



Digitarian Food Park

P5 Presentation

4718860 | Joon Hyung Park



Complex Project

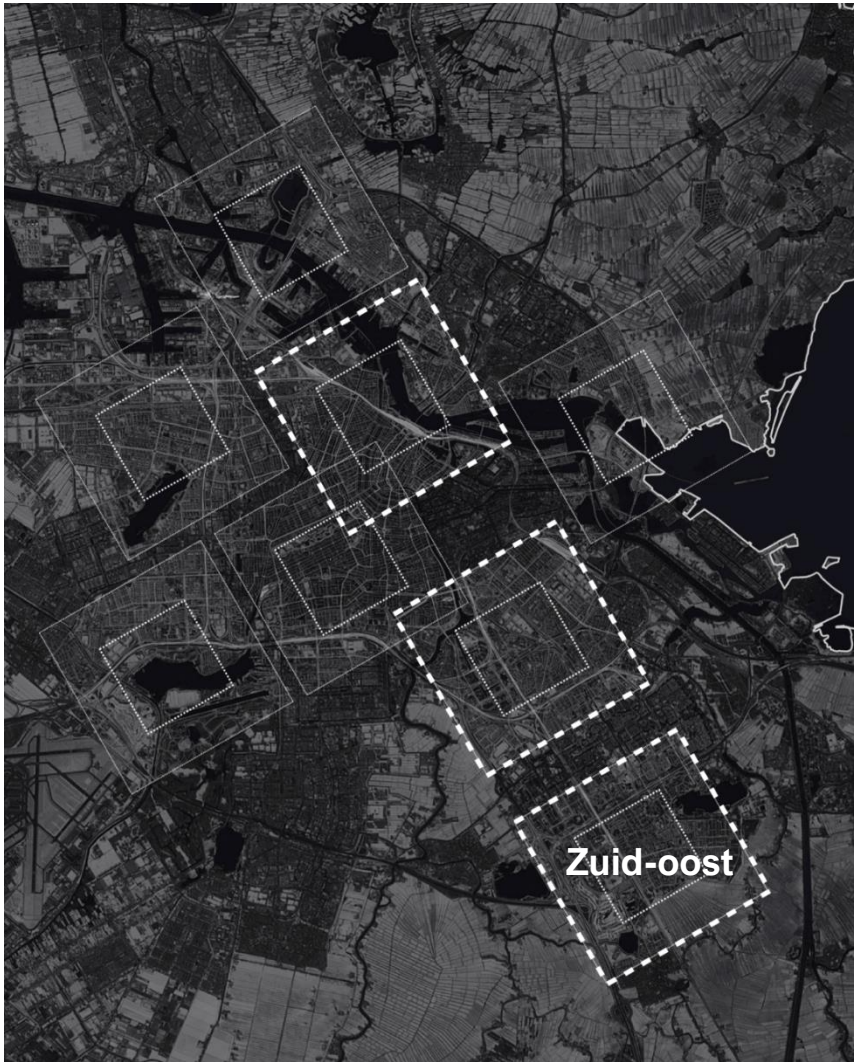


Research

- 2100 Master Plan -

- Problems -

- Results -



MASTER PLAN – 2100 Zuid-Oost

| 1930s |

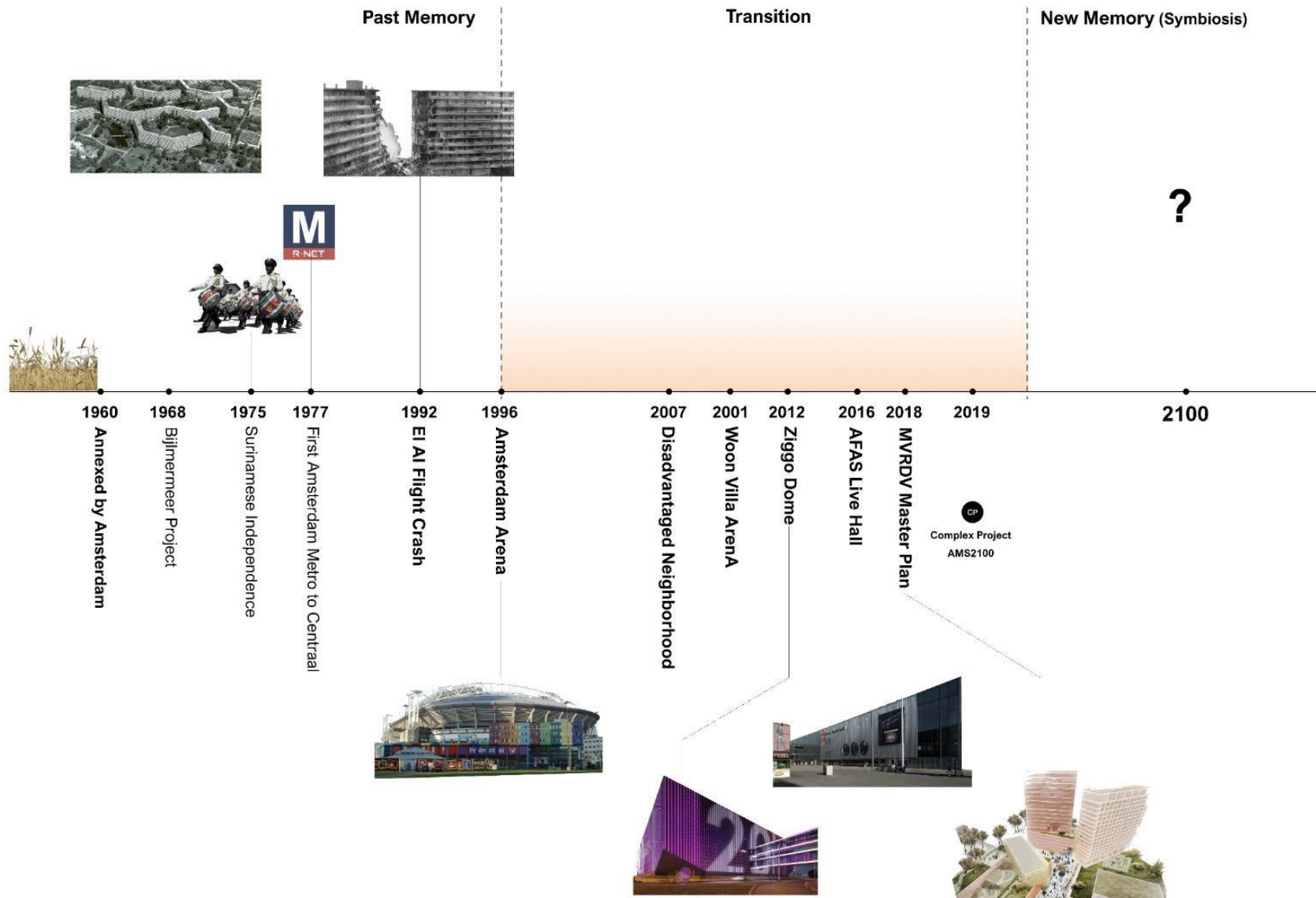


The Radiant City

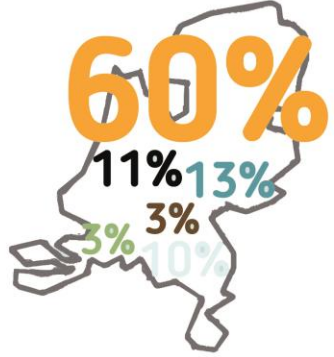
| 1960s |



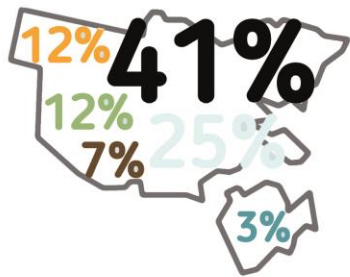
Bijlmermeer



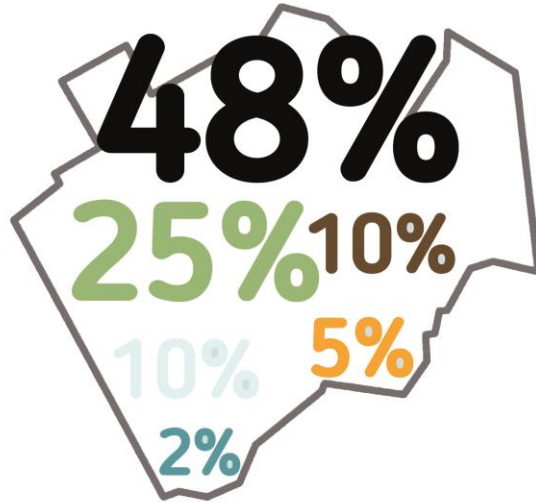
The Netherlands



Amsterdam



Zuid-Oost



84,000

- Agriculture
- Urban Area
- Landscape
- Water
- Infrastructure
- Recreational



Zuid - Oost Land Use

Highly Urbanized Region
&
Vast Amount of Green Area



Urban + Green Open Space



