



THE FUTURE ZOO

Developing a method for sustainable exotic
wildlife exhibition within the urban environment

Adam and Eva in the Garden of Eden,
by Peter Wenzel

THE ZOO

PLACE FOR ALL PEOPLE

CONNECT PEOPLE AND URBAN LIFE WITH
EXOTIC NATURE AND WILDLIFE

PART OF CITIES SOCIO-ECONOMIC LIFE

**NEED FOR
CHANGE**

INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

PROBLEM-FIELD

ANOUSHKA SHANKAR

FOR **PETA**

PETAINDIA.COM

ETHICAL CONCERN ABOUT CAPTIVITY

'ZOO ANIMALS LIVE UNDER CONDITIONS OF
STRESS, DEPRESSION, FRUSTRATION AND
BOREDOM'

EXOTIC ANIMALS BELONG
IN THE WILD NOT IN ZOOS.

INTRODUCTION

ANALYSIS

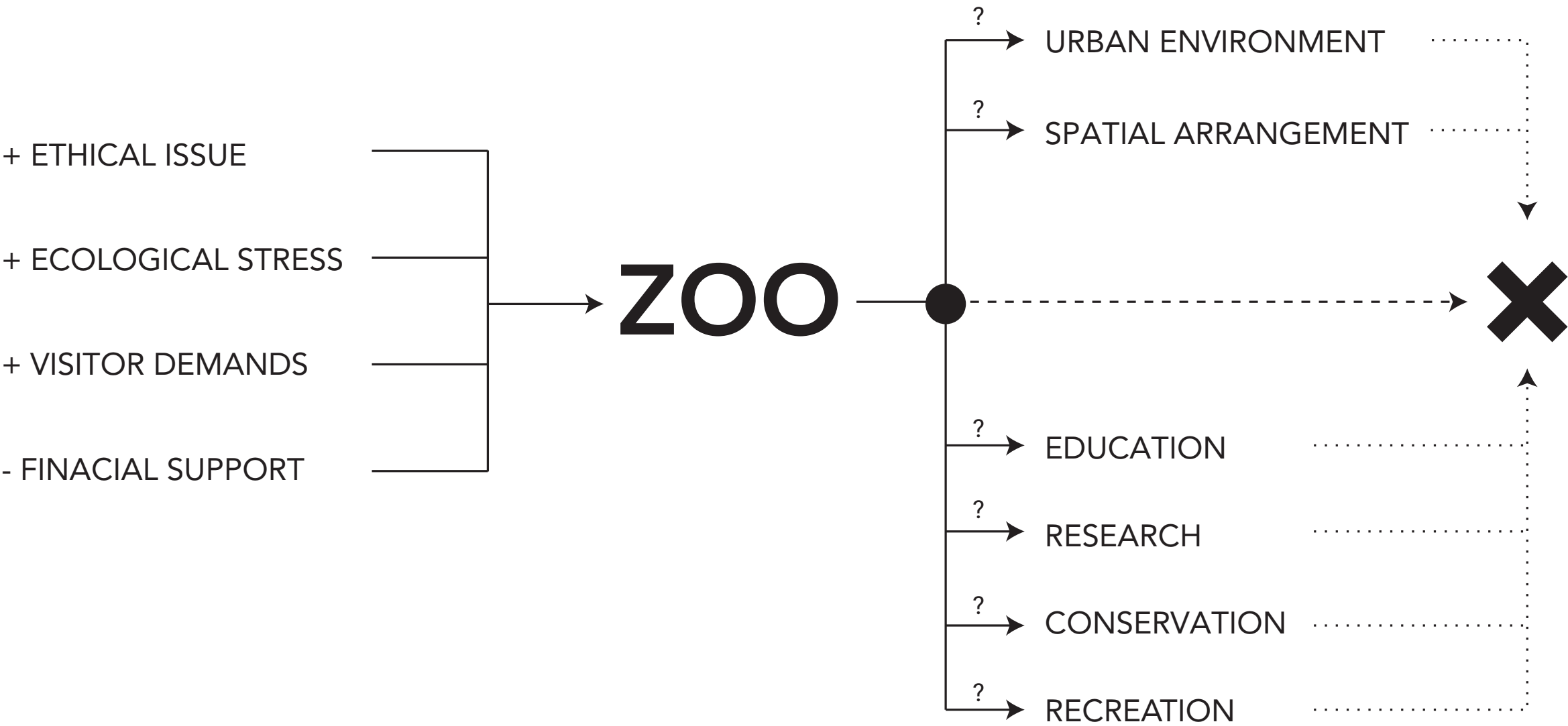
SYNTHESIS

APPLICATION

PROBLEM-FIELD

**THE MAGNITUDE OF OUR HUMAN INFLUENCE
ON THE NATURAL WORLD IS ENORMOUS**

HABITAT DESTRUCTION, BIODIVERSITY LOSS,
CLIMATE CHANGE, DEFORESTATION



*Challenge for zoos today is to transform themselves into future
wildlife institutions enjoyable for both animal and visitor
meanwhile having a **viable place within the urban environment***

***WHAT IS A SUSTAINABLE METHOD FOR EXOTIC
WILDLIFE EXHIBITION WITHIN THE URBAN
ENVIRONMENT OF THE FUTURE?***

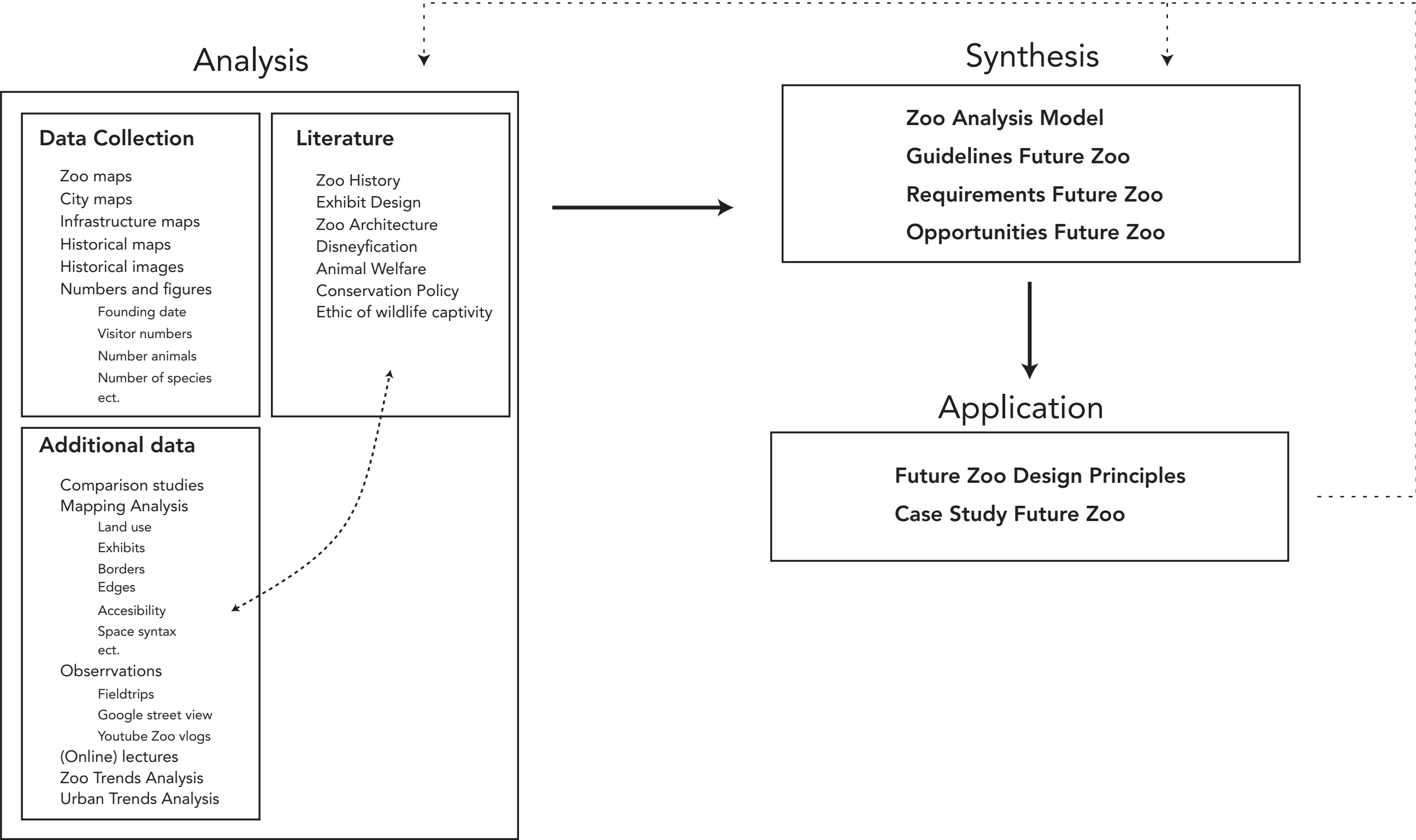
SUB QUESTION

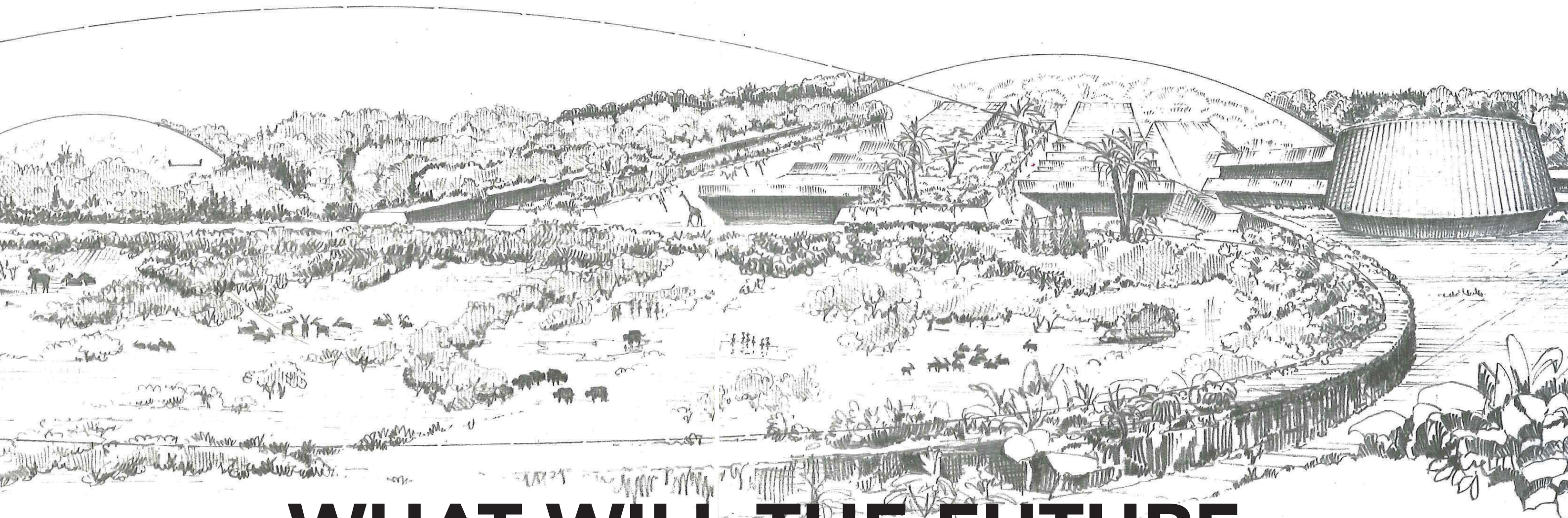
WHAT ARE THE REASONS AND METHODS THE EXHIBITION OF EXOTIC WILDLIFE IN CITIES HAS DEVELOPED?

HOW CAN WE DESCRIBE TYPE OF ZOOS NOWADAYS BASED ON THE DIFFERENT BASIC ELEMENTS AND FUNCTIONS IN OUR URBAN ENVIRONMENT?

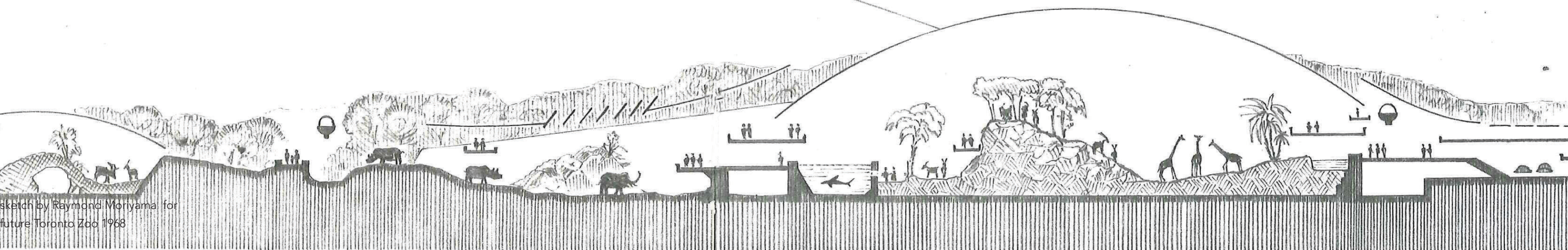
WHAT ARE THE POTENTIALS FOR THE ZOO IN OUR FUTURE URBAN ENVIRONMENT?

RESEARCH APPROACH





WHAT WILL THE FUTURE ZOO LOOK LIKE?



ANALYSIS

UNDERSTANDING THE ZOO

OBJECTIVES

URBAN FABRIC

SPATIAL ARRANGEMENT

OBJECTIVES

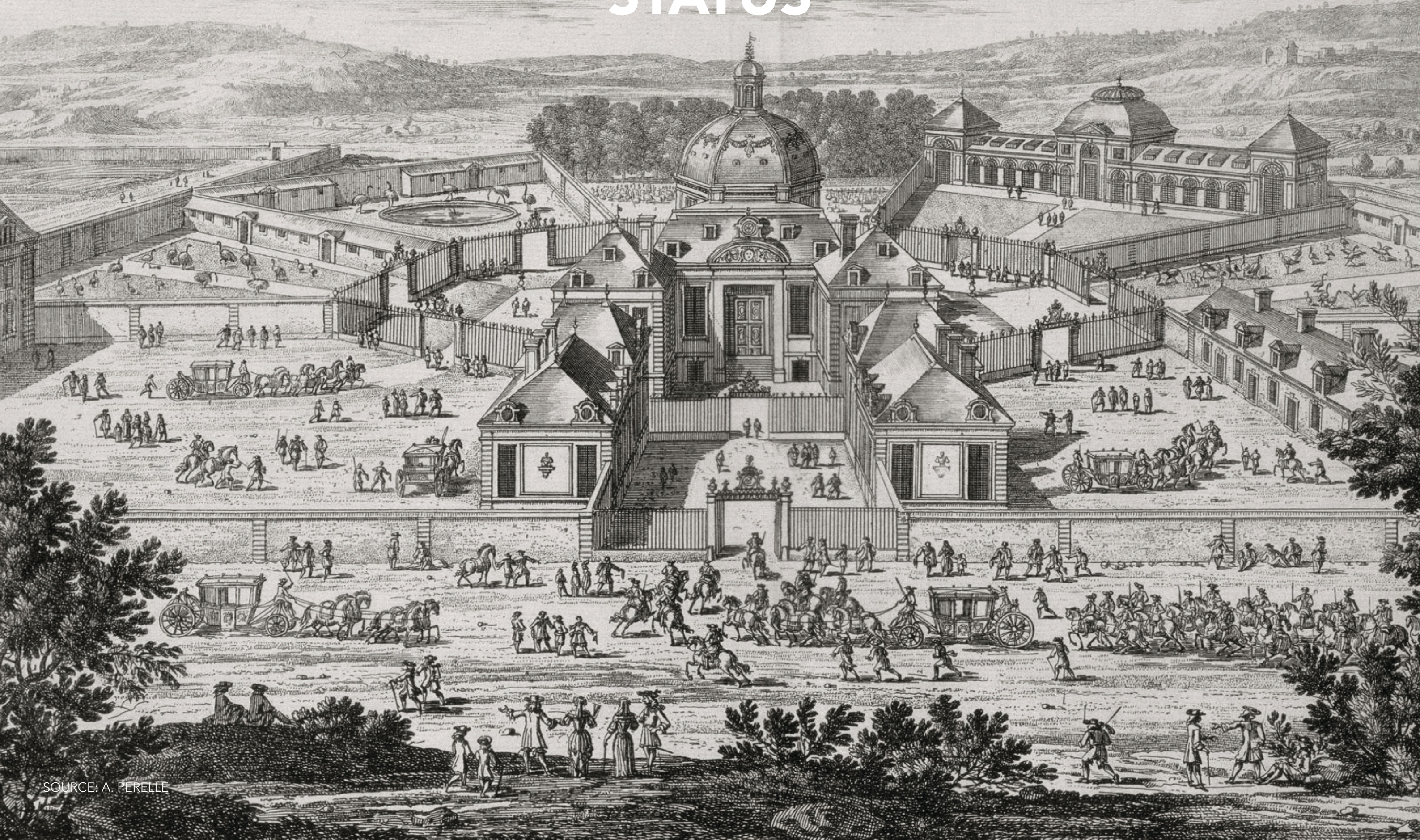
INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

