ground floor
street like
3d printing food? future?
also gallery is on the left
THE SWIMMING POOL
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BASEMENT -1 (- 4.5m)

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INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

PARKING THE BIKE
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GLANCE AT MEDIAWALL AND GYM
THE VOID AS PEOPLE MOVER

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Steel cable 300Ø

Steel/Concrete column 1800Ø

Glass baluster (h=120mm)
Steel mounting frame in U profiles (h=600)
Rotating wheel (h=150mm)
Stretch fibre walkway (d=60mm)
Steel tube rail
Metal finishing (30mm)

Finishfloor (75mm)
Steel profile floor (150mm)
Steel crossbar (HE450A)
Honeycomb beam (HE900A)
Lowered ceiling (30mm)
ACCESS POINTS OF THE LOOP

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

CLOTHING ROOM 1

GYM

DOWN

ARCHITECTURAL FRAGMENT

SCALE 1:50

INTERSECTIONS DENSITY AT MOBILITY HUBS COMPLEX PROJECTS / AMS MID CITY 2100

SUBJECT

SEBASTIAN BOK

NAME DATE

Author
PHYSICAL ACTIVITY
INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

INTERACTIVE MEDIA FACADE
DIGITAL MAKE UP

Concrete column (3000x950mm)
Finishing layer
Insulation (300mm)
Steel mounting frame (450mm)
Interactive mediafacade (300mm)
TO CONCLUDE
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

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS

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

INTERSECTIONS A REINTERPRETATION OF DENSITY AT MOBILITY HUBS
CONCLUSION
THANK YOU
QUESTIONS?