GREEN AS

A NEW VALUE That has been and will be

Even in the future, we always want to have enough open space where we can enjoy green and wind of nature with sunlight. Those values are not totally new from the past. They are trees, grass fields and clean water where we can swim in. However, the scene is in endangered. We should provide different dynamic of urban planning not only externally also internally in terms of architectural program proposals.



Symbiotic Future

- Goal for 2100 -





Symbiotic Future

- Goal for 2100 -



Essential Elements in 2100

FOOD



FOOD IS A RAW MATERIAL

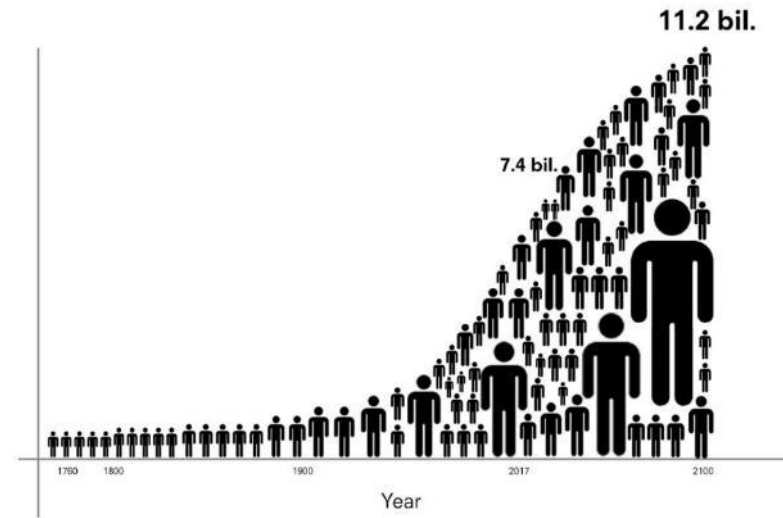
How will we enjoy foods in **2100** ?