STATUS



SOURCE: A. PERELLE

INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

STATUS

SYMBOL OF POWER

DIPLOMATIC GIFTS

LUXURY

INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

RESEARCH



INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

RESEARCH

SCIENTIFIC RESEARCH

VISITOR ENGAGEMENT

RESEARCH FACILITIES



INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

RECREATION



INTRODUCTION

ANALYSIS

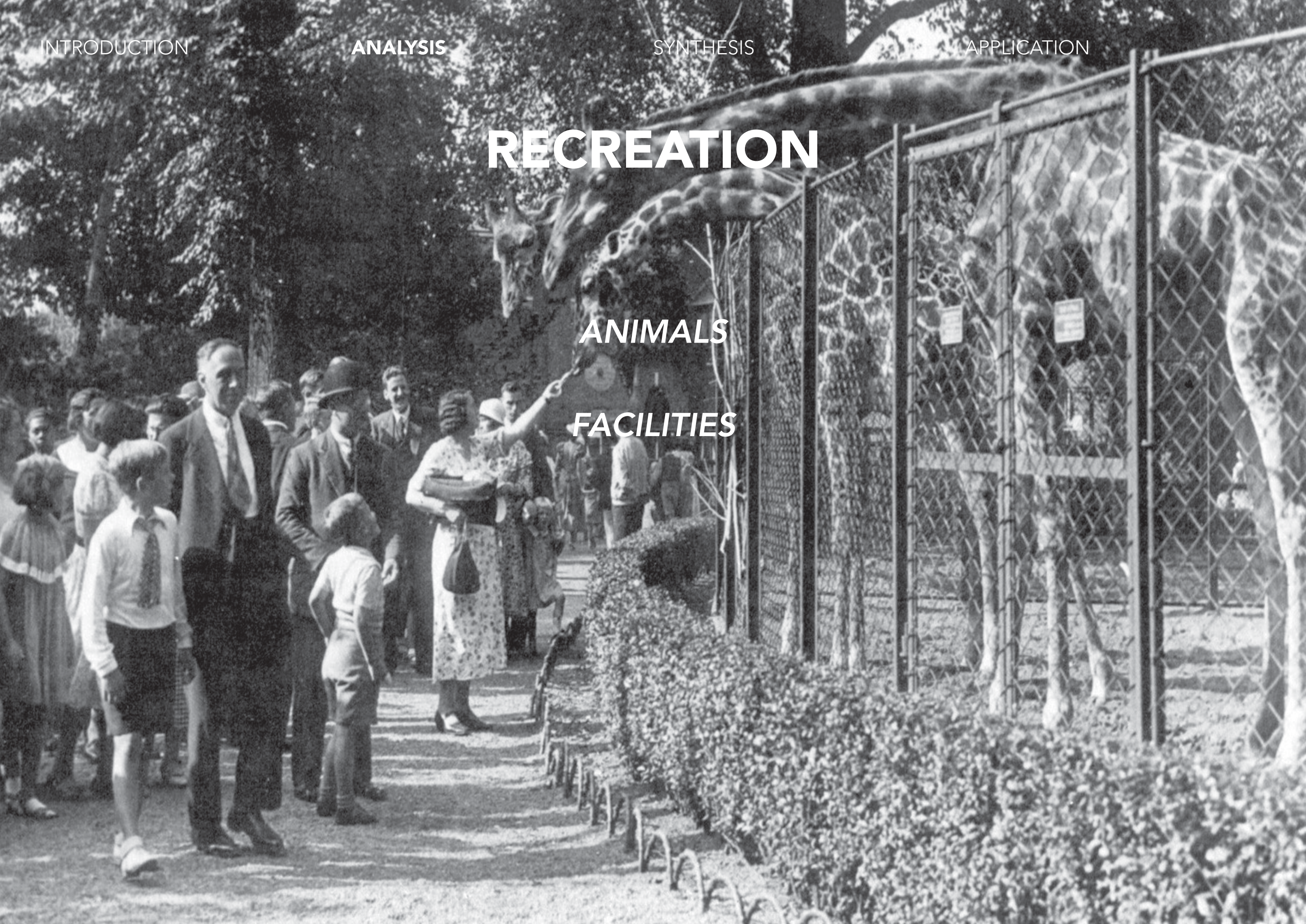
SYNTHESIS

APPLICATION

RECREATION

ANIMALS

FACILITIES



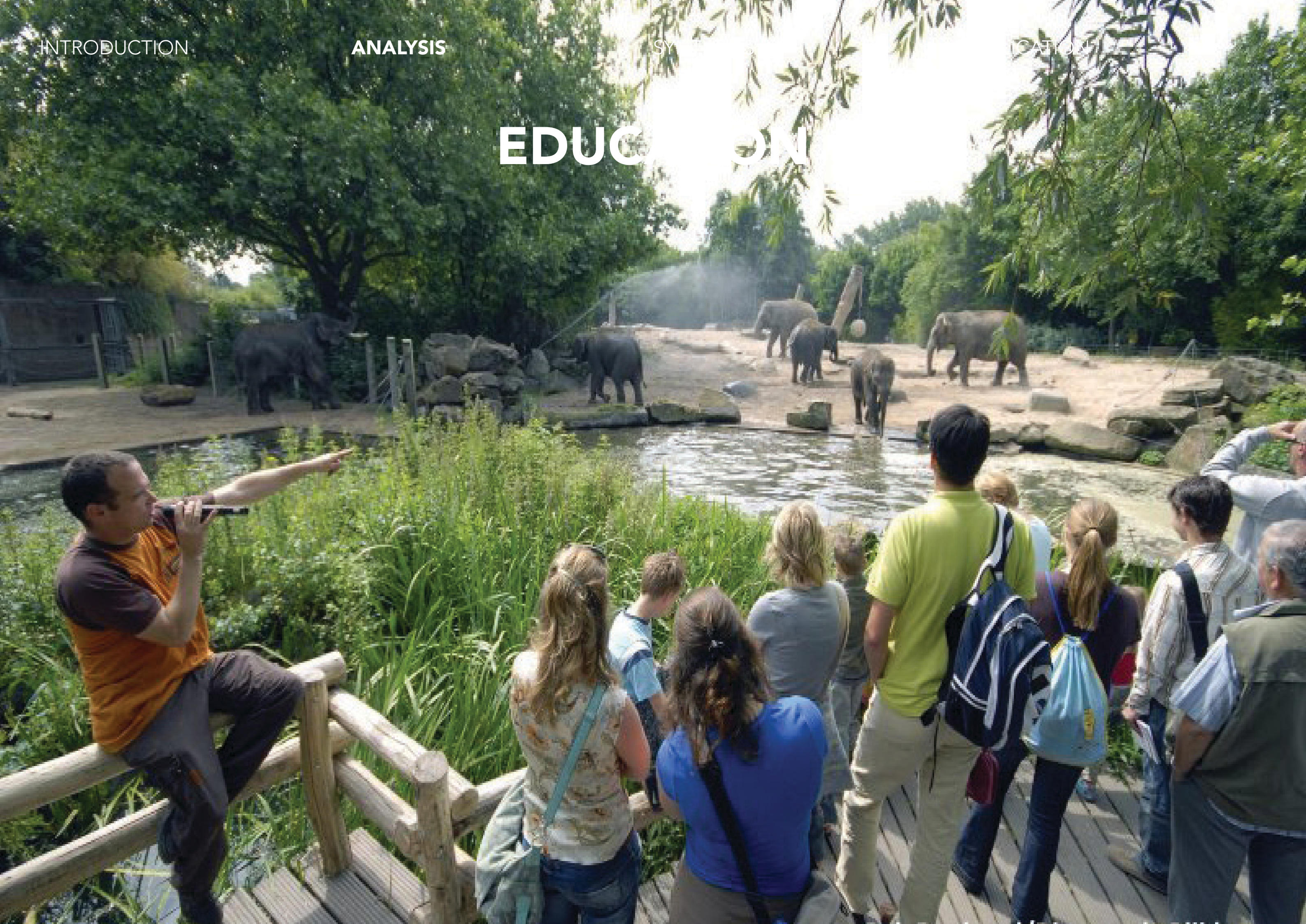
INTRODUCTION

ANALYSIS

SY

ICATION

EDUCATION



INTRODUCTION

ANALYSIS

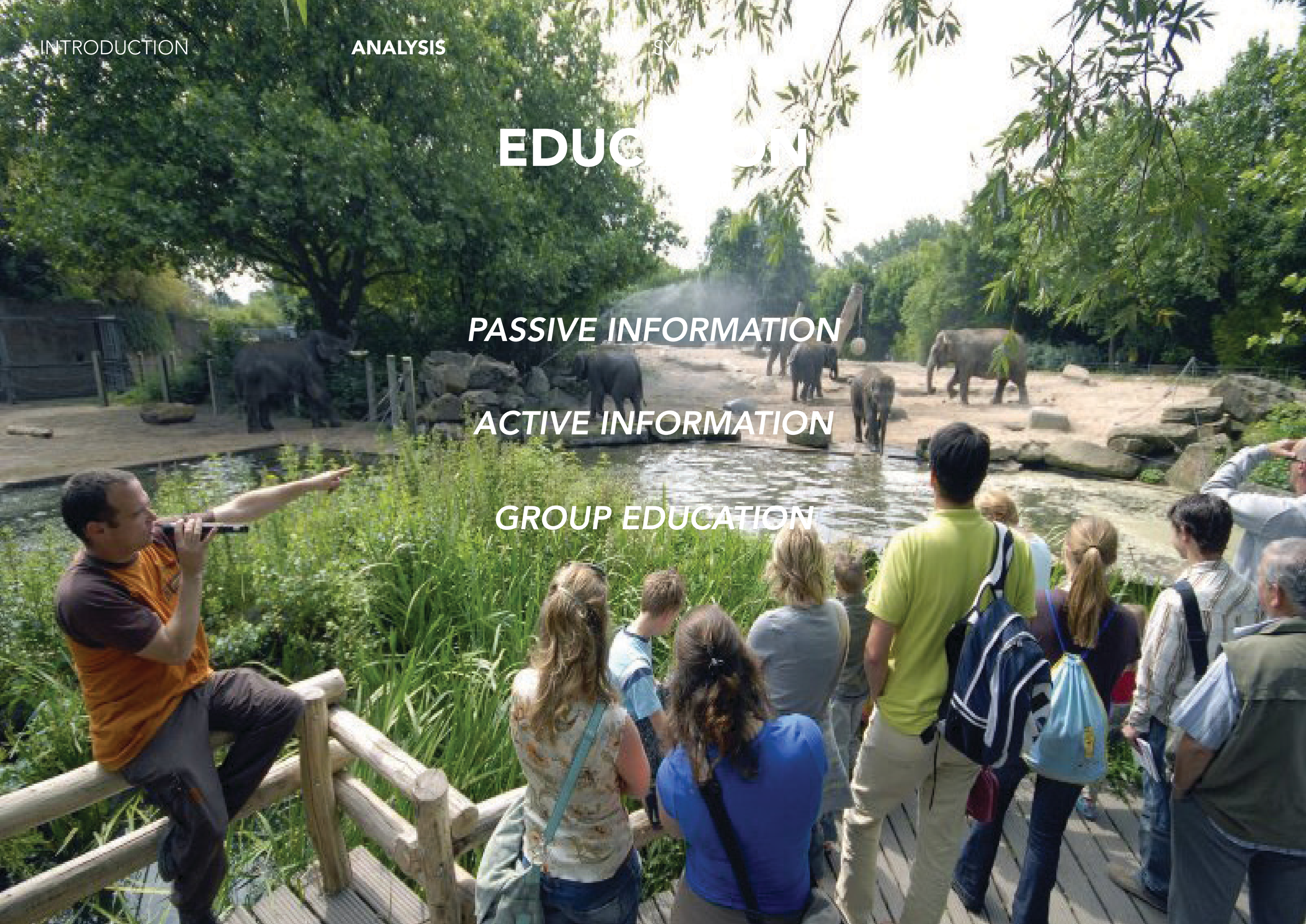
SYNTHESIS

EDUCATION

PASSIVE INFORMATION

ACTIVE INFORMATION

GROUP EDUCATION



INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

CONSERVATION



INTRODUCTION

ANALYSIS

SYNTHESIS

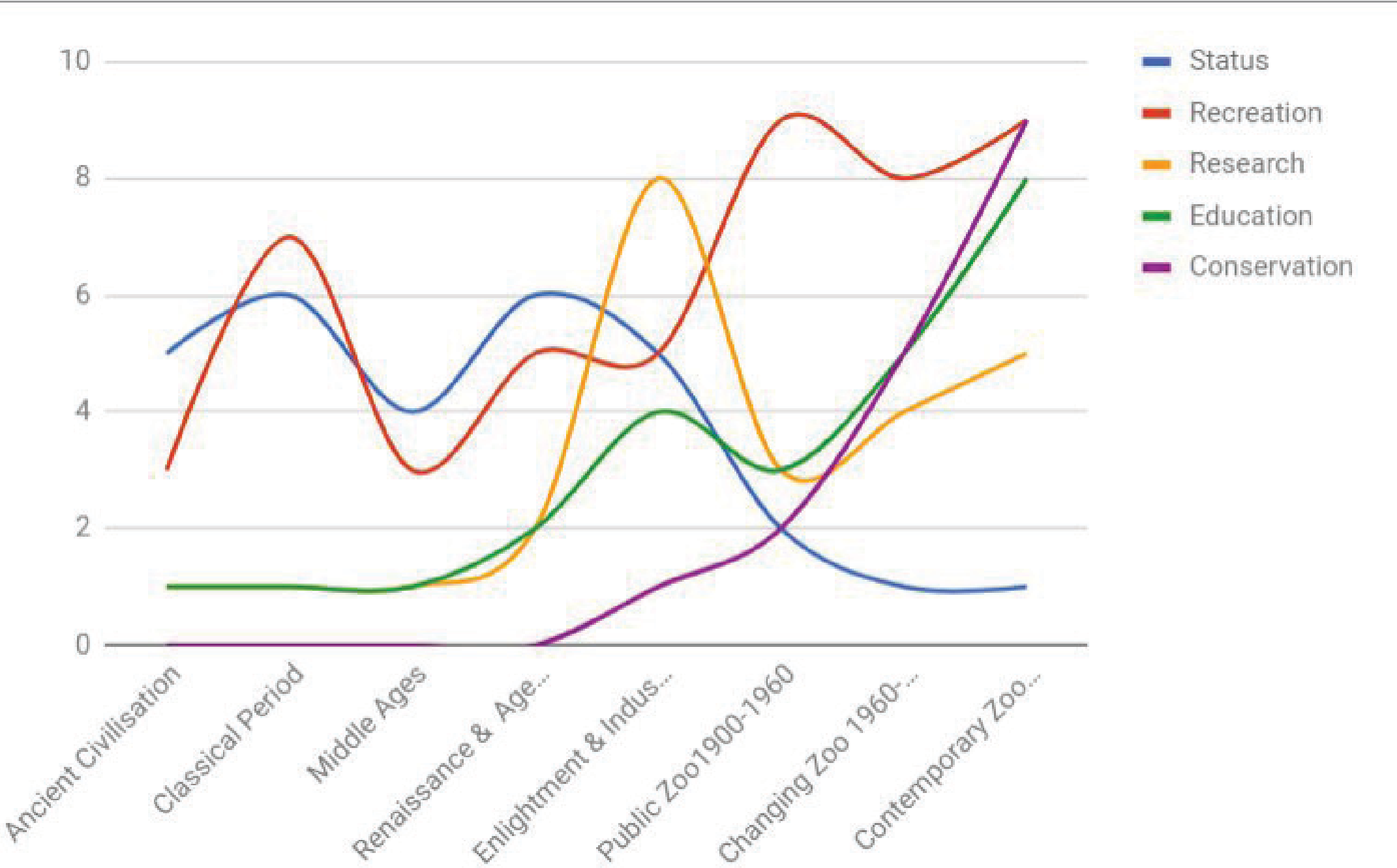
APPLICATION

CONSERVATION

IN - SITU

EX - SITU





CONSERVATION AND EDUCATION MOST
IMPORTANT OBJECTIVES FOR THE FUTURE ZOO

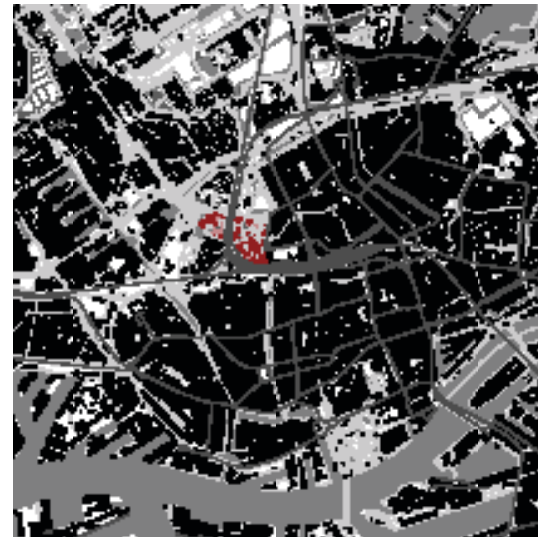
URBAN FABRIC



CENTRE

ARTIS

AMSTERAM



URBAN

DIERGAARDE BLIJDORP

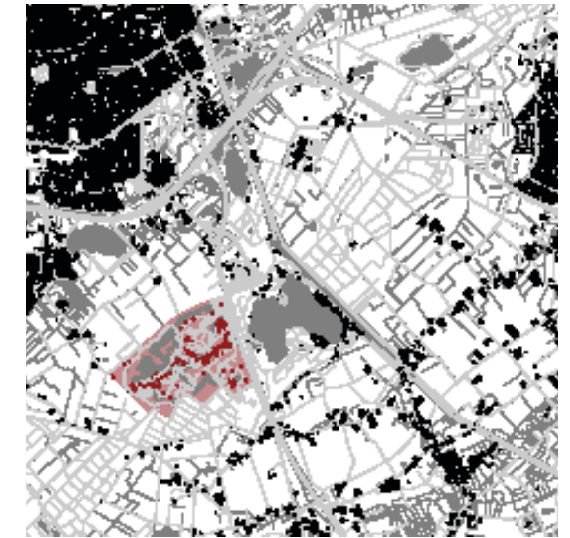
ROTTERDAM



EDGE

BURGERS ZOO

ARNHEM



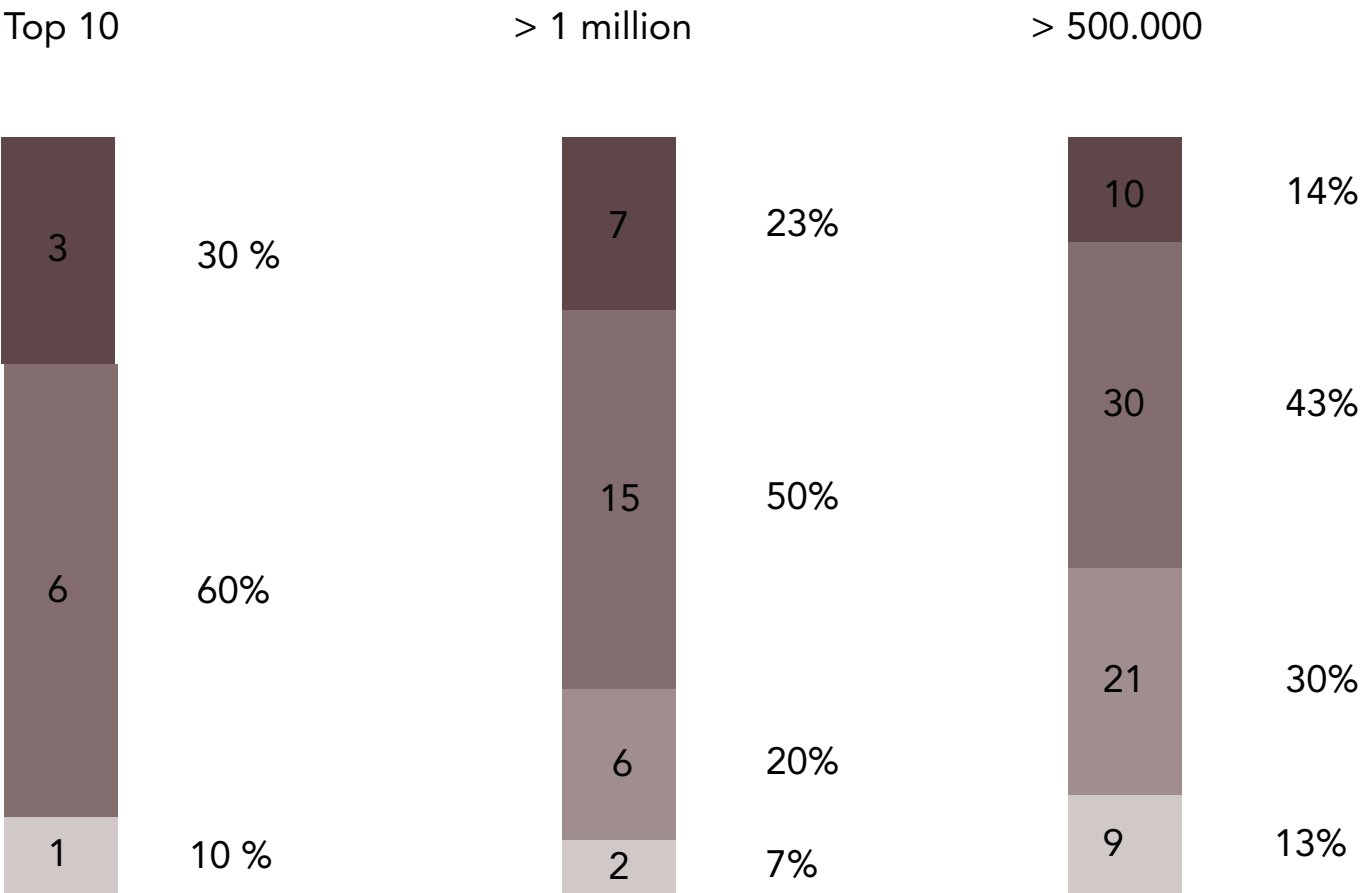
RURAL

BEEKSE BERGEN

TILBURG

FOUR URBAN LOCATIONS

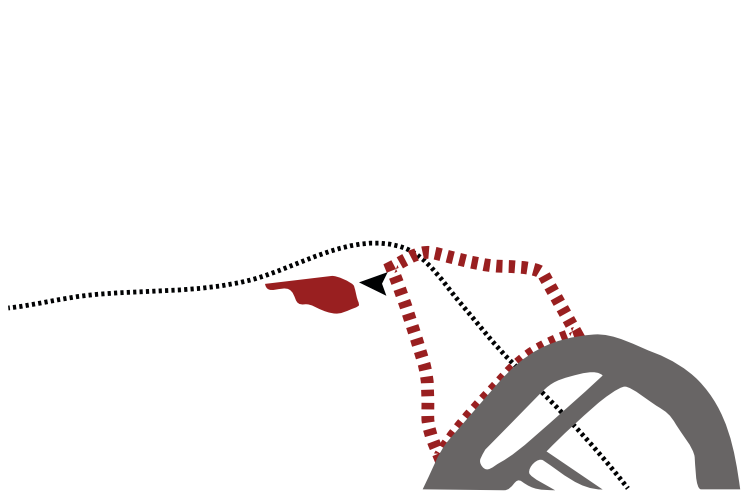
POSITION MATTERS



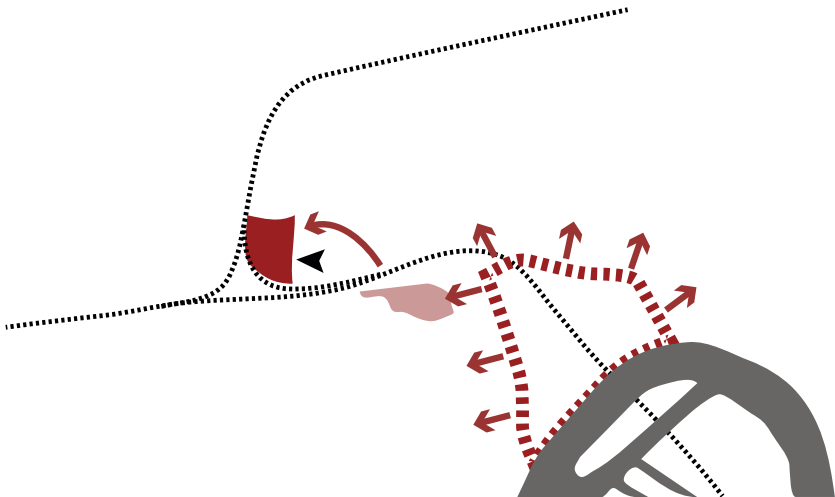
