URBAN GREEN SPACE EFFICIENCY

AN INSECT-BASED ECOLOGY CENTER

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AMS MID-CITY  P5 Presentation

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CONTENT OVERVIEW

1  DESIGN CONTEXT       --- L ---  CITY
2  URBAN STRATEGY 2050   --- M ---  CITY   ---  AREA
3  ARCHITECTURAL DESIGN  --- S ---  CITY   ---  LOCATION
DESIGN CONTEXT

AMSTERDAM

[HAVENSTAD] 2050
The presence of **GREEN SPACE**

- **Waterfront**
- **Mobility & Connection**
- **AMS 2050?**
- **Housing**
- **Amenities & Health**
- **Petroleumhaven**

**Havenstad**
- +150,000 population

**High-desified urban environment**
- 80% housing
- 20% working
BY 2050 HAVENSTAD
+150,000 population

WORLD HEALTH ORGANIZATION
+1 Habitant               +9 m² Green Space

GREEN SPACE
+150,000 X 9 m² = 1,350,000 m²

5 X Vondelparks
Not Enough Space
A DENSIFYING CITY - DENSIFIED GREEN SPACE
GREEN EFFICIENCY
RESEARCH QUESTION

HOW TO IMPROVE THE EFFICIENCY OF FUTURE URBAN GREEN SPACE FOR THE 2050 BIOPHILIC CITY OF HAVENSTAD?
URBAN STRATEGY

IMPROVE GREEN EFFICIENCY

[HAVENSTAD] 2050
THE NOODER IJ-PLAZ
BRACKISH AQUATIC ENVIRONMENT
IJ-PLAZ TRANSPORTATION

Mobility Types

- Walking: 42 mins
- Car: 14 mins
- Bicycle: 13 mins
- Motorcycle: 7 mins
THE PETROLEUMGHAVEN PARK
FOUR PROBLEMS

Fragmentation of Green
Unaccessible of Green
Biodiversity
Nonparticipation
FRAGMENTATION OF GREEN
UNACCESSIBLE GREEN
BIODIVERSITY
FOUR STRATEGIES

- Fragmentation of Green
- Unaccessible of Green
- Biodiversity
- Nonparticipation

Ecoduct
ECODUCT
FOUR STRATEGIES

- Fragmentation of Green
- Unaccessible of Green
- Biodiversity
- Nonparticipation

- Ecoduct
- Gate
ACTIVATE PARK
FOUR STRATEGIES

- Fragmentation of Green
- Unaccessible of Green
- Biodiversity
- Nonparticipation

- Ecoduct
- Gate
- Landscape Reorganization
LANDSCAPE REORGANIZATION
FOUR STRATEGIES

- Fragmentation of Green
- Unaccessible of Green
- Biodiversity
- Nonparticipation

- Ecoduct
- Gate
- Landscape Reorganization
- Immersive Experience
Holographic Display/ VR (virtual reality)
AR (AUGMENTED REALITY)
INSECT WORKSHOP
ARCHITECTURAL PROPOSAL

AN INSECT-BASED ECOLOGY CENTER
AMBITIÖN

A GREEN INTERVENTION improving green efficiency in physical and psychological way and give every resident an equal right to get in and use the architecture and experience and learn the nature.
AN INSECT-BASED ECOLOGY CENTER

INSECTARIUM

LAB

VISIT ROUTE
PUBLIC AREA

IN-SITE LAB

Database
Reading Room
Lecture Room
Storage

BIOTOPES

Butterfly, Moth
Mayfly, Dragonfly
Flatworm
Grasshopper, Cricket
Bee, Wasp, Ant

Experience 1
Experience 2
Experience 3
Experience 4
Experience 5

PUBLIC

Foyer
Helpdesk
Cafe
Restaurant
Waterfront

ROOF TERRACE

Camping
Exhibition
Concert
FOUR CONSTRAINTS
High Density Urbanism

Low Density Nature

BORDER
LINEAR ORGANIZATION?
CIRCULAR ORGANIZATION!
FIVE SCENARIOS FROM DUTCH ECOSYSTEM
FIVE BIOTOPES
BIOTOPE+WORKSHOP
WORKSHOPS
STREAM BIOTOPE (DRAGONFLY)
STREAM BIOTOPE (DRAGONFLY)
STREAM BIOTOPE (DRAGONFLY)
AIR BIOTOPE (BUTTERFLY)
AIR BIOTOPE (BUTTERFLY)
AIR BIOTOPE (BUTTERFLY)
GROUND BIOTOPE (CRICKET/BEE)
GROUND BIOTOPE (CRICKET/BEE)
GROUND BIOTOPE (CRICKET/BEE)
UNDERGROUND BIOTOPE (SOIL INSECT)
UNDERGROUND BIOTOPE (SOIL INSECT)
UNDERGROUND BIOTOPE (SOIL INSECT)
UNDERWATER BIOTOPE (FLATWORM/FISH)
UNDERWATER BIOTOPE (FLATWORM/FISH)
UNDERWATER BIOTOPE (FLATWORM/FISH)
FIVE SCENARIOS
WORKSHOP (CIRCULATION)
WORKSHOP (GAP)
IMMERSIVE EXPERIENCE
ROOF (OUTDOOR EXHIBITION)
ROOF (PET ZONE)
ROOF (CAFE BAR)
ROOF (STAGE)
STRUCTURE DESIGN

PREFABRICATED COMPONENTS
MAIN STRUCTURE
MAIN STRUCTURE
FOUR TYPES
BIRD NEST
FACADE (WATERFRONT)
BIOTOPE STRUCTURE
STEEL TRUSS STRUCTURE
CLIMATE DESIGN

DOUBLE FACADE
CLIMATE ZONE
INCREASE HUMIDITY

DECREASE HUMIDITY
GROWING WALL
GROWING WALL
TOOLS OF GREEN EFFICIENCY

- Ecoduct
- Gate
- Vertical Landscape
- Immersive Experience
- Prefabrication
- Double Facade
THANK YOU!!!