There are many challenges and obstacles to reach to the bright future such as global warming, migration, urbanization among of them, this proposal will focus on the most essential element, food that we have to eat everyday to sustain ourselves.



Increasing Demand

Growing number of population and middle class will have more demands on food.



FOOD

2018

FOOD

2050

X2

FOOD

2100

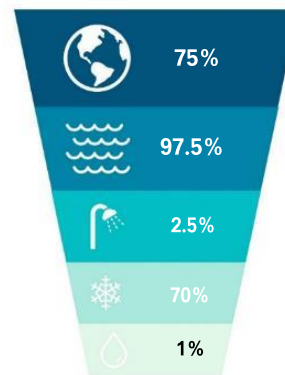
X?

The Most Destructive Industry

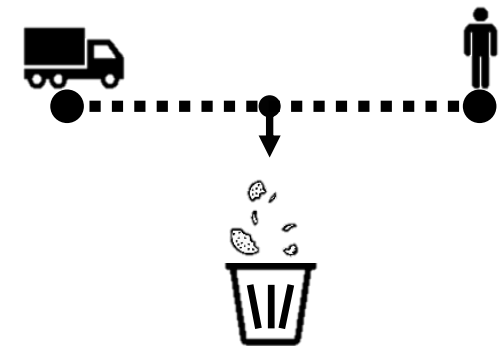
However, the food industry is imposing huge negative influences on the planet



35% of the planet are already being used for Food



70% is used for Food Production
Of Contaminations comes from Agriculture



We are losing **50%** of production



FOOD & HEALTH



We all are already aware that food is critical to live healthy life. Food acts as medicines to maintain, prevent, and treat disease. Food directly impacts our healthy life. But, it seems that those concepts has been disappeared in our sight consciously or not.

PUBLIC HEALTH

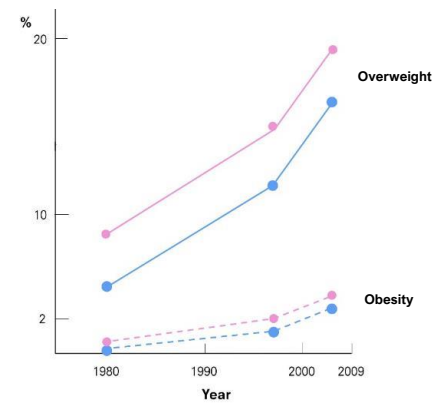


Obesity



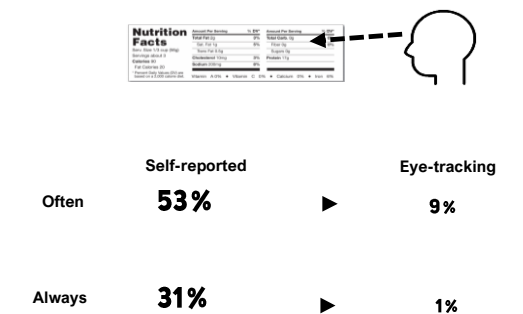
Obesity has become a world wide major problem of public health. It kills more people than war, genocide and traffic accidents

Education

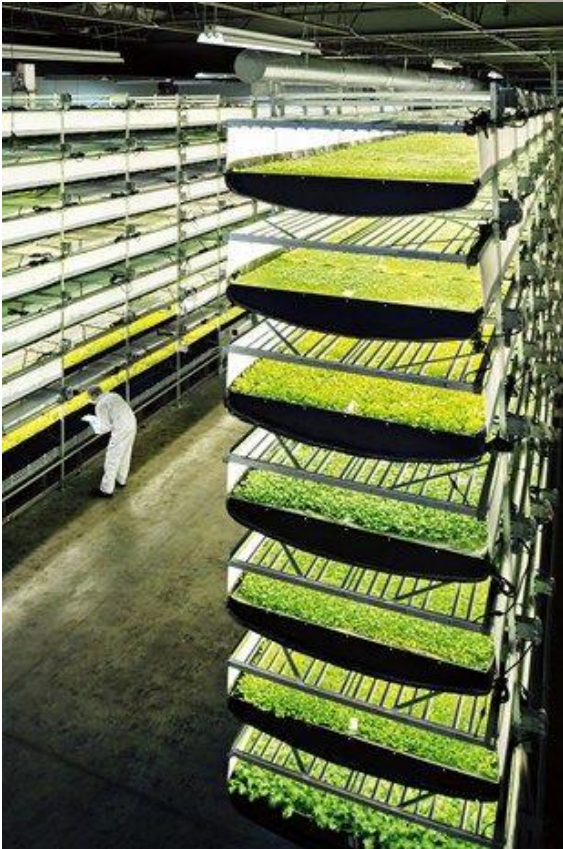


It affects to children's health too. They don't know what to eat and how to cook properly feed themselves. In bad environment, sometimes having a chance is even difficult.

Awareness



We read labels from cover to understand of foods but we hardly read it and try to understand it. Therefore, we are left on the status that we don't know what we are eating



WE NEED TO BUILD ...