MORE URBAN ZOOS RECEIVE MORE VISITORS



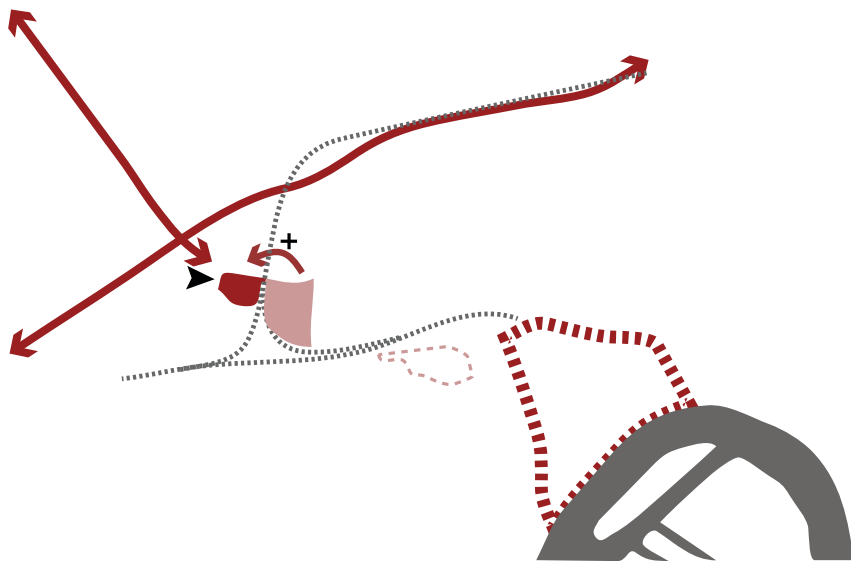
URBAN CONNECTION



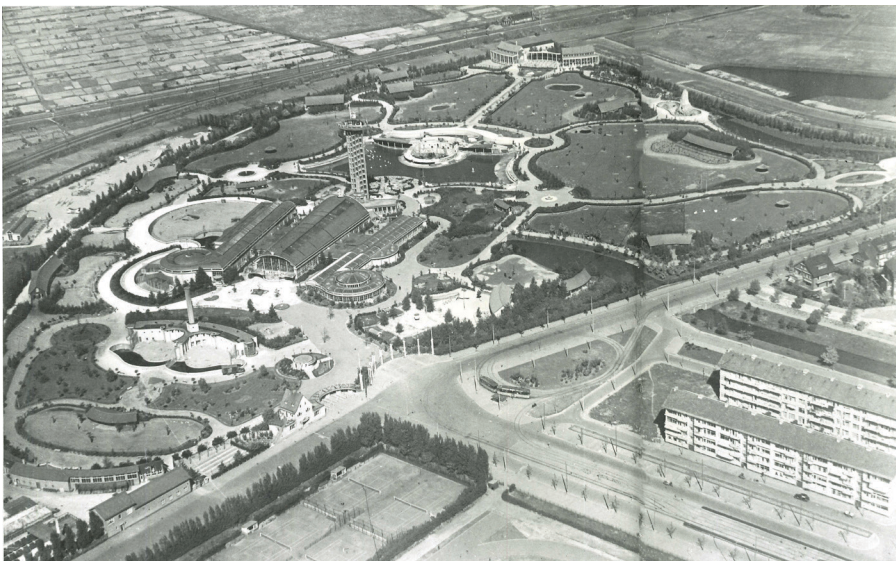
1855



1940



2000



URBAN FABRIC CONNECTIONS HAVE WEAKEND

ACCESSIBILITY

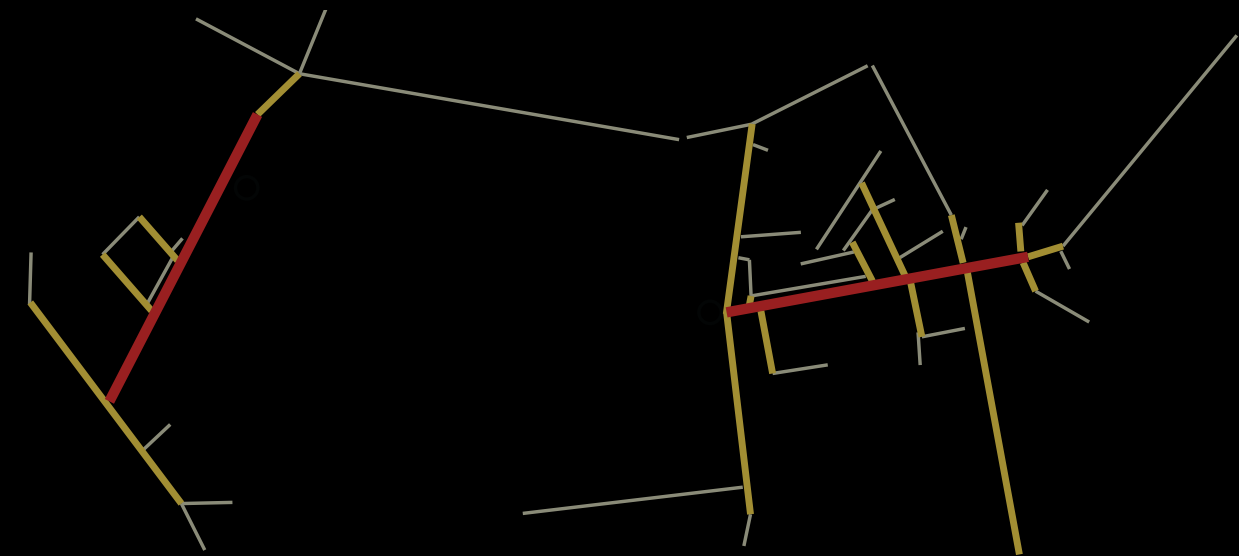
LOCAL INTEGRATION

CAR

PUBLIC TRANSPORT

POTENTIAL MARKET

ACCESSIBILITY IS KEY FOR THE ZOO



local integration Rotterdam Zoo



Accesibility Rotterdam Zoo



Accesibility Dutch zoos combined

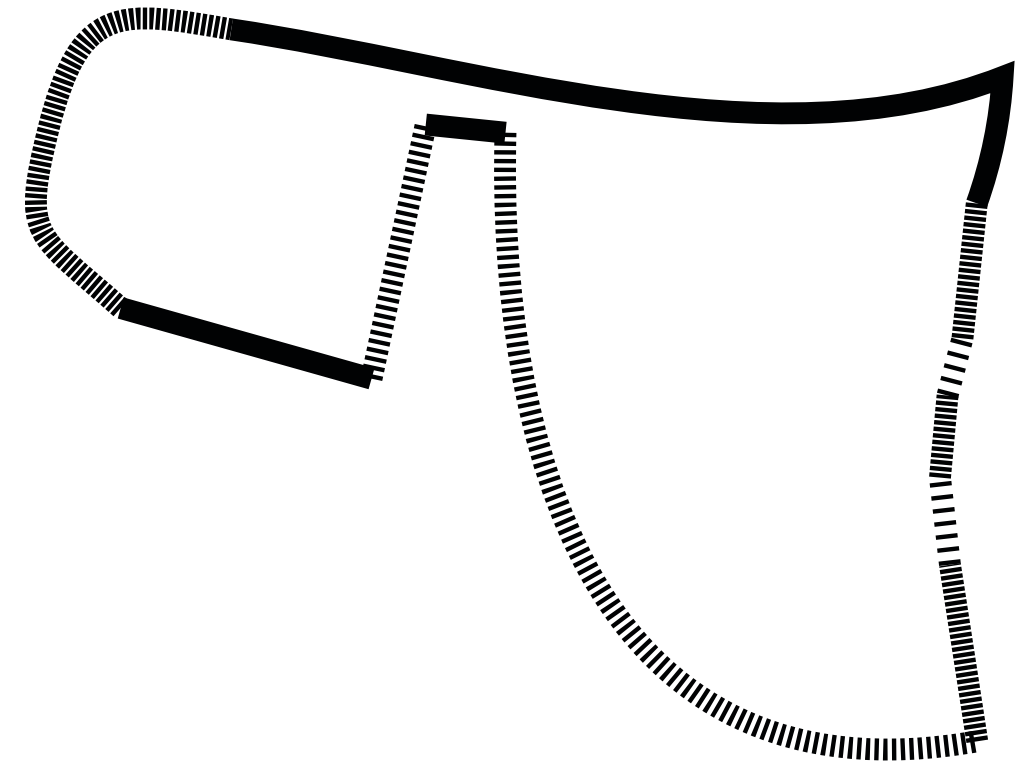
EDGE

TRANSPARENCY

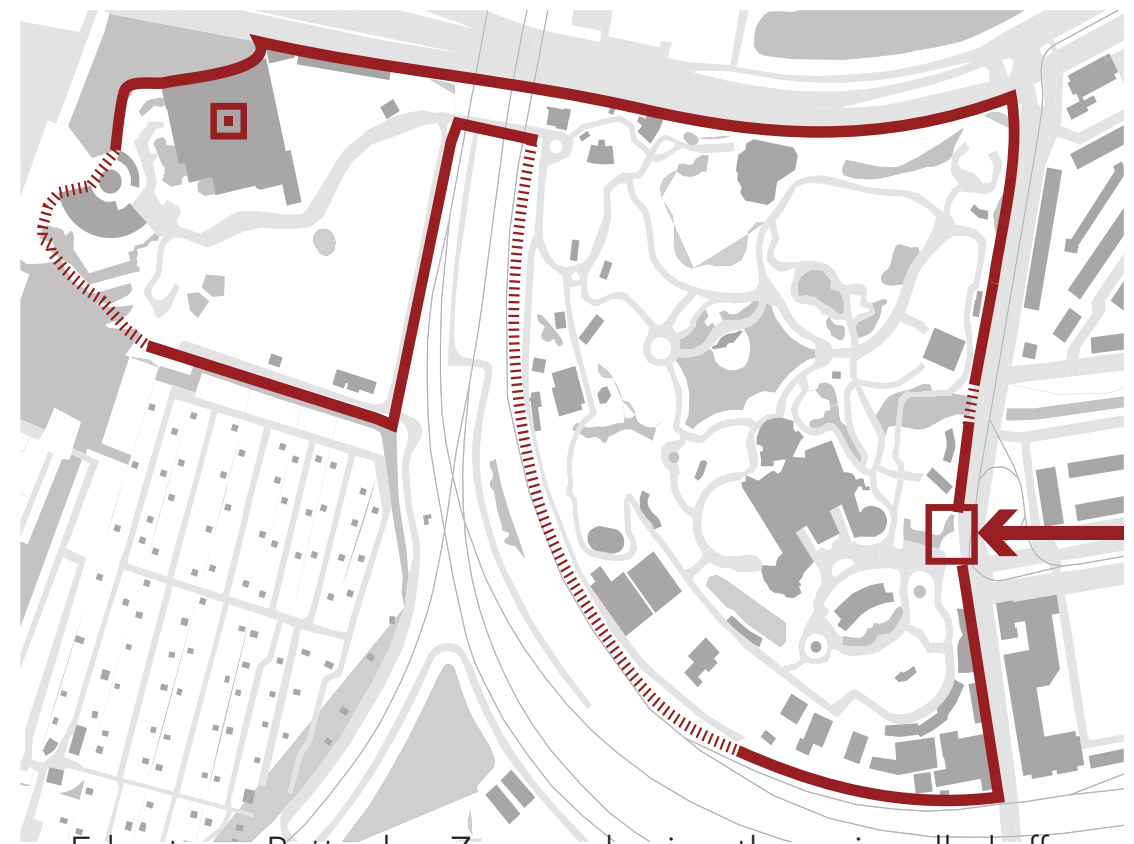
URBAN CONNECTION

PARK STRUCTURE

ZOO IS GATED COMMUNITY WITHIN
THE URBAN FABRIC



Transparency Rotterdam Zoo, rarely transparent



Edge types Rotterdam Zoo, predominantly zoo is walled off

MIXED FUNCTIONS

CITY CENTRE CONNECTION

OPENING HOURS

SHARED URBAN FUNCTIONS

MIXED FUNCTION OCCURS LIMITEDLY,
LOTS OF POTENTIAL



Restaurant de Plantage, Amsterdam Zoo



Party venue, Rotterdam Zoo

Congress centre, Arnhem Zoo



SPATIAL ARRANGEMENT



POLAR BEAR EXHIBIT AMSTERDAM ZOO 1899



CAGE BARRIER



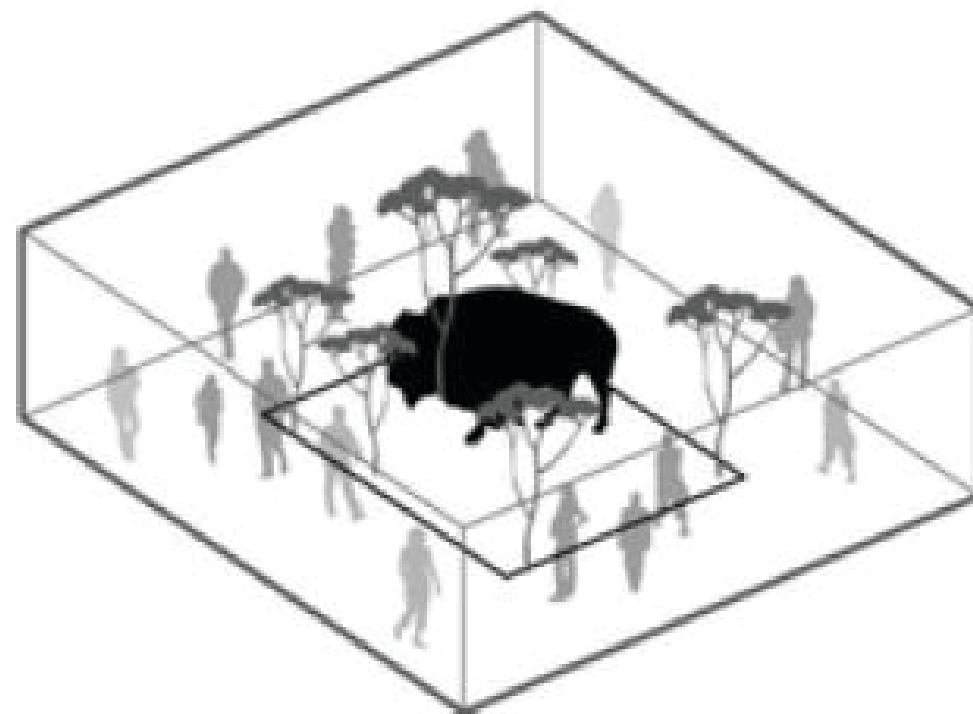
POLAR BEAR EXHIBIT AMSTERDAM ZOO 1974



NATURALISTIC BARRIER



POLAR BEAR EXHIBIT ROTTERDAM ZOO 2008



IMMERSION EXHIBIT

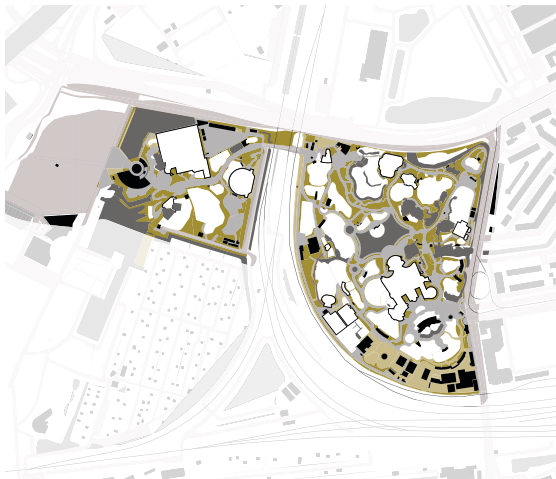
SPACE ALLOCATION

people space

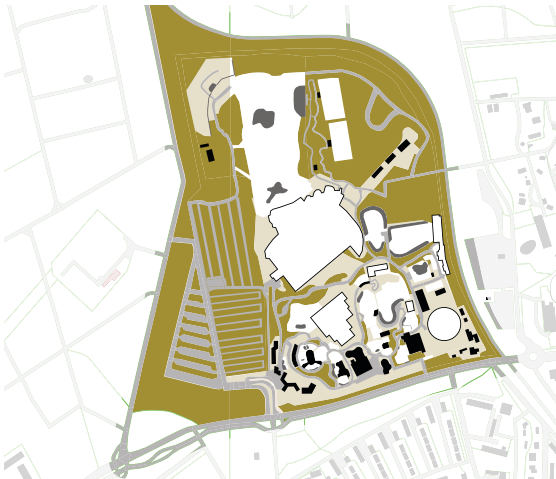
Amsterdam Zoo



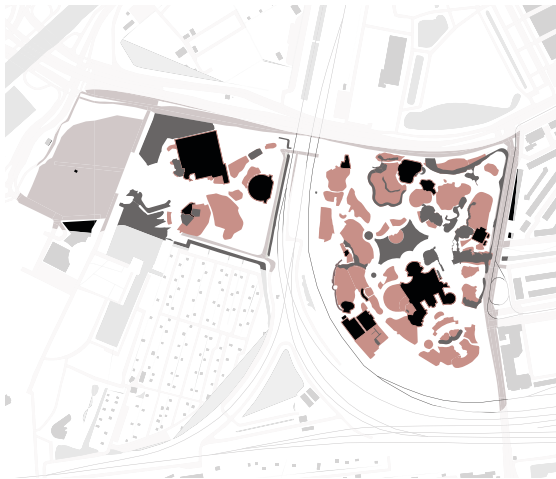
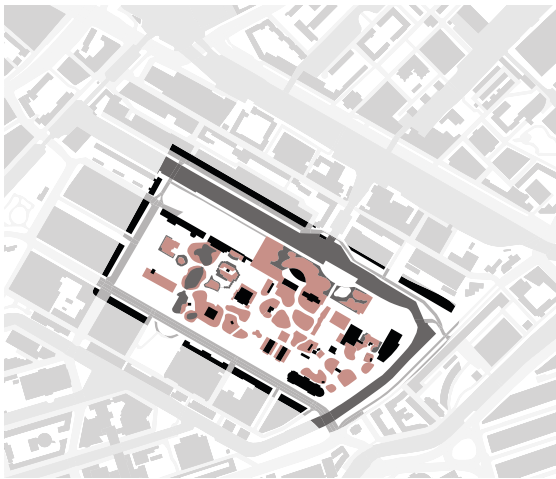
Rotterdam Zoo



