FUTURE MOBILITY

X

LIVABILITY

NEW OPPORTUNITIES FOR ENHANCING LIVABILITY IN AMSTERDAM

KENDRA HEIDE P5 PRESENTATION 5 JULY 2019
Increased Amount of Traffic Accidents

- 1996: 1500
- 2018: 500

Bicycle
Vehicle

Increased Congestion

- 2013: 8016612 km/min
- 2015: 9824126 km/min
- 2017: 10870944 km/min

Increased Noise Disturbance

- 2011-2018: 9% Increase

Cycle Safety

Increased Amount of Cycling Accidents Every Year

Increased Parking Pressure

Average parking pressure in the streets of the centre is 80%

Increased Pollution

Average NO\textsuperscript{2} Amount of NO\textsuperscript{2}

2008-2018
Population growth INCREASES PRESSURE Mobility

EXTERNAL FACTOR

Livability
AUTOMATED MOBILITY

AUTOMATED VEHICLES

SMART LOGISTICS

MICRO-MOBILITY
“With respect to Amsterdam's population growth, how can the implementation of automated mobility contribute to enhancing livability and the environmental health in the city?”
WHAT IS LIVABILITY?
WHAT ARE THE INDICATORS?
Livability could be seen as a range of issues relating to the ‘quality of life and well-being’. It is a place based concept that refers to the elements of a home, neighbourhood, or city that contribute to quality of life and well-being. (Giap, Thy & Aw, 2014)

- Encourage walkability
- Enhance green spaces
- Varied sustainable transportation network
- Access to good quality public space
- Create economic opportunities
- Encourage social interaction
- Development of mixed use neighbourhoods
- Ensure safety
To create a healthy & livable urban environment for the growing population of Amsterdam with the implementation of automated mobility
REALITY
SLOTERDIJK
REALITY
CITY CENTRE
AMSTERDAM 2060
WELCOME ANA!
YOU ARE SHARING A RIDE WITH 4 PEOPLE
AMSTERDAM
SPATIAL VISION

- FAST AUTOMATED MOBILITY ROUTE HIGHWAY
- CITY CENTRE CONNECTION ROUTES AUTOMATED MOBILITY
- MAIN ROADS AUTOMATED MOBILITY

EXISTING ECOLOGICAL STRUCTURE
NEW ECOLOGICAL CORRIDOR
PARKING HUBS/TRANSITION ZONES

IMPROVED AIR QUALITY
AUTOMATED CARS ON HIGHWAY
AUTOMATED CARS ON MAIN ROADS

ENHANCE/PRESERVE ECOLOGICAL STRUCTURE
STRATEGY SLOTERDIJK

CITY SCALE
Enhance ecological structure
Parking HUBS & transition zones located near key nodes
Steer motorized traffic to go around neighbourhoods

NEIGHBOURHOOD SCALE
Connect neighbourhoods of Sloterdijk by introducing a recreational route
Hierarchy of streets to manage crowdedness in the streets and public/private zones
Introducing a new living environment

STREET SCALE
Active human layer by introducing a public program to the plinth.
Streets become places: flexible streets, living streets, places to meet
Short distances between blocks ensures improved walkability
**STRATEGY SLOTERDIJK**

### CITY SCALE
- Limit the amount of vehicular activity in the city centre to maintain accessibility.
- Locate transition hubs & parking at key nodes (5m radius - 10min walking).
- Create a network of secondary roads (not accessible by car).

### NEIGHBOURHOOD SCALE
- Separate streets by speed and status: primary roads or secondary roads.
- Status of the streets decides the internal organization of the street and the public spaces.
- Preserve architectural quality carefully: replacing materials when adjusting street profile.

### STREET SCALE
- Recapture street space for the public realm.
- Introduce flexible spaces in street scape.
MASTERPLAN
CENTRUM - WEST
SCALE 1:10,000

LEGEND
- RECREATIONAL ROUTE
- SLOW MOBILITY ROUTES
- MOTORIZED ROADS
- TRANSITION HUB

1 NIEUWZIJDSVOORBURG WAL
2 WESTERSTRAAT
3 VAN LIMBURG STIRUM STRAAT
NIEUWEZIJDS VOORBURGWAL
FUTURE OF THE STREET PROFILE

- SOFTER TRANSITION TO ZONES
- REMOVED PARKING SPACES
- EXPANDED CYCLING LANES
- EXPANDED SIDE WALKS
- FLEXIBLE PUBLIC SPACES
- FUTURE STREET FURNITURE & ROAD MARKINGS
DESIGN
SLoterdiJK 1 & sloterdijk park

LEGEND

SPORTS FACILITIES
- URBAN FARMING
- SLOW MOBILITY ROUTES
- COMMUNAL GARDENS
- MOTORIZED ROADS
- TRANSITION HUB

1 LINEAR PARK
2 PARK
3 Sloterdijk Sports
4 CEMETARY
5 COMMUNITY PARK
6 CITY FARMING
7 SPORTS
8 COMPOST FACILITY
DESIGN
Sloterdijk 2 & 3

LEGEND
SPORTS FACILITIES
URBAN FARMING
SLOW MOBILITY ROUTES
MOTORIZED ROADS
TRANSITION HUB

1 CITY FARMING
2 PARK
3 SPORTS
4 TRANSPORTATION HUB
5 RECREATIONAL ROUTE

SLOTERDIJK 2
SLOTERDIJK 3
ENHANCING ECOLOGICAL STRUCTURE

Alnus cordata

Fraxinus Excelsior, Tilia cordata

Tilia cordata, Acer campestre, Alnus glutinosa, Prunus avium

Iris pseudacorus, Scripus lacustris, Phragmites australis, Rananunculus lingua

birdsnests in prefab elements in residences
ENHANCING ECOLOGICAL STRUCTURE

BLACK WATER

BLACK WATER

PRE-TREATMENT

PBR

HELOPHYTE FILTER

ALGAL BIOMAS

FINDAL EFFLUENT
PHASING

- Gradual phasing depending on technology
- Transformer weg secondary road
- Businesses move out slowly
- New developments start (new businesses & residences)
- Car-free neighbourhoods develop gradually
FUTURE

- EXACT IMPLEMENTATION OF AUTOMATED MOBILITY IS STILL UNCLEAR
- STRICT MANAGEMENT IS NEEDED TO PREVENT AV’S FROM DOMINATING THE STREETS
- DESIGN CAN HELP GUIDE LOCATIONS WITH SIMILAR CHARACTERISTICS
With respect to Amsterdam’s population growth, how can the implementation of automated mobility contribute to enhancing livability and the environmental health in the city?
encourage social interaction
access to good quality public space
mixed use development
enhance green spaces
improve environmental health
sustainable transport network
encourage walkability
economic opportunities
FUTURE MOBILITY X LIVABILITY

NEW OPPORTUNITIES FOR ENHANCING LIVABILITY IN AMSTERDAM

KENDRA HEIDE
RECREATIONAL ROUTE
ENCOURAGE WALKABILITY

FILTERING POND
IMPROVING WATER QUALITY
AESTHETIC QUALITY

TREES ALONG SIDE LANE
HIGHLIGHT RECREATIONAL ROUTE
ENHANCE ECOLOGY

AV ROAD
PRIMARY ROAD

CYCLING LANE
SAFETY
SPORT FACILITIES
- Encourage social activities
- Promote healthy lifestyle

TREES ALONG SIDE LANE
- Highlight recreational route
- Enhance ecology

URBAN FARMING
- Promote local food production
- Encourage social interaction

FILTERING POND
- Improving water quality
- Aesthetic quality