New Foodscape

- Good Science -
- New Possibility -
- New Phenomenon -

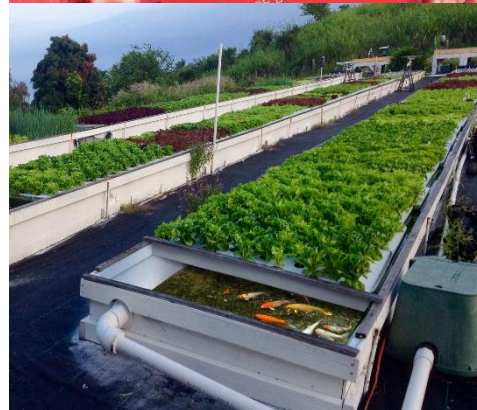
GOOD SCIENCE

Using good agricultural sciences can save the planet and public health



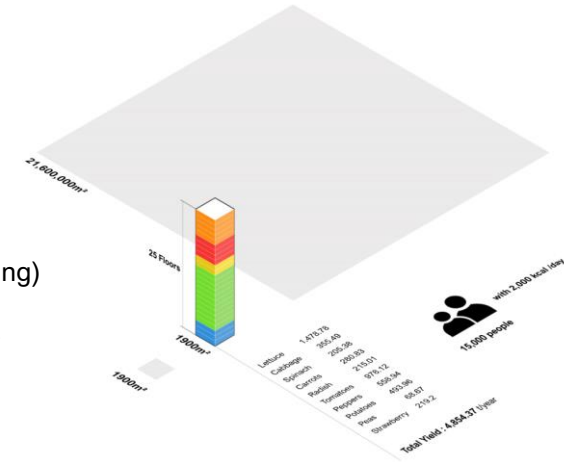
No More Slaughter (Cellular Agriculture)

Cellular agricultural technology is bringing food production on another era. It gives us possibility to reduce land usage fro livestock while we keep our appetite for meat and dairy products



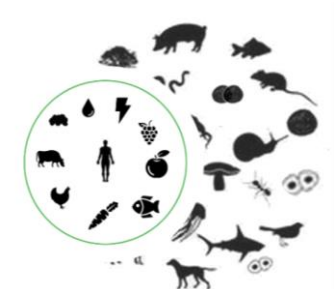
Less Land, More Food (Vertical Farming)

With vertical farming technology, farmlands can be stacked each others. It gives more productivity with less land. Eventually, it will be able to change paradigm of agricultural image.



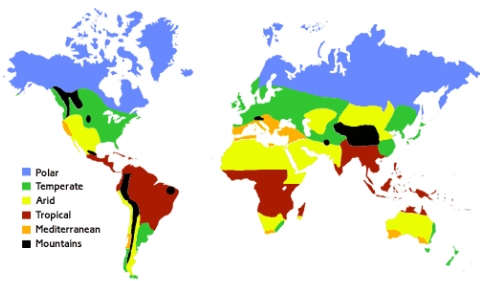
Closed Circulation (Aquaponics)

We used to think we need to be more close to nature and interact with them in a way of living. However, when it comes to food industry, it is more critical to keep closed cycled for human ecology.

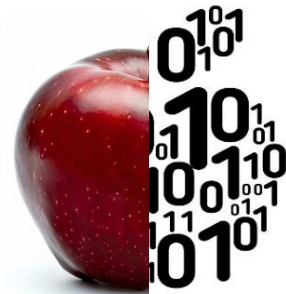


NEW POSSIBILITY

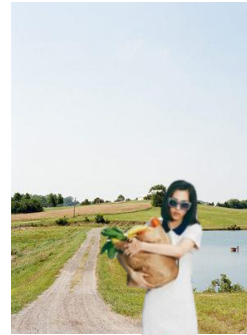
In 2100, We will be able to ...



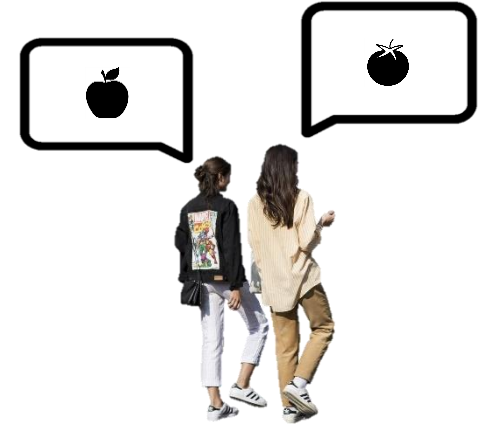
Choose Climate



Share Growing Information



Get the Freshest Food

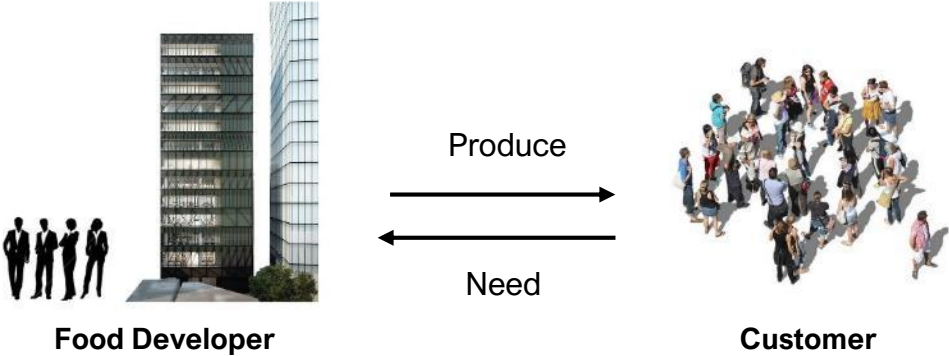


Express our Identity

NEW PHENOMENON

The Advent of New Business

Food developers will listen needs of customers who want to find their own food not only for taste but also environments and future.