Arnhem Zoo



animal space



MOST SPACE ALLOCATED FOR PEOPLE

SPATIAL ARRANGEMENT

EXHIBIT ANIMAL PERSPECTIVE

LAYOUT

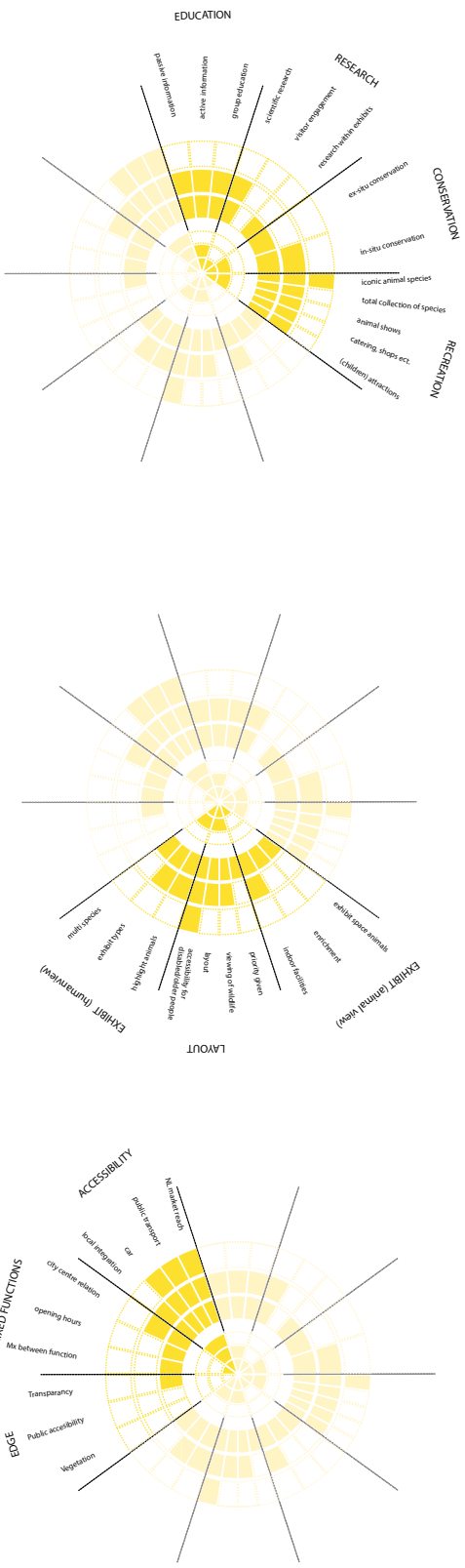
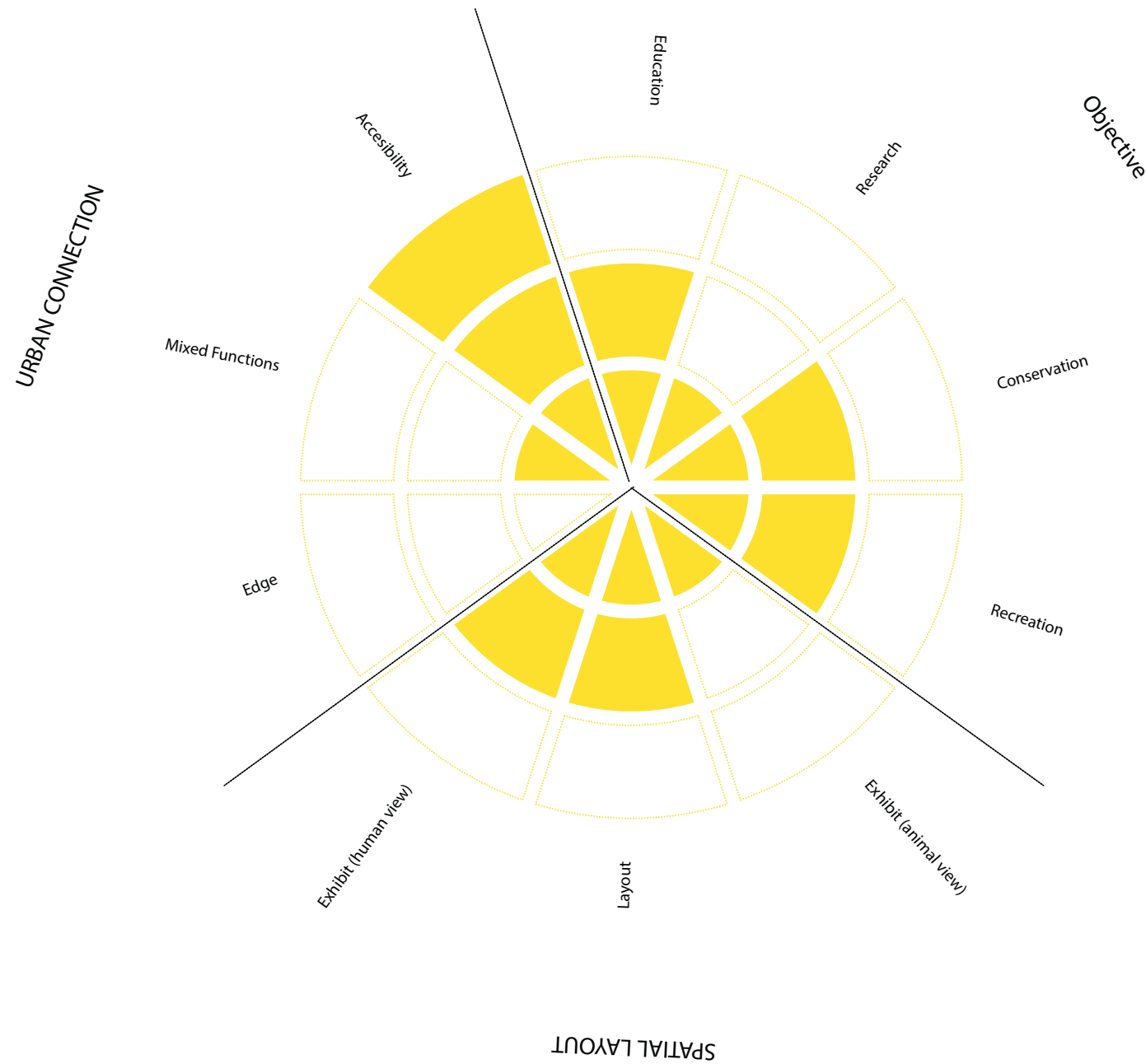
EXHIBIT HUMAN EXPERIENCE



SYNTHESIS

ZOO TOOL

ZOO TOOL



EVALUATION ROTTERDAM ZOO USING THE ZOO TOOL

INTRODUCTION

ANALYSIS

SYNTHESIS

APPLICATION

FUTURE CONTEXT

NEW TECHNOLOGY

VIRTUAL REALITY, DIGITALIZATION

EXHIBITS

ROTATION EXHIBITION

UNZOO

ANIMAL WELFARE

ENRICHMENT

QUALITY OF LIFE

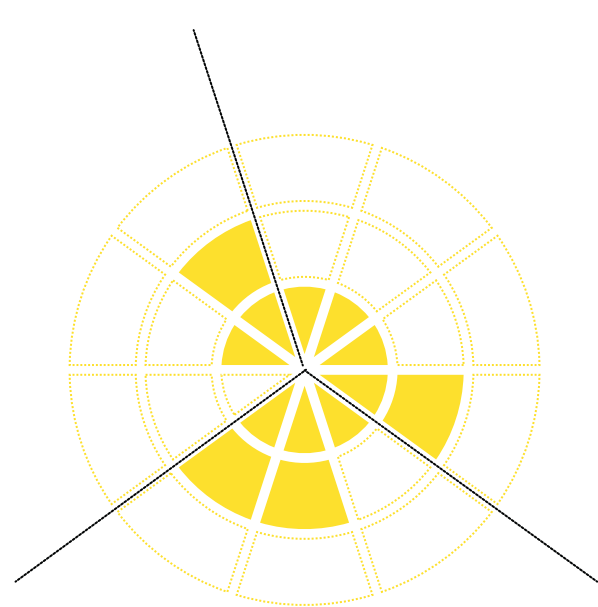
ESCAPE FROM BUSY URBAN LIFE

INTEGRATION OF PEOPLE

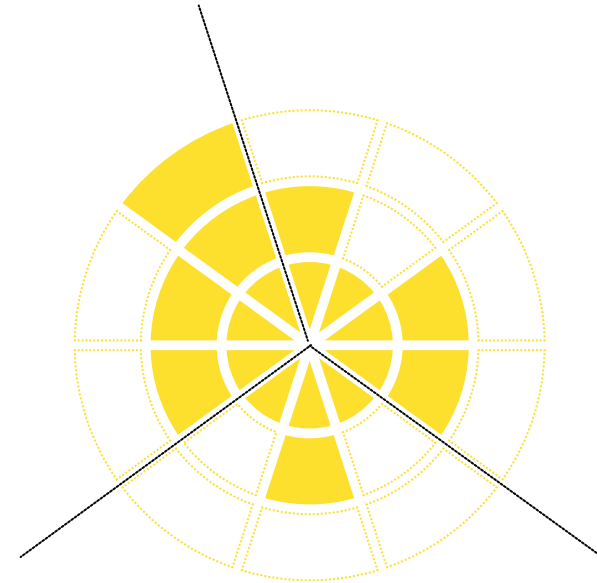
INDIVIDUALIZATION, SEGREGATION



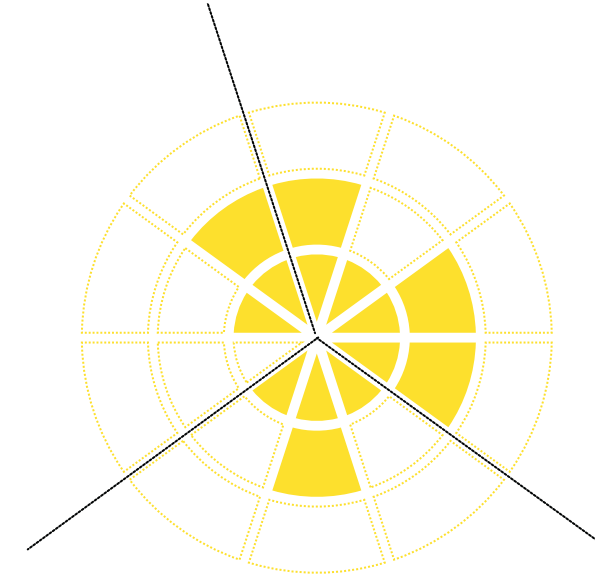
EVALUATION DUTCH ZOOS



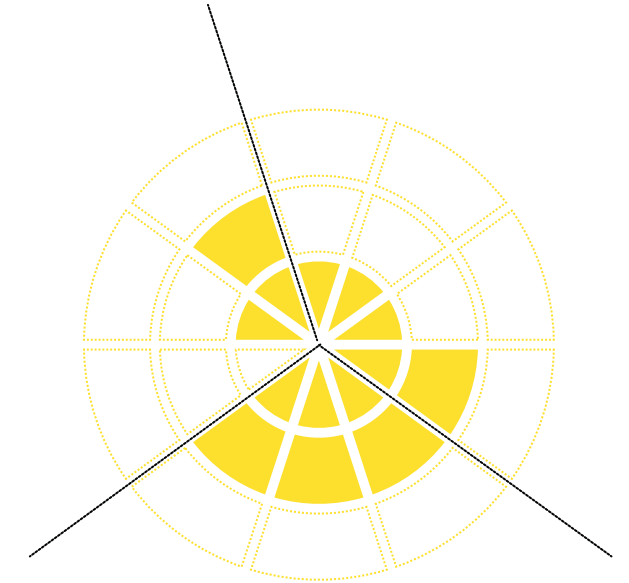
Amersfoort Zoo



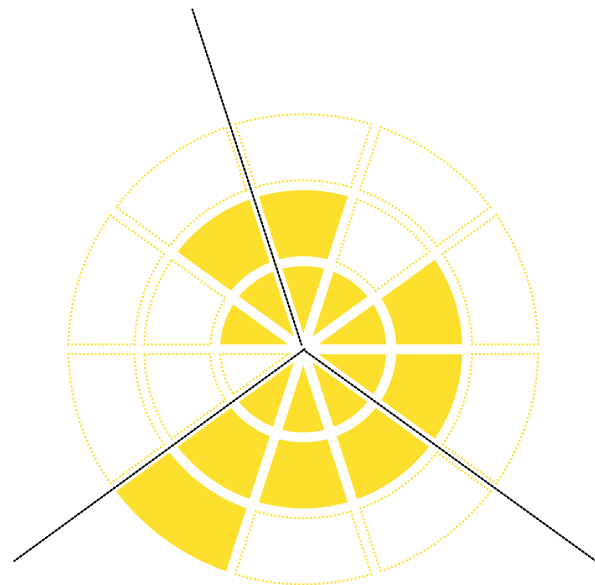
Amsterdam Zoo



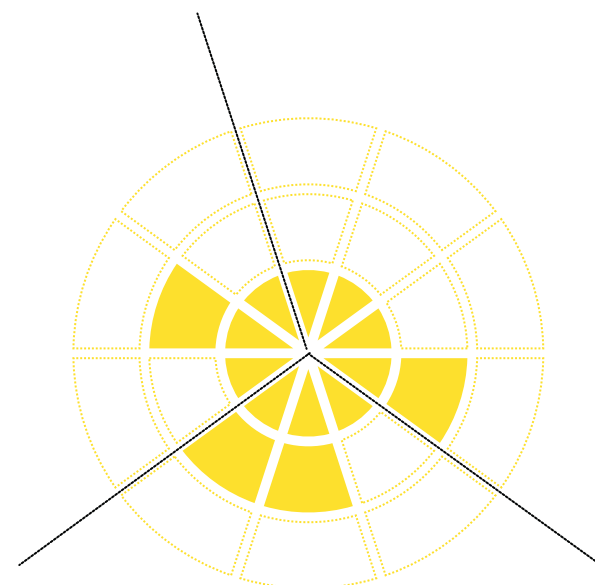
Rhenen Zoo



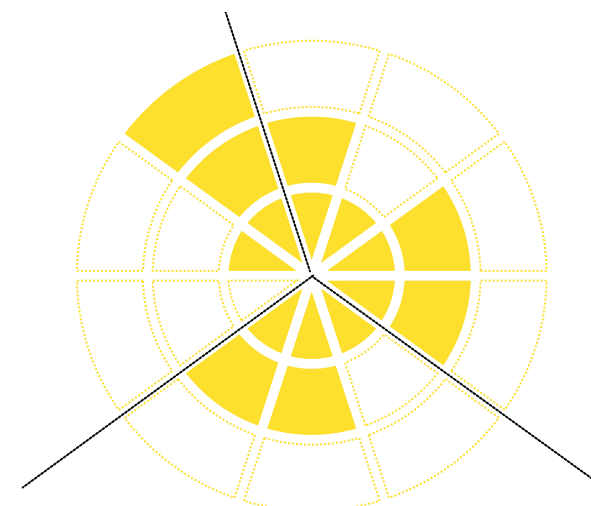
Tilburg Zoo



Arnhem Zoo



Emmen Zoo



Rotterdam Zoo

EVALUATION DUTCH ZOO USING THE FUTURE ZOO TOOL

GUIDELINES FUTURE ZOO

EDUCATION

A TRIP TO THE ZOO IS A BIOLOGY CLASS

RECREATION

THE ZOO IS AN ADVENTURES EXPERIENCE INTO THE WILD

RESEARCH

THE ZOO IS A LIVING LABORATORY

CONSERVATION

BREEDING CENTRES FOR ENDANGERED ANIMALS

LAYOUT

PEOPLE ENCAGED

DIFFERENT ROUTES OF EXPLORING THE ZOO

EXHIBITS

ECOZONES, MULTI-SPECIES ECOSYSTEMS

ROTATION EXHIBITION

ANIMALS

ICONIC AMBASSADOR ANIMAL PER BIOZONE

ADJUST COLLECTION TO IN-SITU CONSERVATION WORK

ATTRACTIONS AND FACILITIES

MIX BETWEEN CITY AND ZOO ATTRACTIONS/FACILITIES

URBAN FABRIC

BLUR EDGE OF THE ZOO AND URBAN ENVIRONMENT

COOPERATE CITY FUNCTION WITHIN OR ON THE EDGE OF THE ZOO

ZOO IS A PUBLIC PARK

PEOPLE

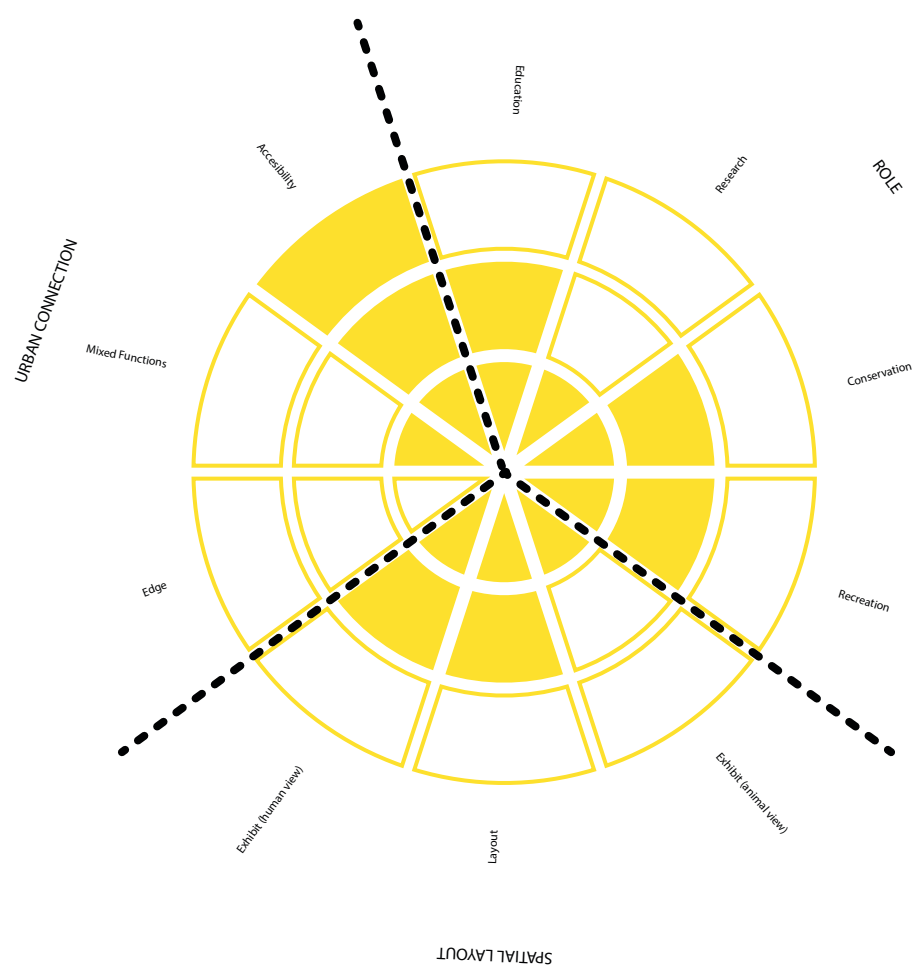
ATTRACT DIFFERENT KIND OF VISITS

APPLICATION

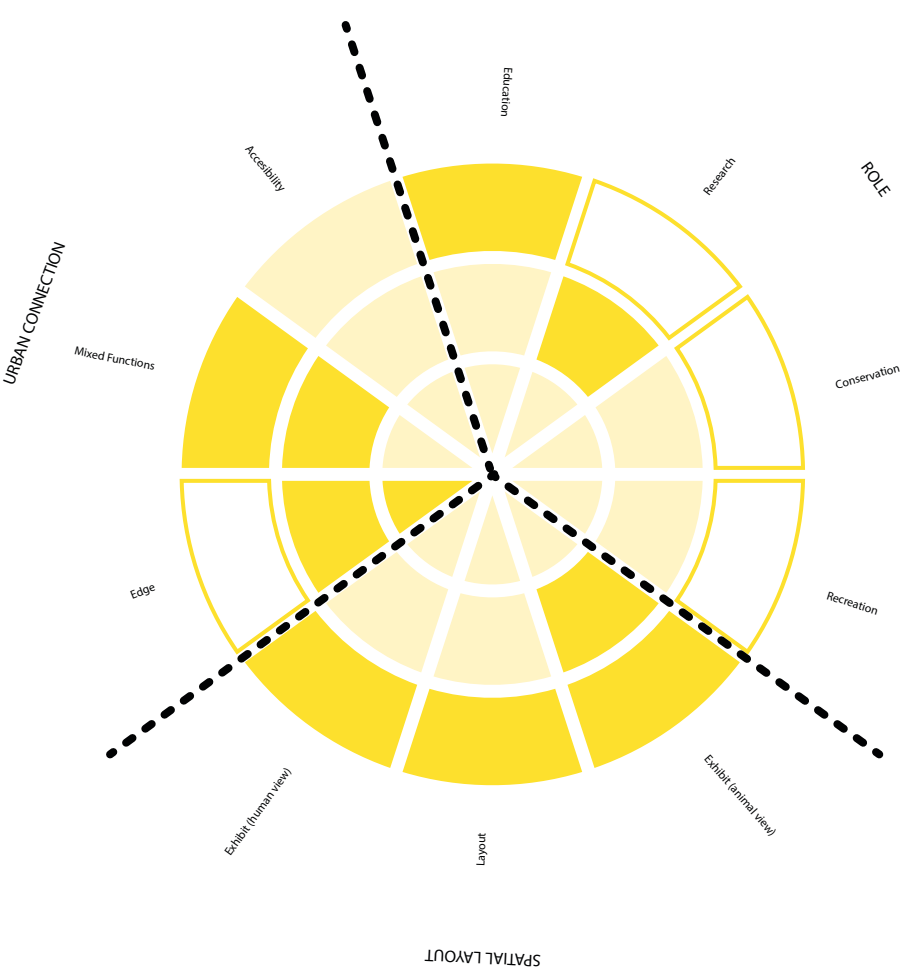
RECREATING GARDEN OF EDEN IN THE CITY?