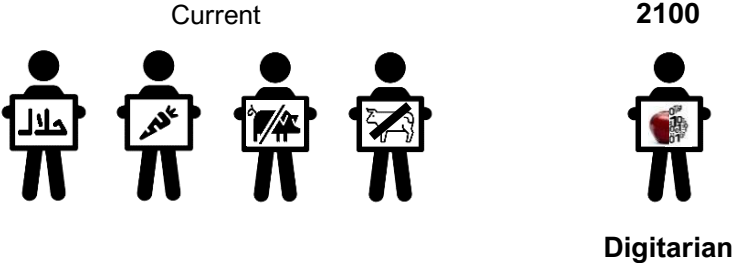


- Food Developer 1
- Food Developer 2
- Food Developer 3
- Food Developer 4
- Food Developer 5

...

The Advent of New Consumer

There are already many people who want to choose and make their own path to food and the path is representing themselves or their community.



A person who only purchases foods grown by computer, robotics technologies under closed environments.

RESEARCH QUESTION



How can a building for food experiences be developed in the future supporting upcoming new phenomenon and needs?



We Need a Platform Space for ...

Clean Food

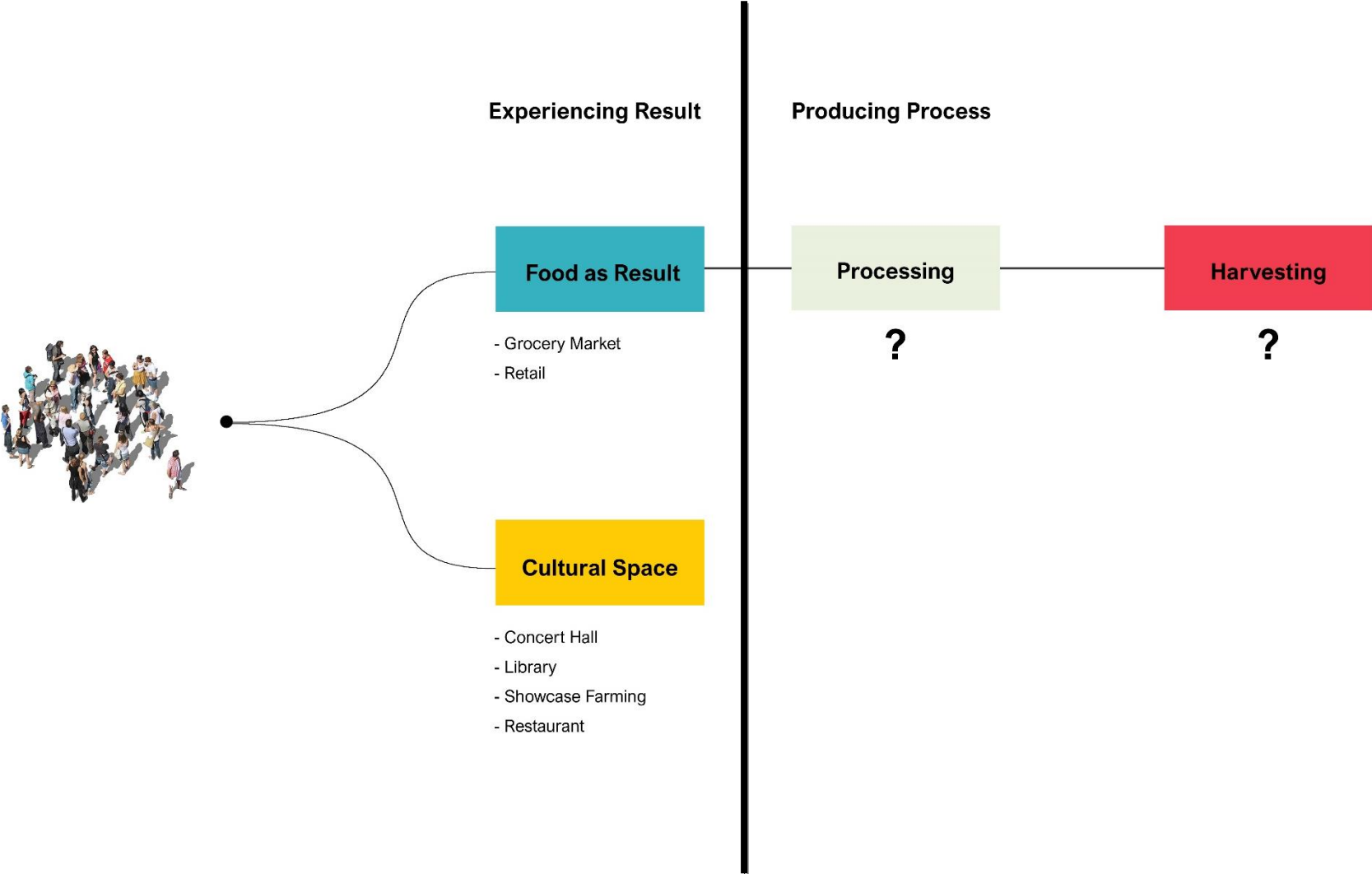
Exchange

Education

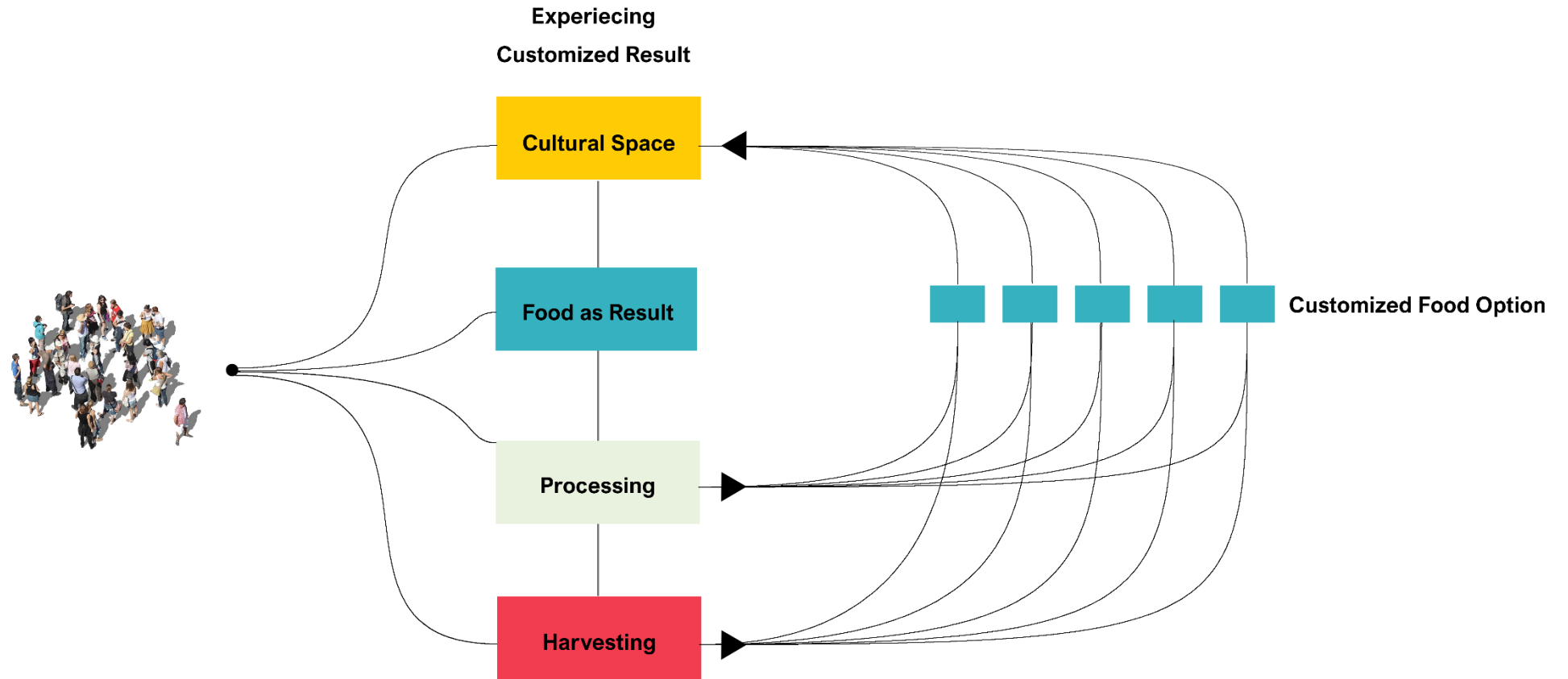
There has not been exclusive space for food's development. Food has been only commodity to be consumed and it brings the lack of knowledge and experience in urban context.

However, new technology can give a chance to change this situation

Current Effort 2019



A Proposal for 2100





DESIGN PROPOSAL

Digitarian Food Park

Production

+

Experience

+

Education

+

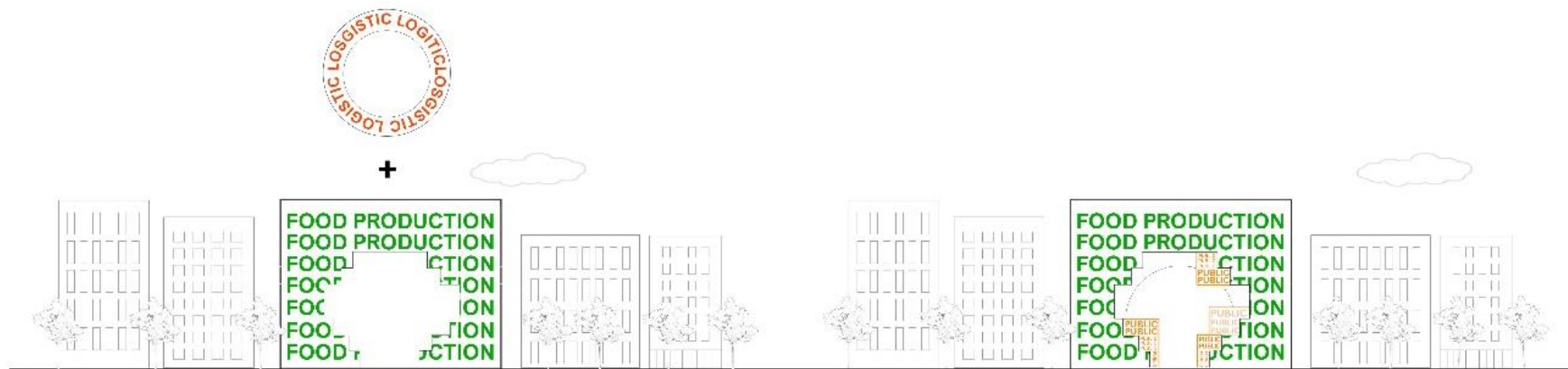
Exchange

DESIGN PROCESS



1. Locating Food Production in Urban Area

2. Linking Different Zones with Urban Passage

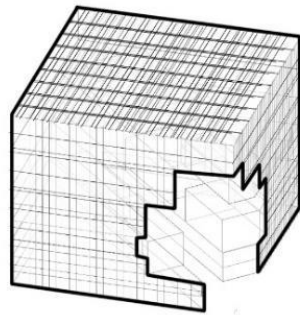


3. Organizing Production Areas
Following Logistic System(Wheel)

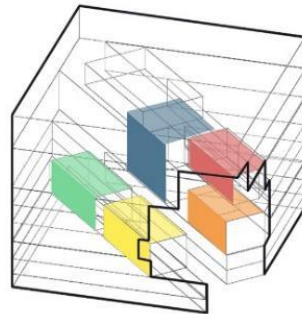
4. Introducing Public Destinations
(Food Experience Zones)