Adam and Eva in the Garden of Eden,
by Peter Wenzel

FUTURE ROTTERDAM ZOO



CURRENT ROTTERDAM ZOO



FUTURE ROTTERDAM ZOO

EDUCATIONAL AND CULTURAL URBAN PARK ZOO

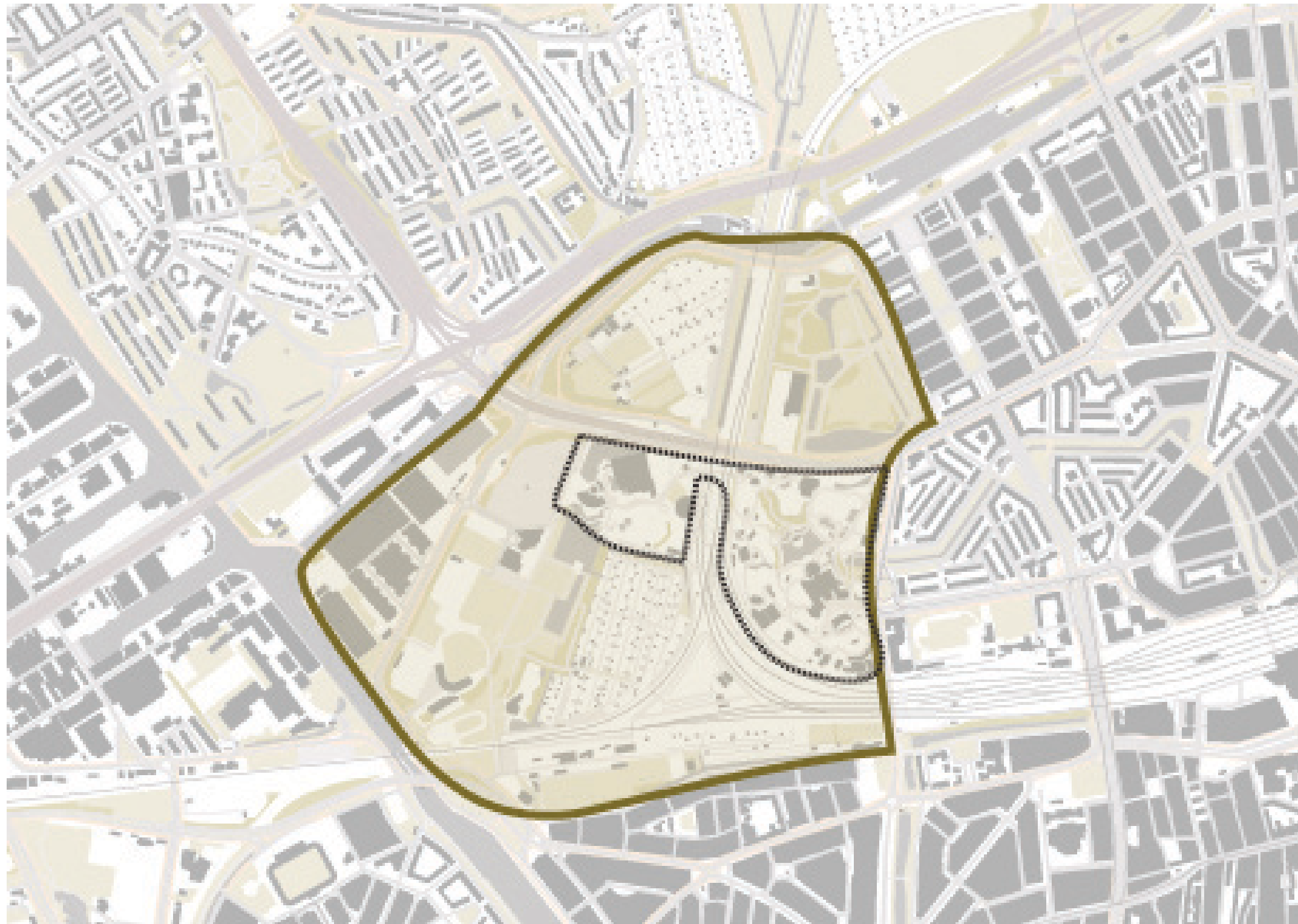
MEASURE FOR FUTURE ZOO ROTTERDAM

- + facilities for interactive and personalised methods of education
- + separately accessible educational facilities
- + research station or laboratory
- + microtopia or insect house
- + introduce rotation exhibition
- + large indoor facilities (for animals that are from another climate)
- + introduces rides or other special manners to explore the biozones
- + Order animals by ecosystem
- + multiple iconic animal per biozone
- + unzoo exhibition method for biozones
- + integrate zoo in Rotterdam park structure
- + create new and connect biotopes with park structure
- + add multiple (cultural) urban function on edge zoo urban fabric, at least one per biozone
- + make areas separate accessible and usable of 24/7 use possibilities
- + zoo infrastructure should create new links with the urban environment and different urban environments with each other.