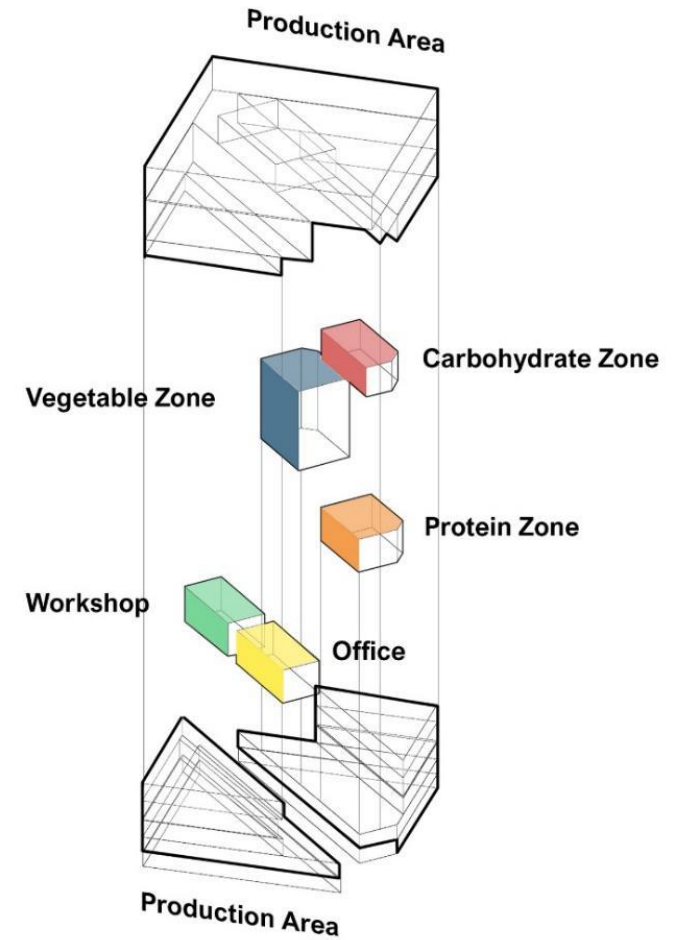
PROGRAM ZONING



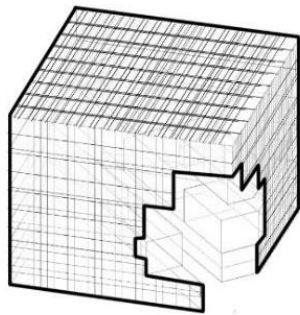
Production Area as Envelope



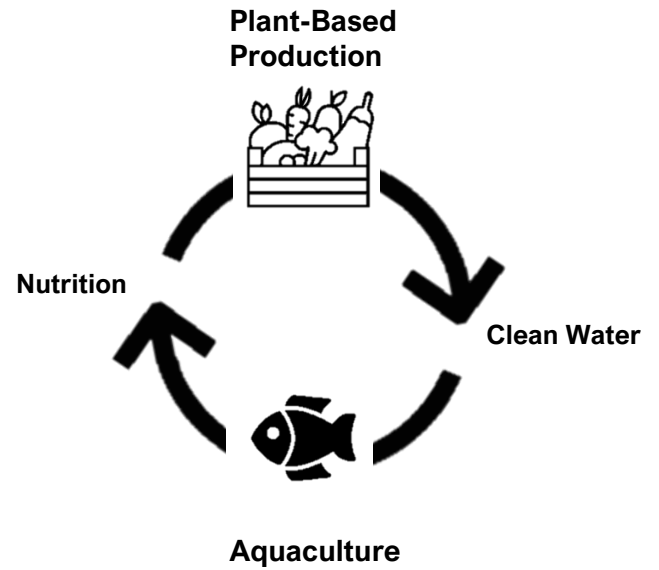
Food Experiencing Zone