FUTURE ZOO ROTTERDAM



LOCATION



PROJECT SITE



CONNECTING GREEN STRUCTURES



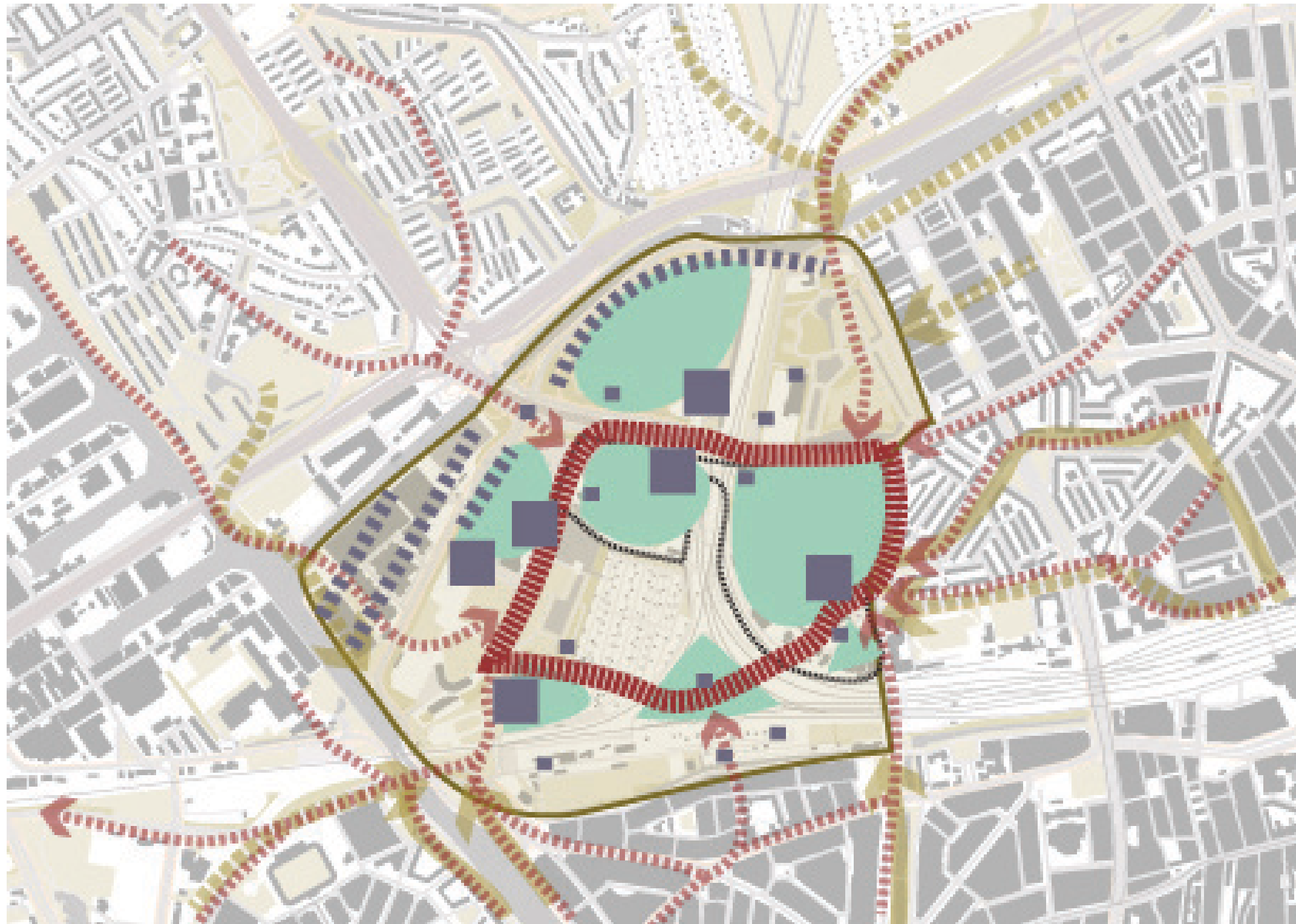
CONNECTING LOCAL INFRASTRUCTURE



CONNECTING RING



SEPARATE ZOO BIOZONES ON RING



URBAN FUNCTION AND HOUSING AROUND RING AND BIOZONES





**AUSTRALIAN
WETLANDS**



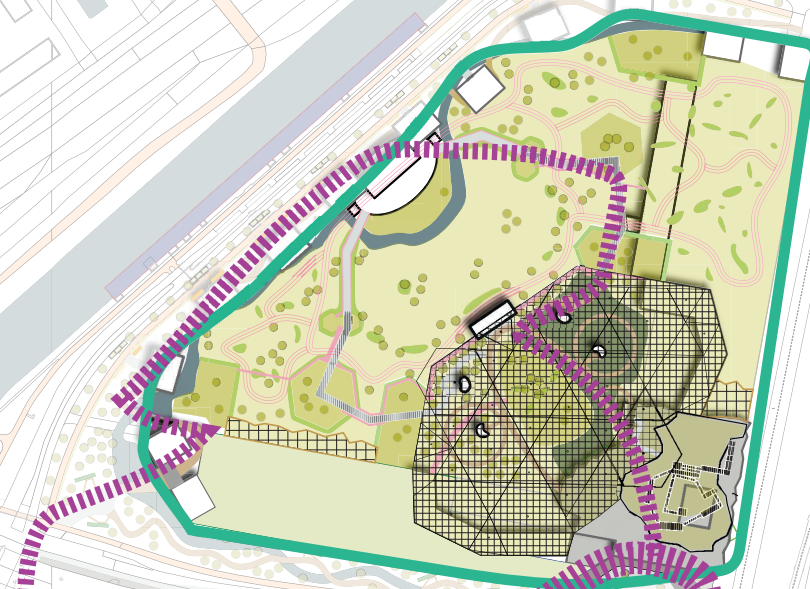
**CONGO
BASIN**



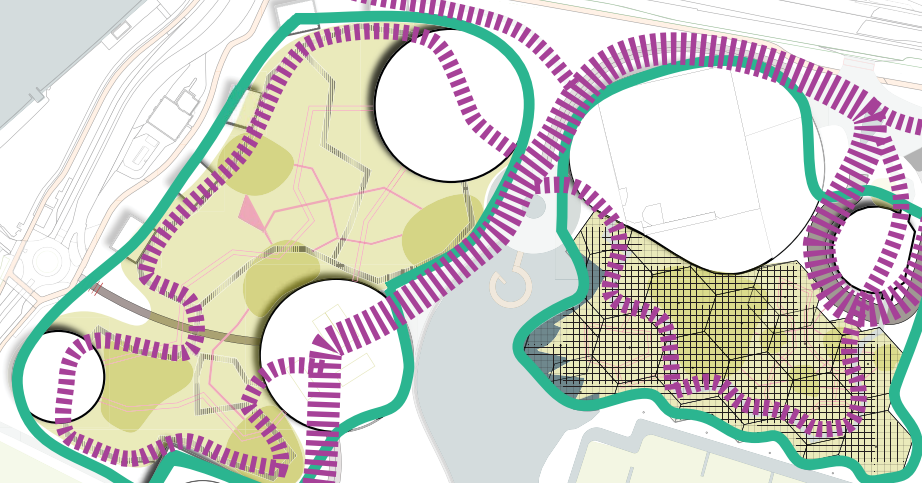
**SOUTHERN
OCEANS**



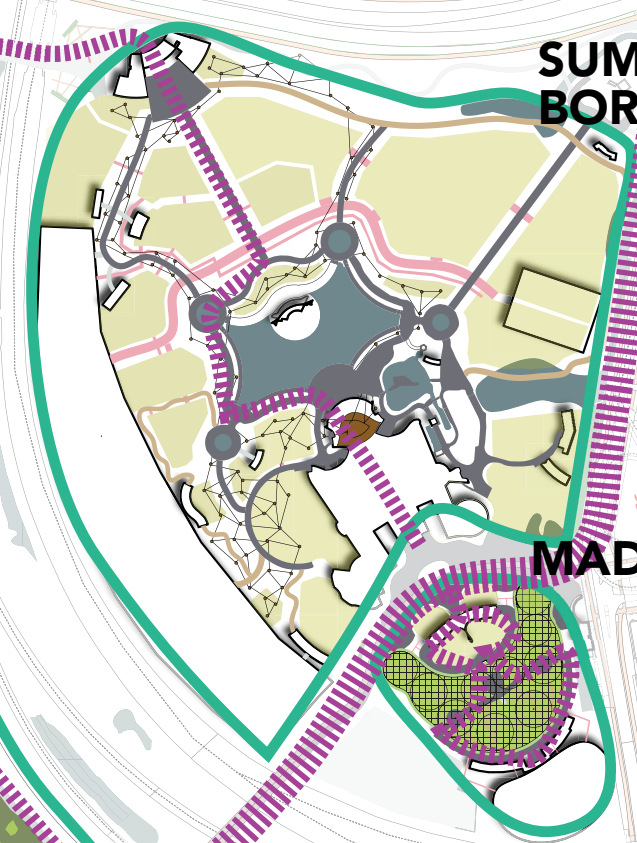
AMAZON



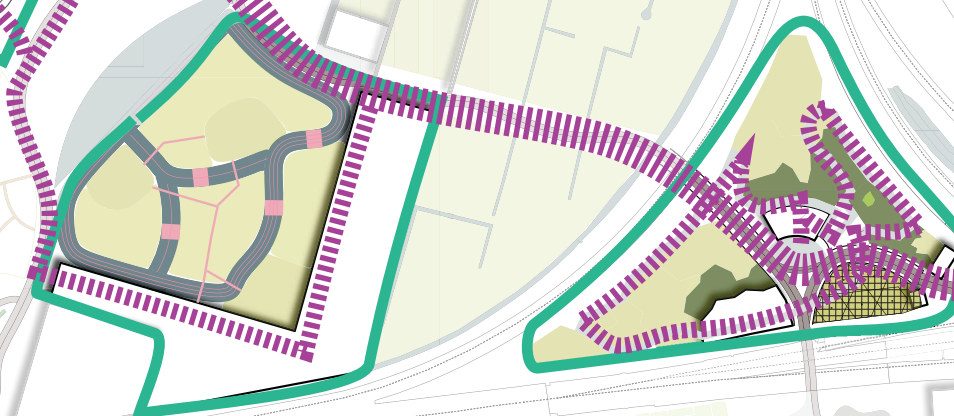
**RIFT VALLEY
GRASSLANDS**



**SUMATRA &
BORNEO**



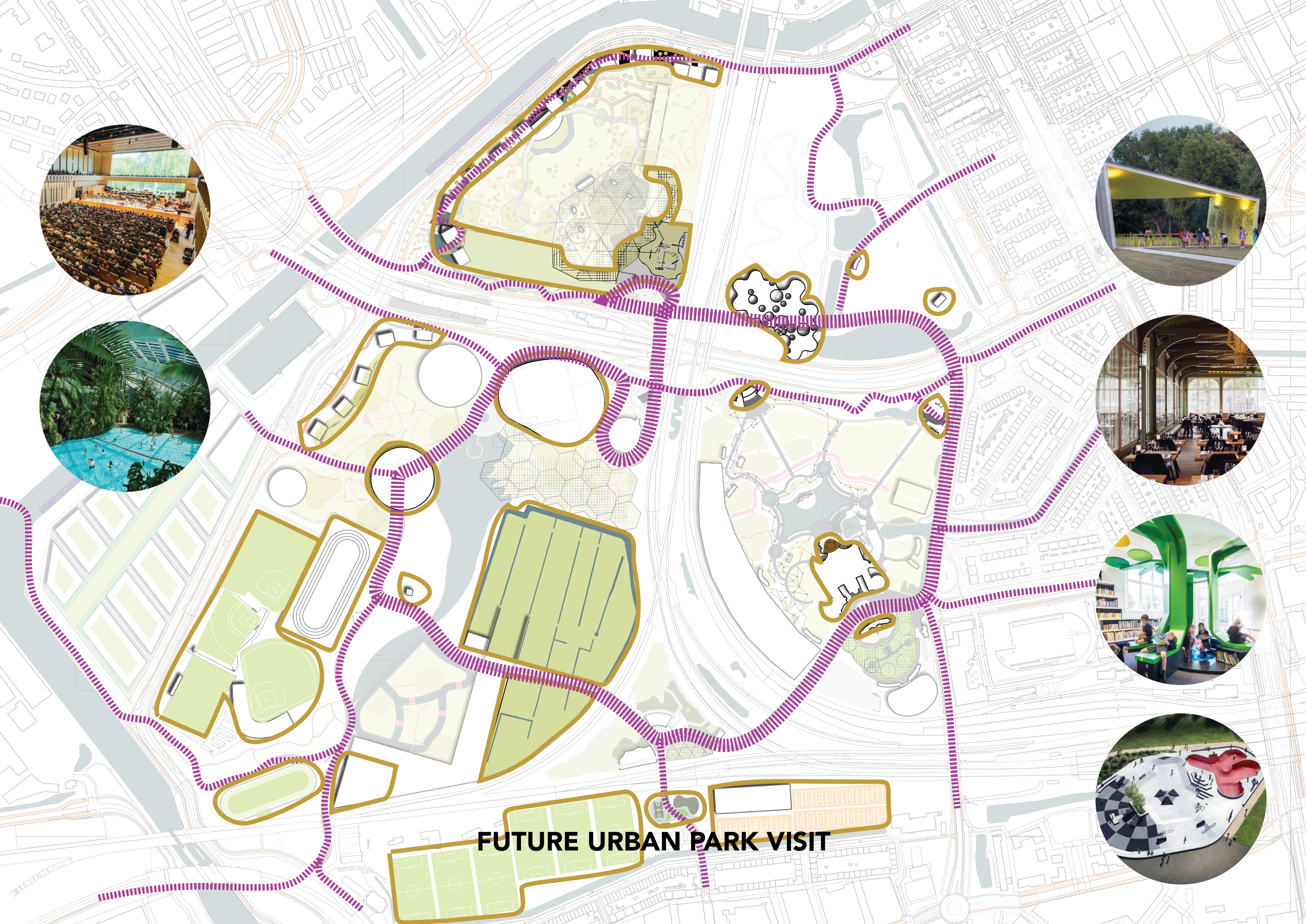
MADAGASCAR



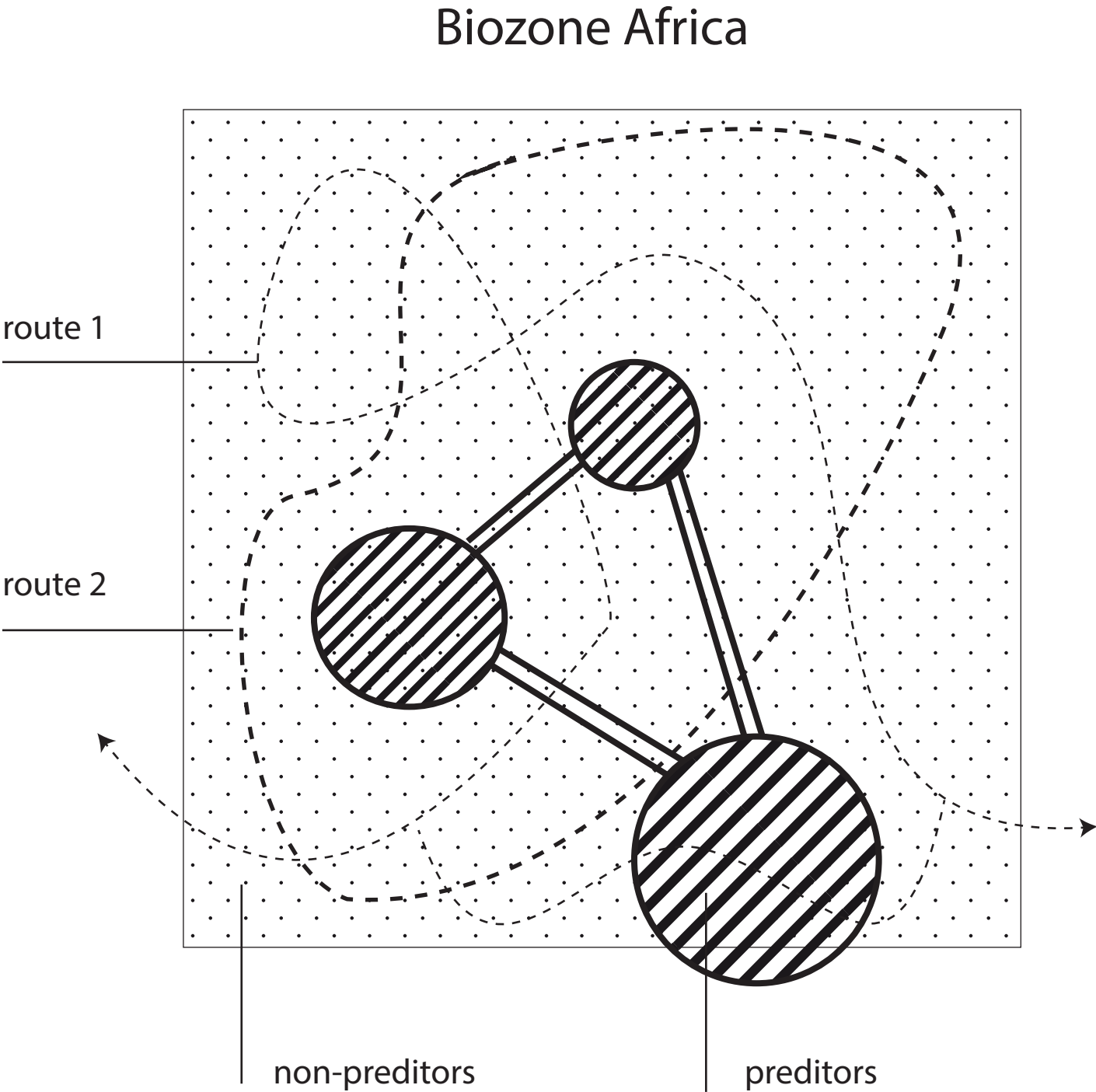
ARTIC

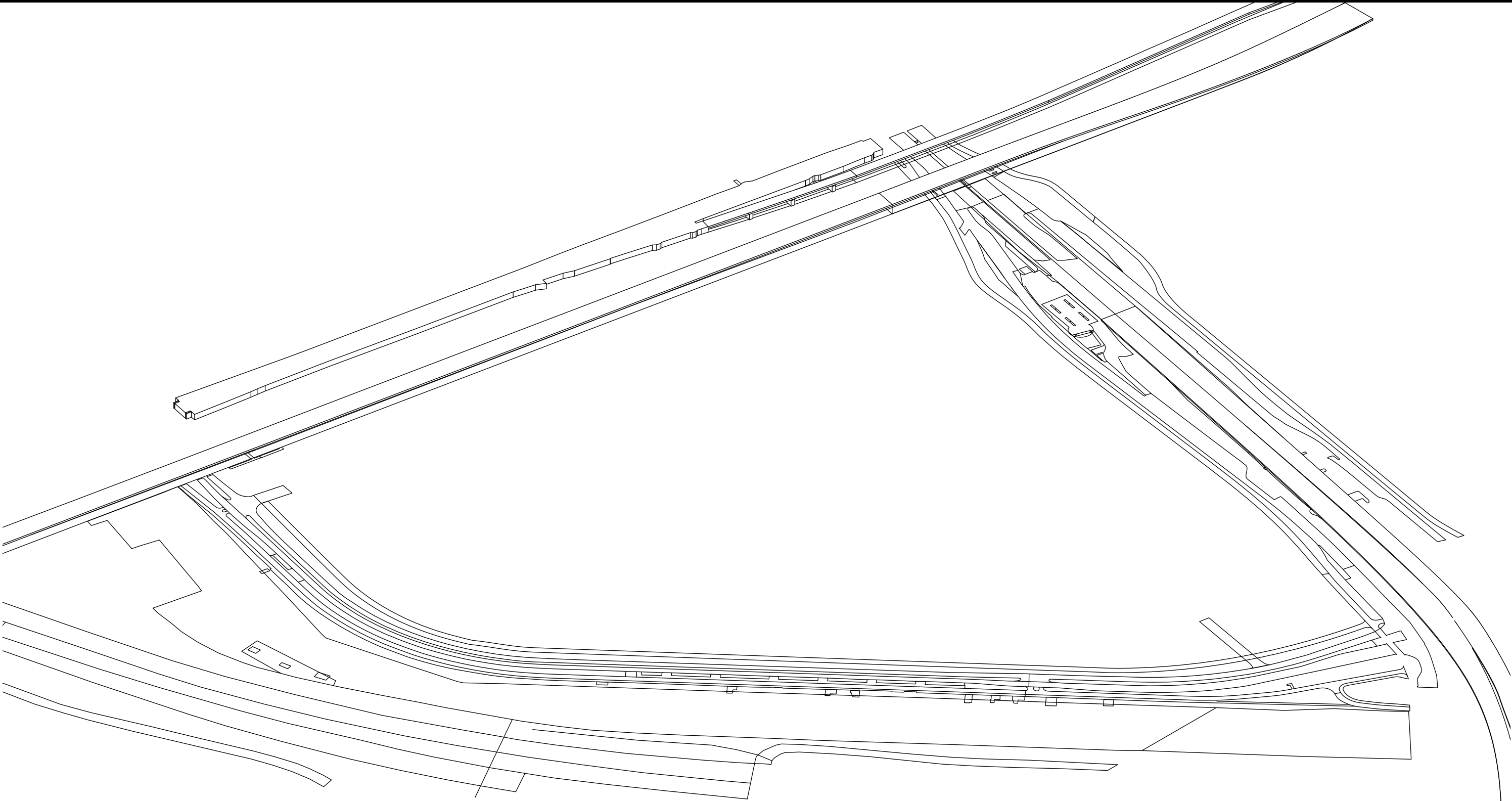


FUTURE ZOO VISIT



FUTURE URBAN PARK VISIT





SITE BIOZONE AFRICA SAVANNA

FREE ROAMING
(LARGE) ANIMALS

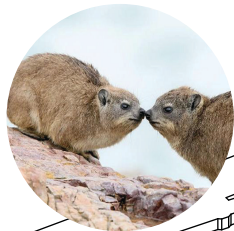


LOCAL VEGETATION

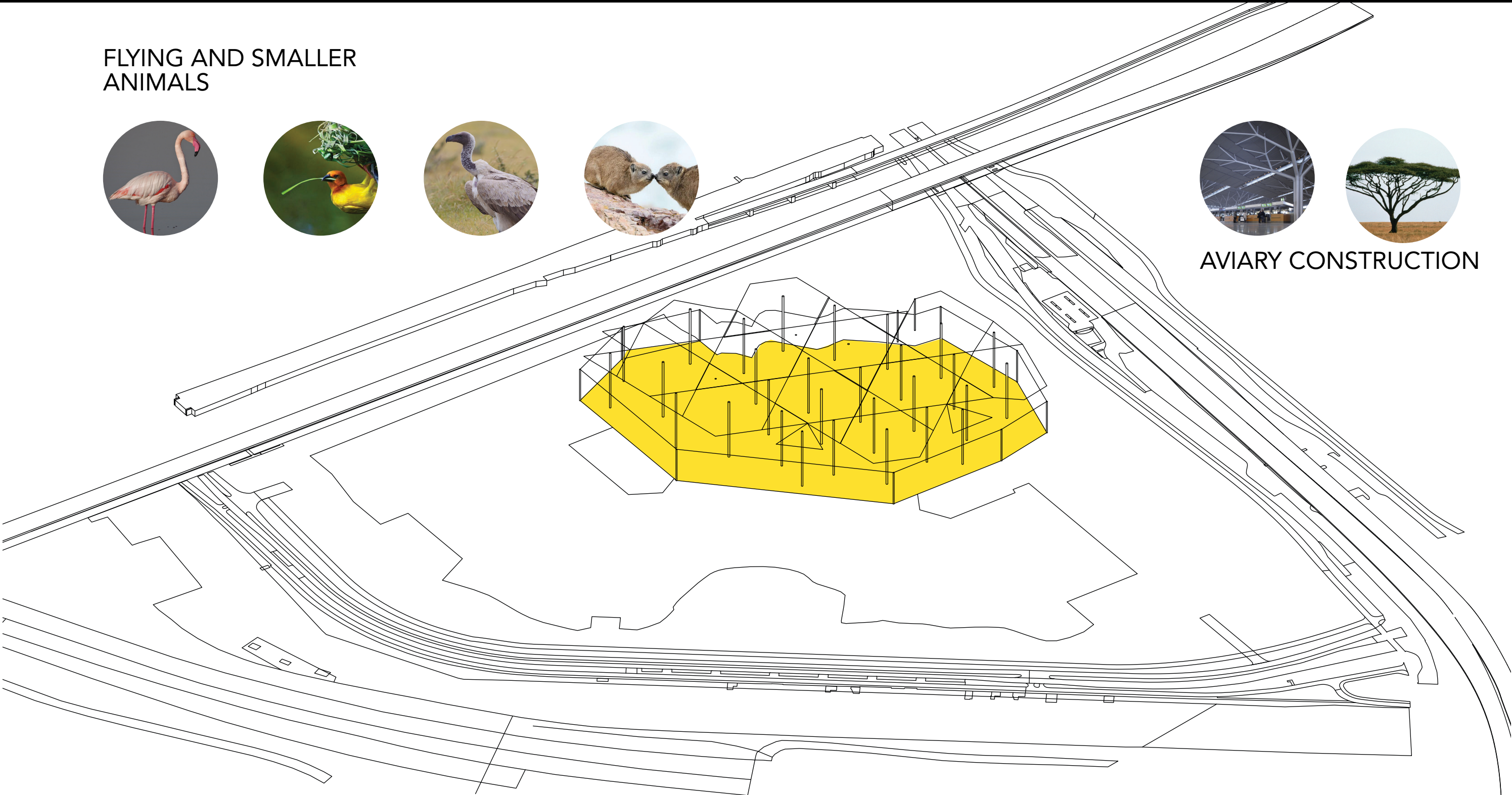


LARGE ECOZONE

FLYING AND SMALLER
ANIMALS

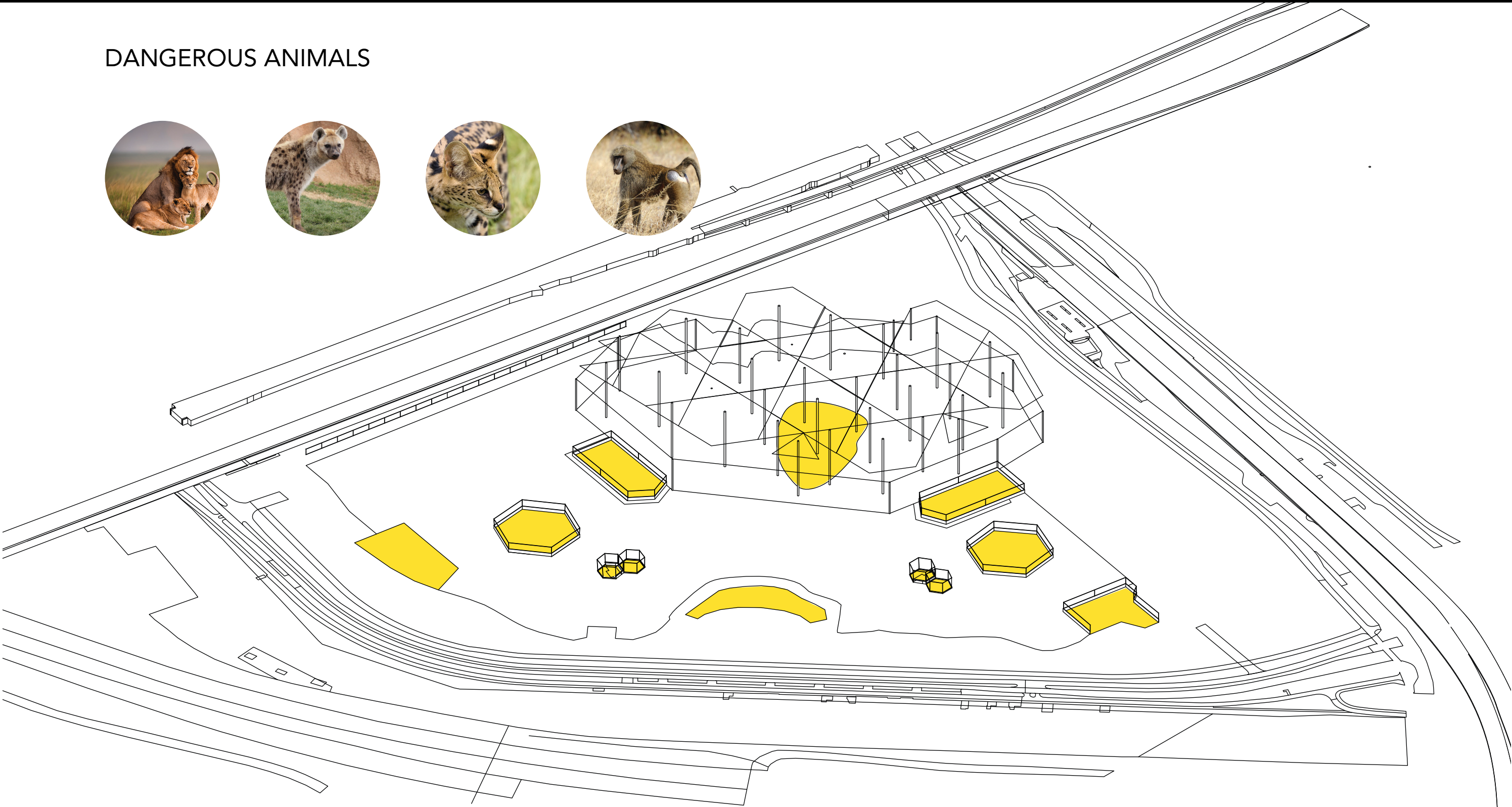


AVIARY CONSTRUCTION



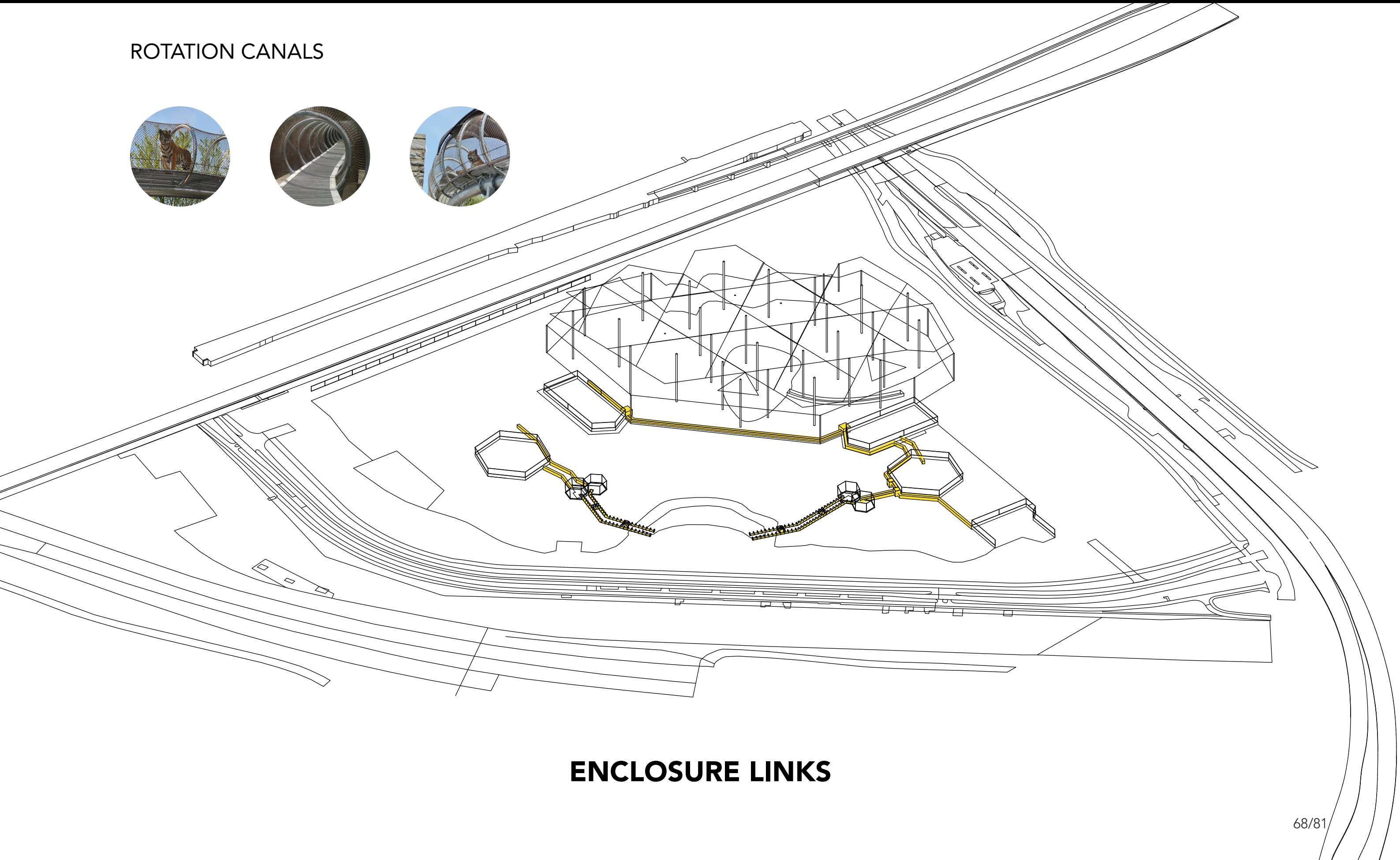
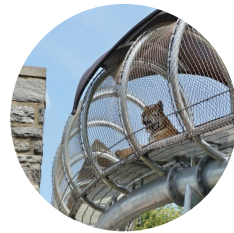
AVIARY ECOZONE

DANGEROUS ANIMALS



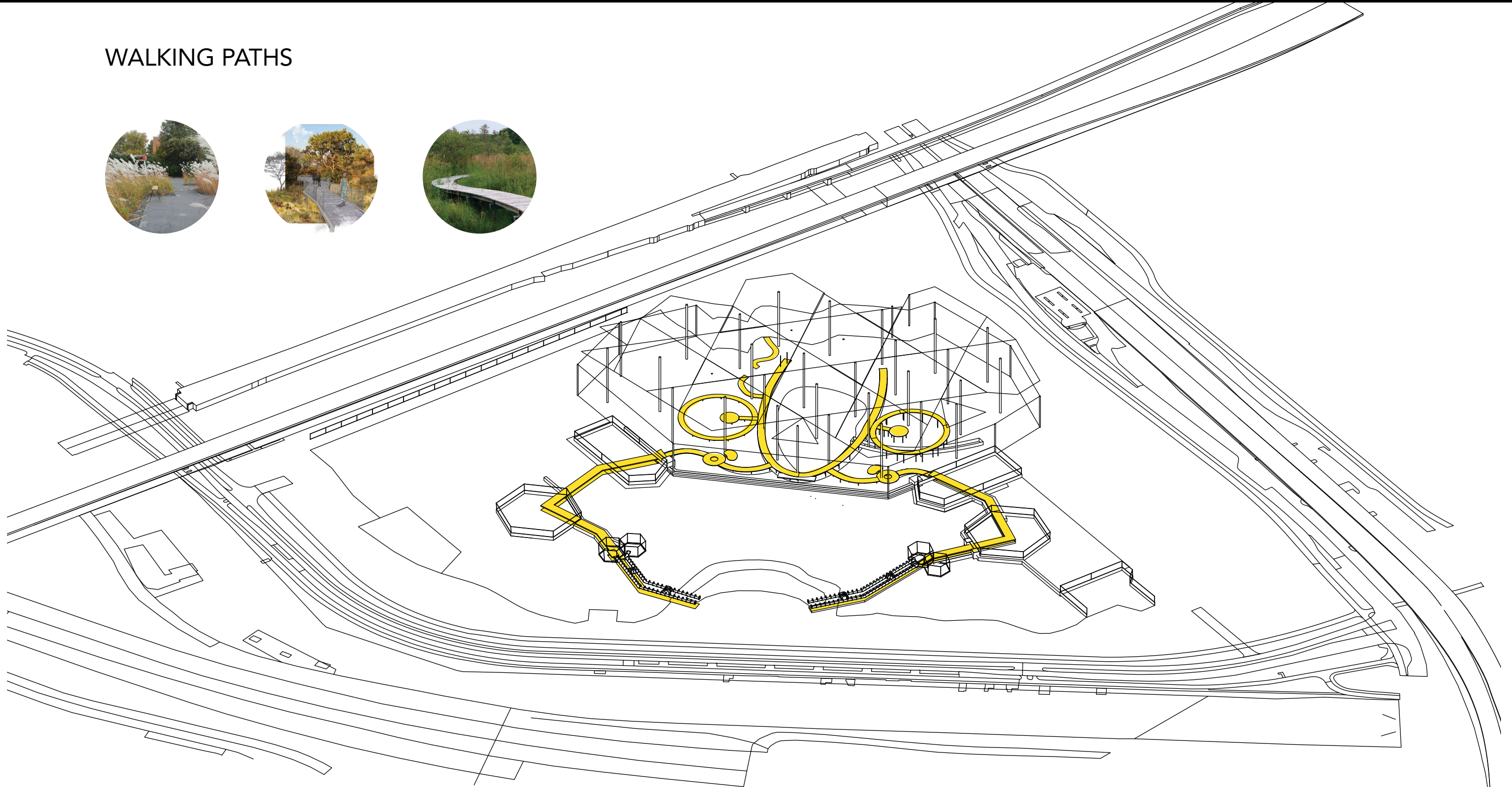
(PREDATOR) ENCLOSURES

ROTATION CANALS



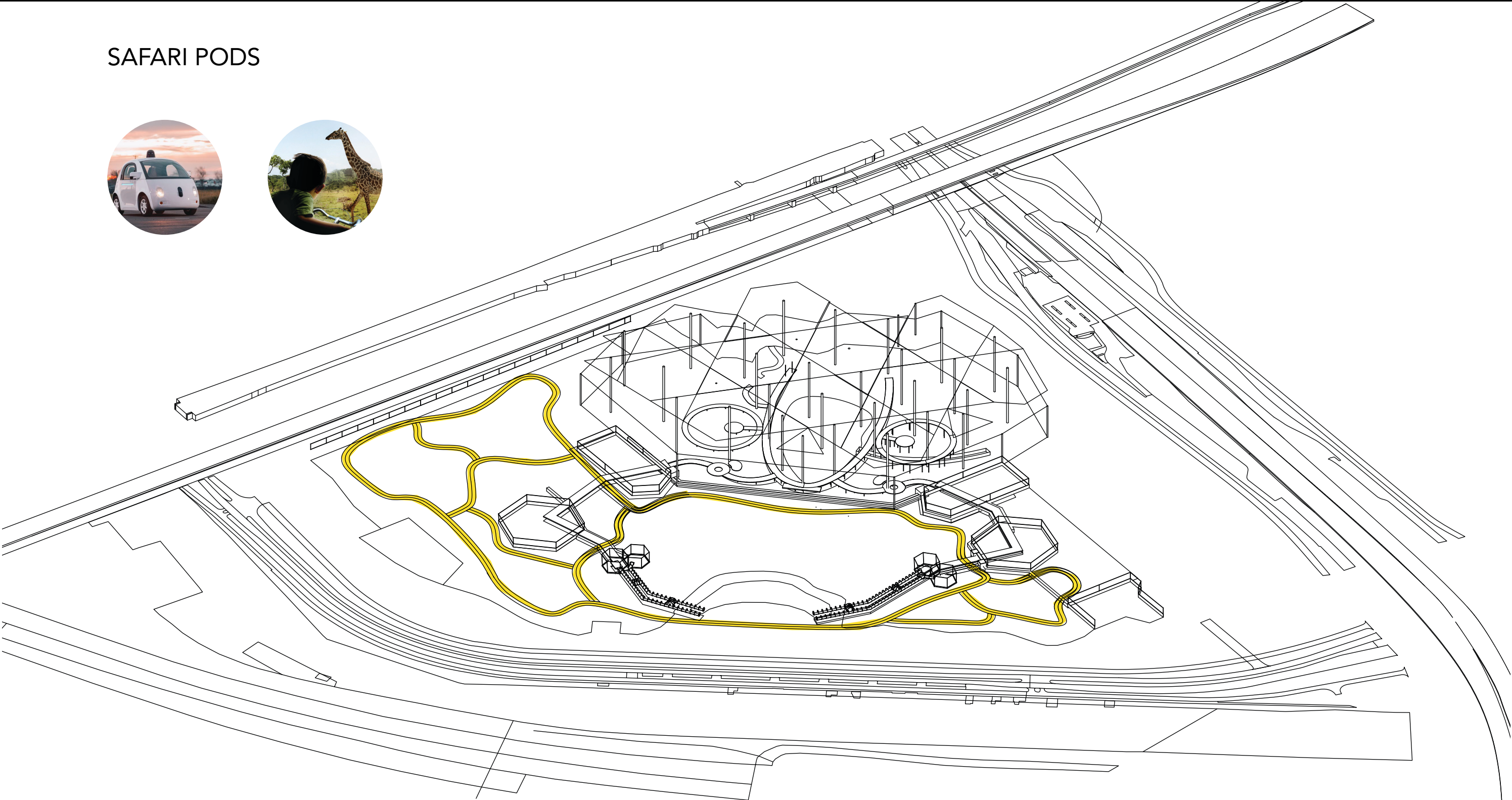
ENCLOSURE LINKS

WALKING PATHS

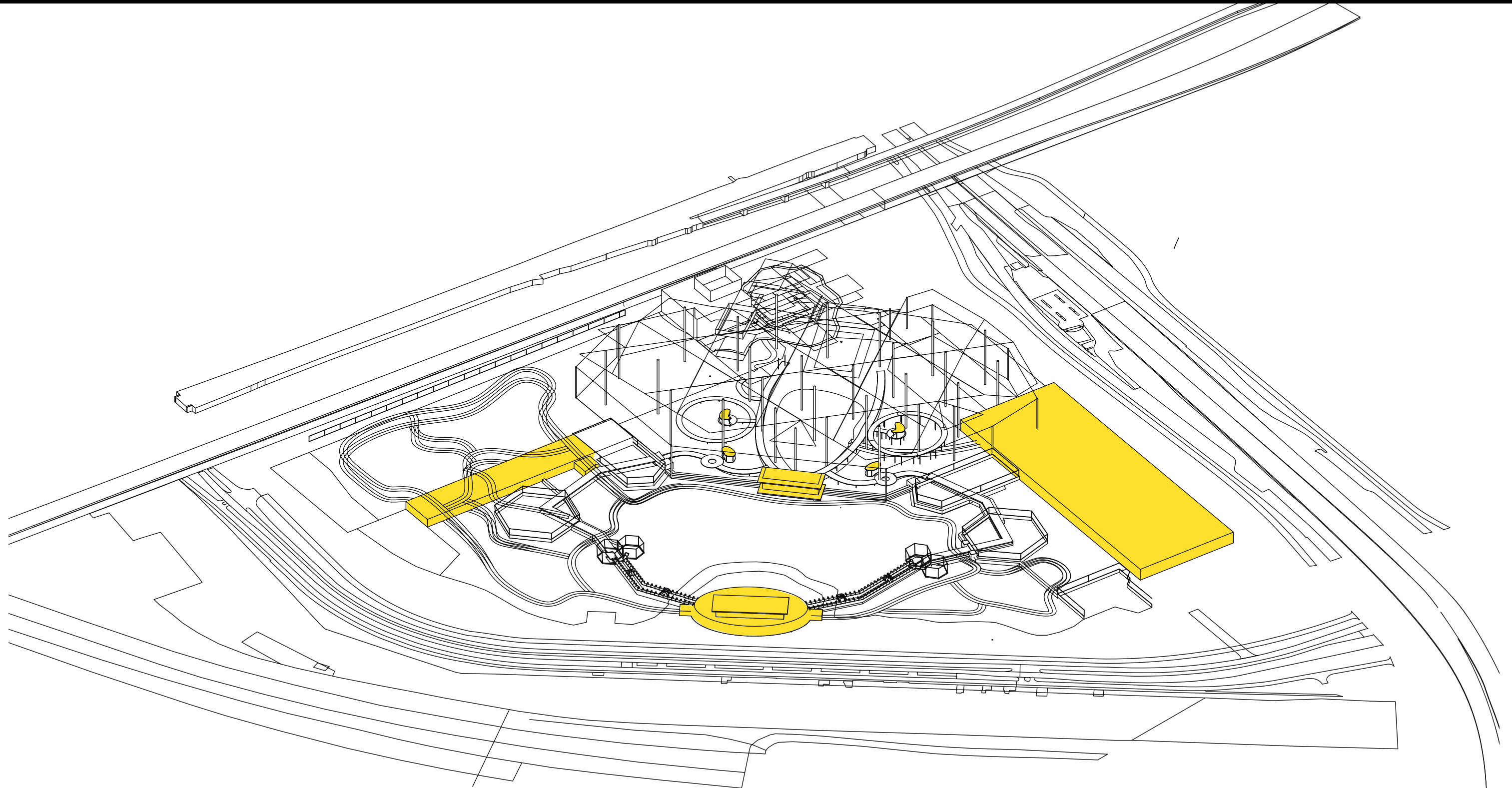


VISITOR WALKING PATHS

SAFARI PODS

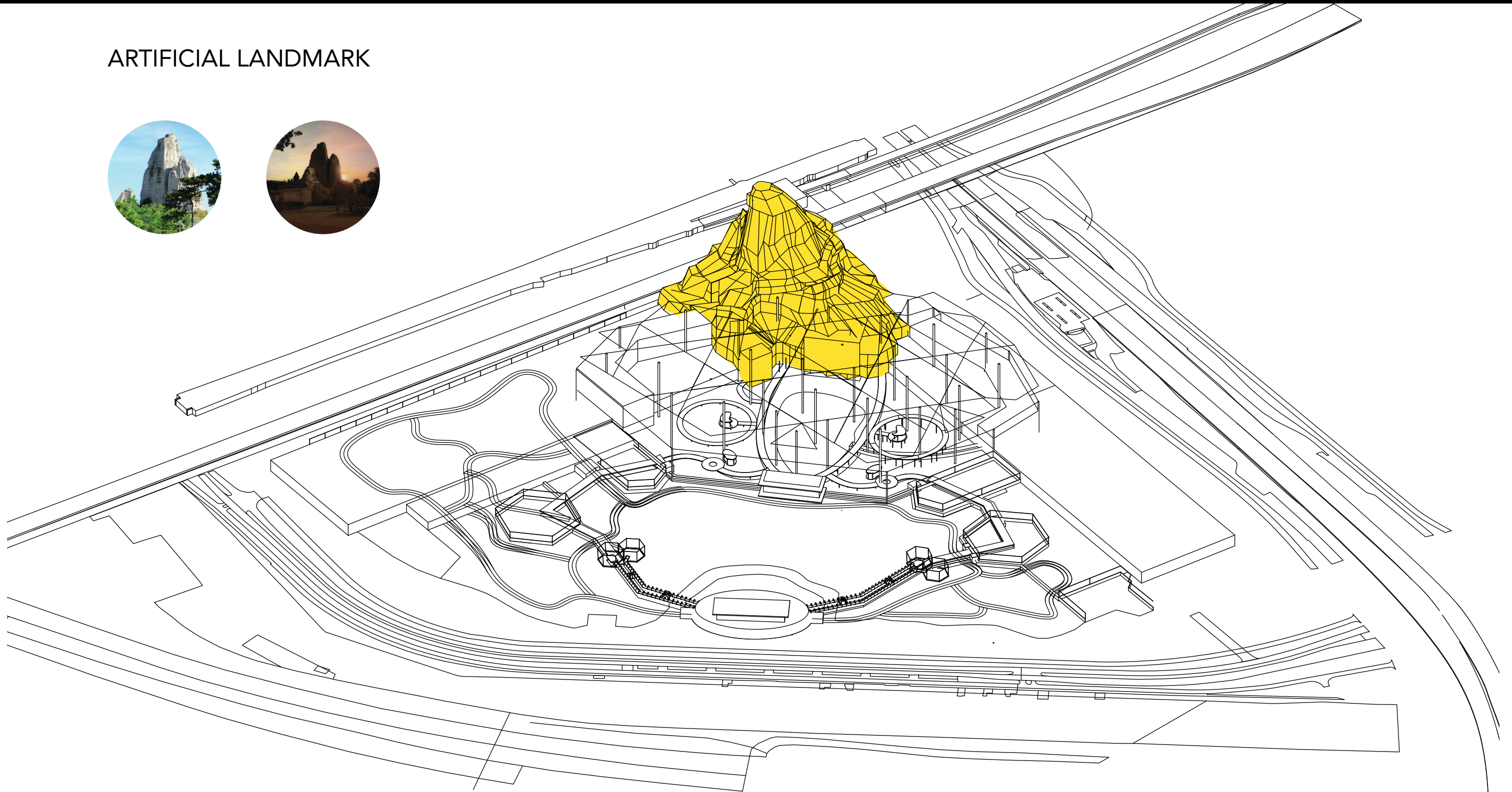


SPECIAL ROUTE



ZOO BUILDINGS

ARTIFICIAL LANDMARK



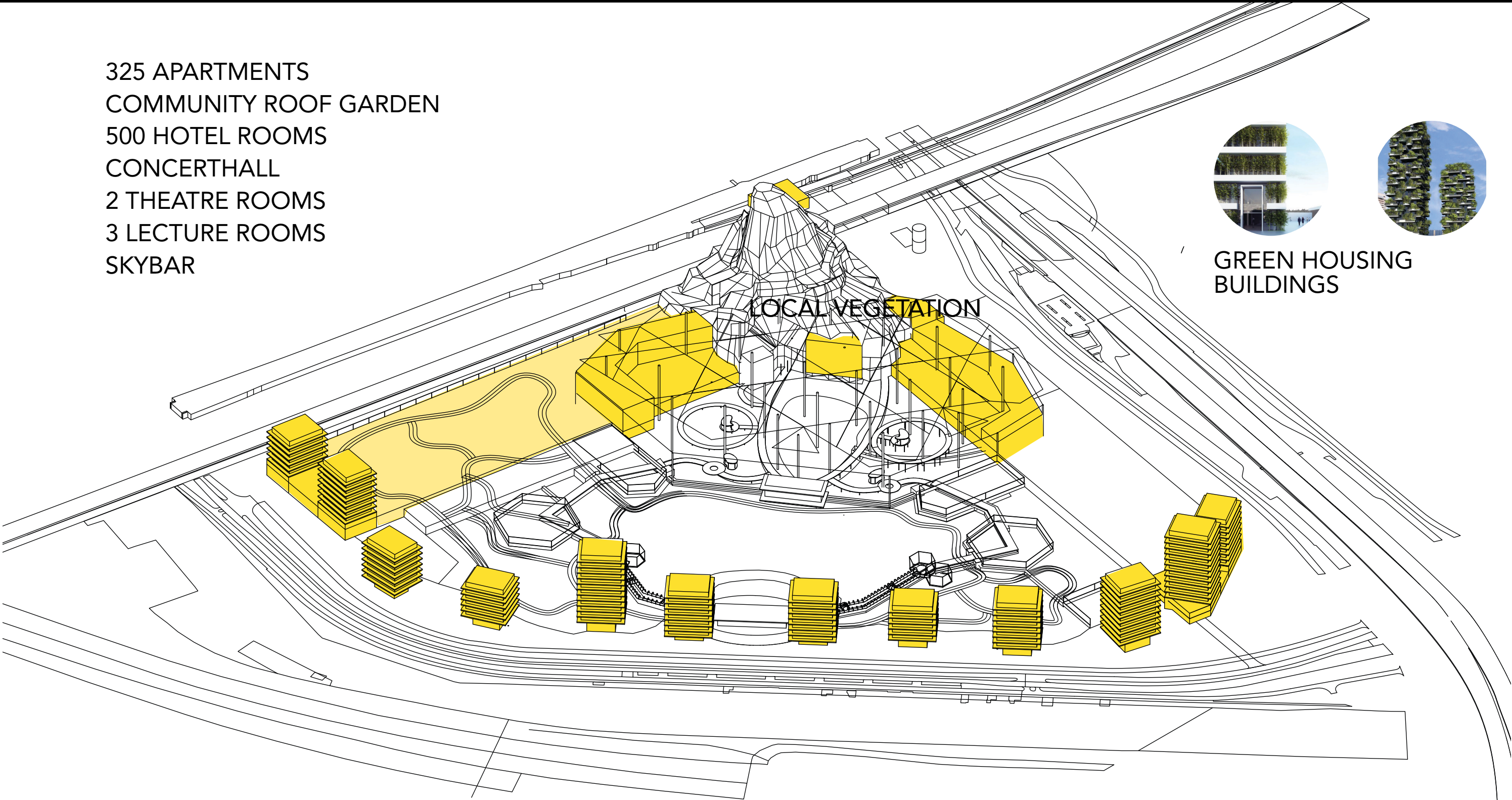
THE ROCK

BIOZONE AFRICA

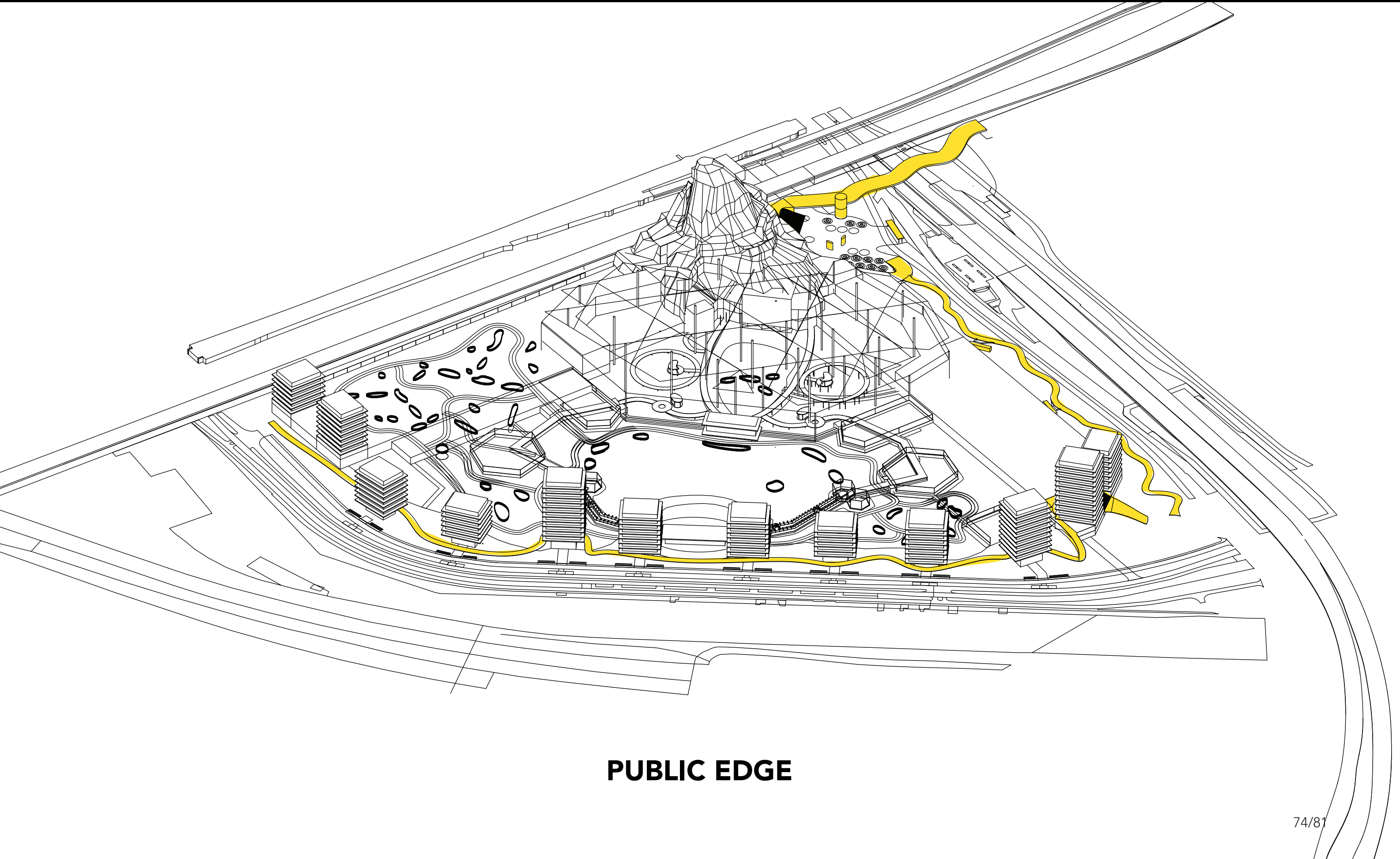
- 325 APARTMENTS
- COMMUNITY ROOF GARDEN
- 500 HOTEL ROOMS
- CONCERTHALL
- 2 THEATRE ROOMS
- 3 LECTURE ROOMS
- SKYBAR



GREEN HOUSING BUILDINGS



URBAN FUNCTIONS

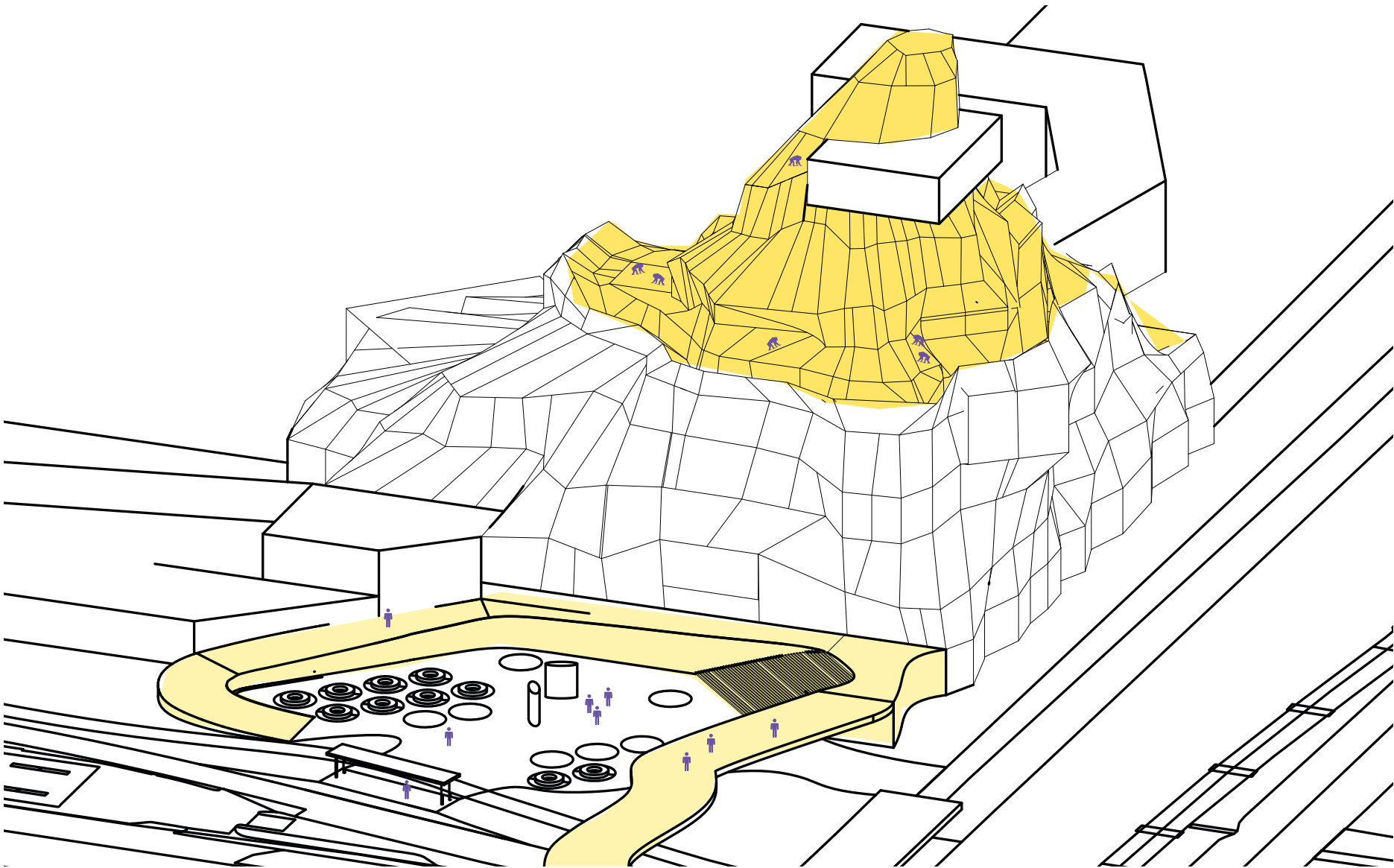
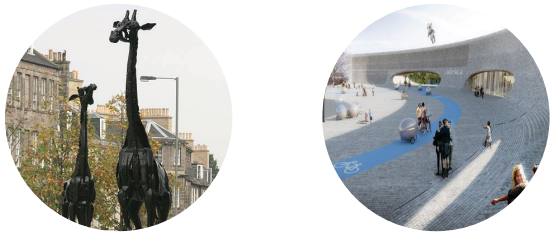


PUBLIC EDGE



THE ROCK

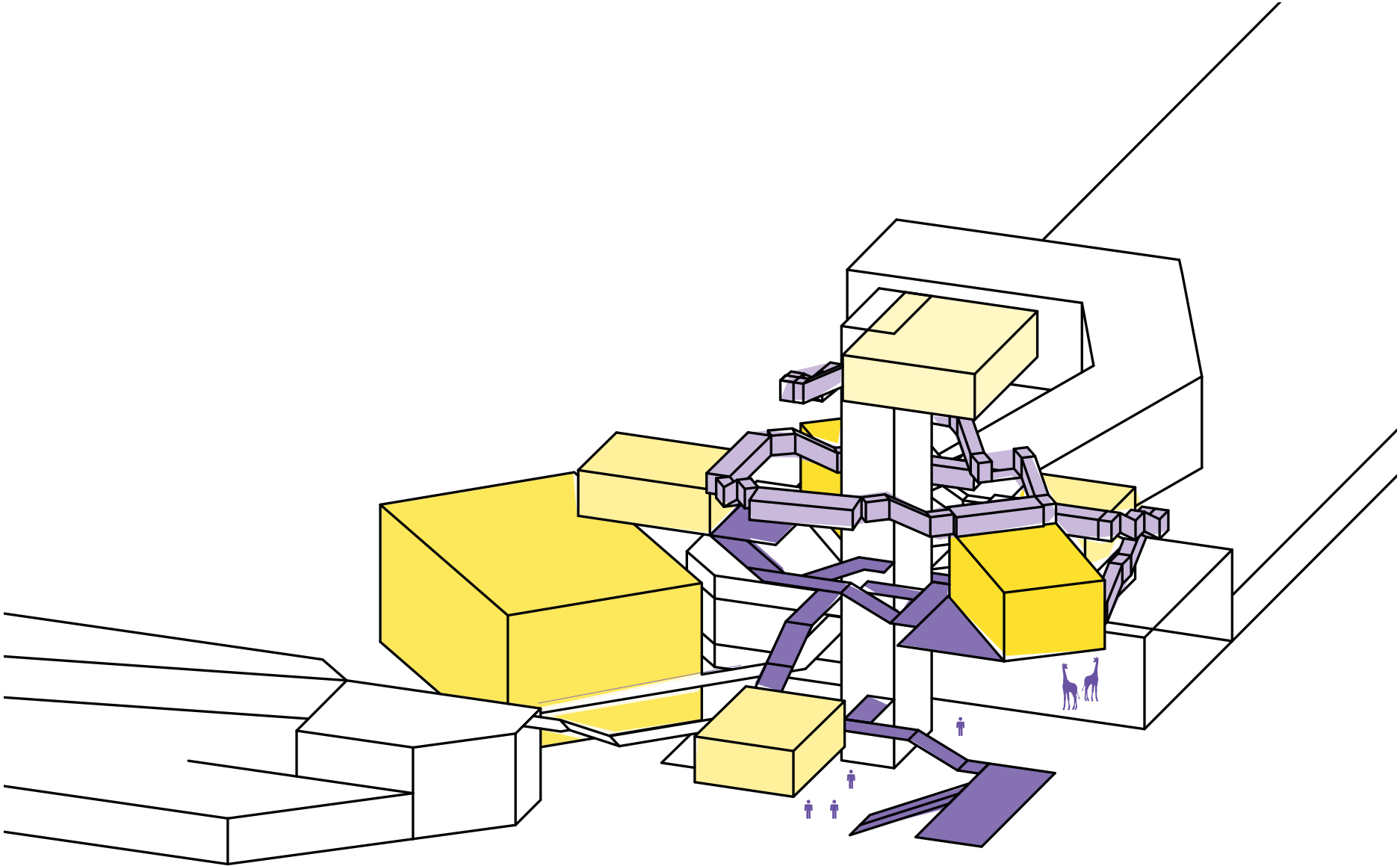
ENTRANCE SQUARE



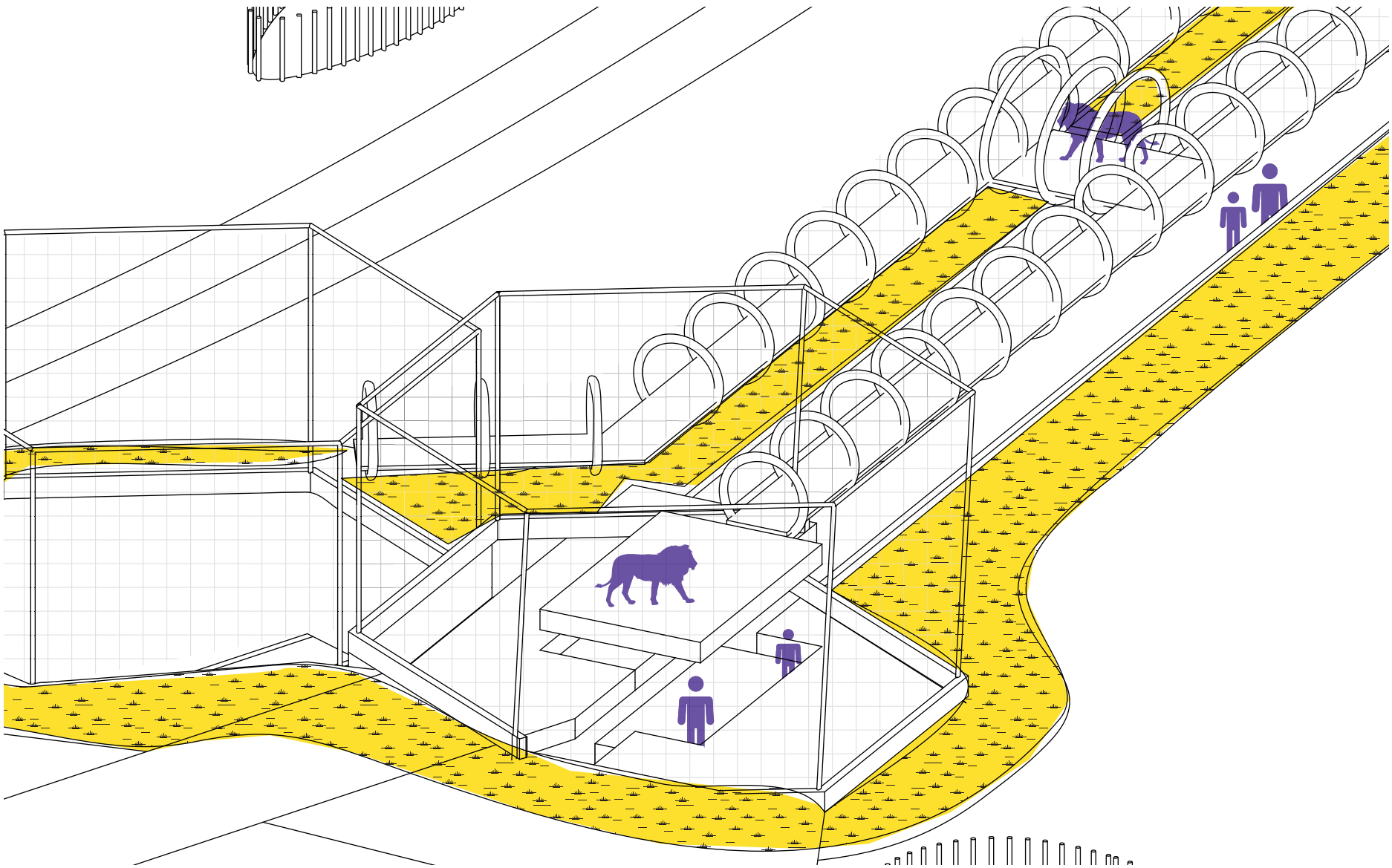
ECOZONE ETHIOPIAN HIGHLANDS



ZOOM-IN OUTSIDE ROCK



ZOOM-IN INSIDE ROCK

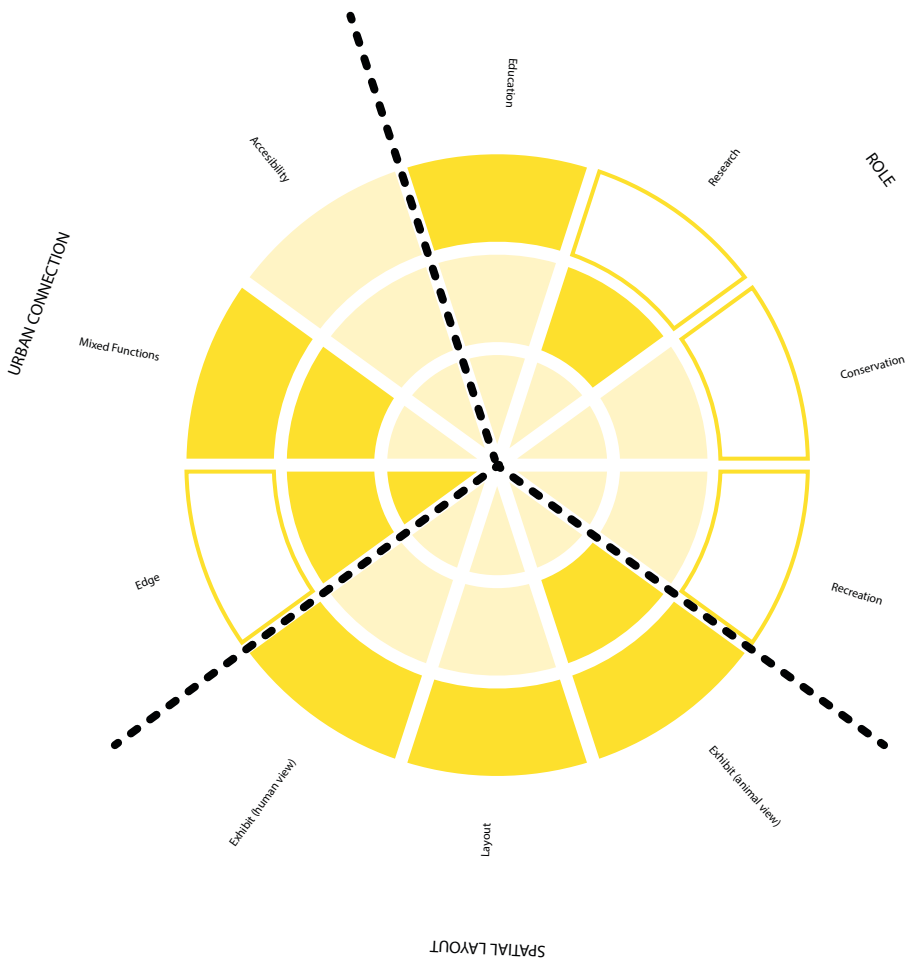


ZOOM-IN ROTATION CANALS

CONCLUSION



FUTURE ROTTERDAM ZOO



A LOT IS POSSIBLE, BUT NT EVERYTHING

This is a highly detailed Renaissance-style painting depicting the Garden of Eden. In the center, Adam sits on the ground while Eve stands beside him, holding a fruit. They are surrounded by a vast array of animals, including lions, tigers, camels, horses, sheep, and various birds like parrots and swans. The scene is set in a lush garden with large trees, a winding river, and distant mountains. The overall composition is rich and vibrant, typical of Northern European art from the 16th century.

TOWARDS EDEN