Attaching Public Programs to Production Area



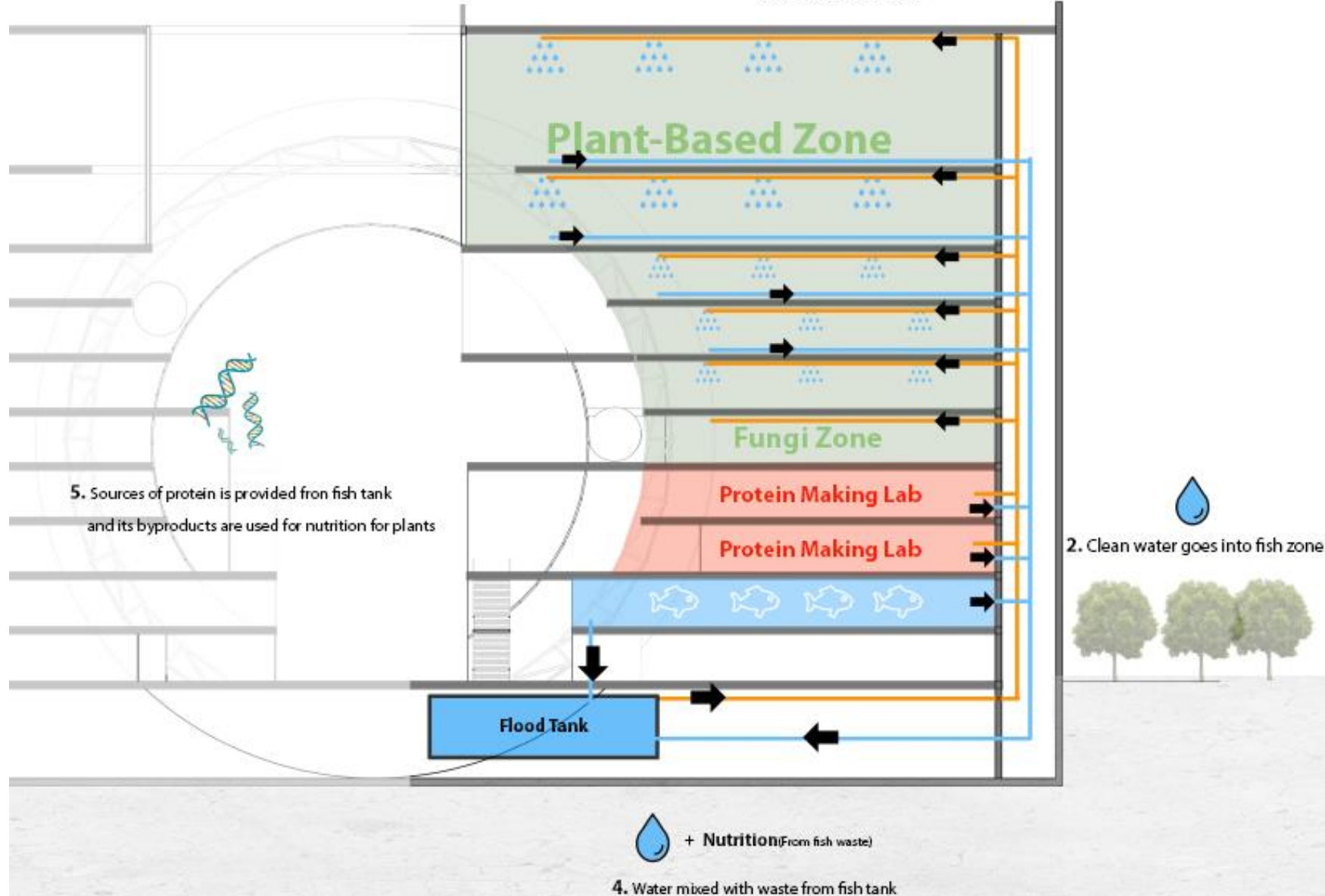
PRODUCTION ZONE



CLOSED ECOLOGY



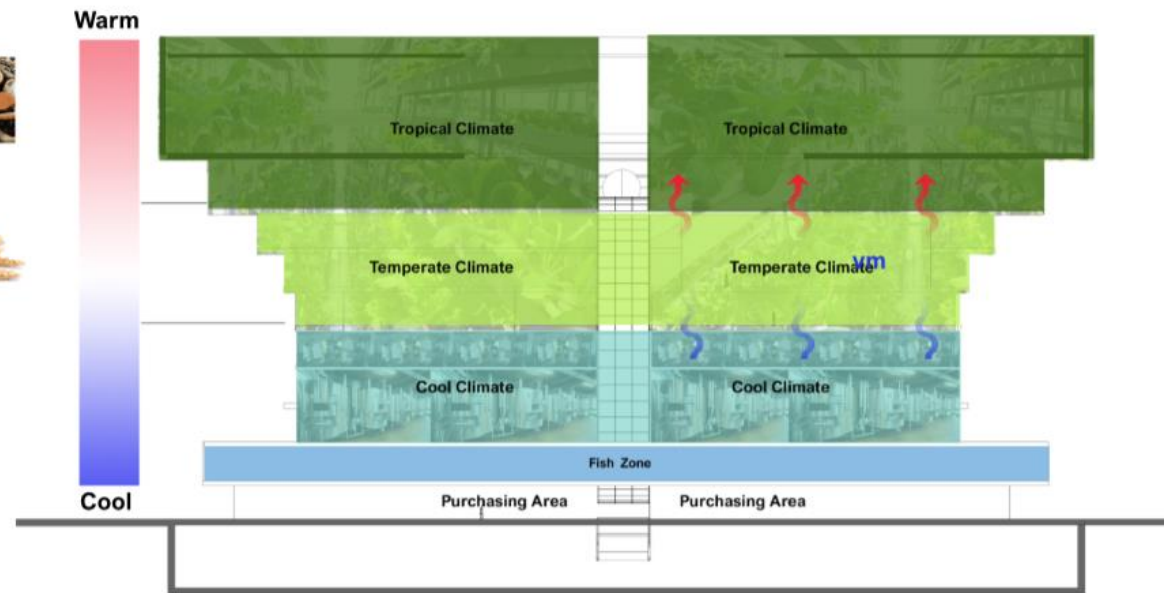
1. In Growing bed, Bacterias in water break Ammonia into Nitrates



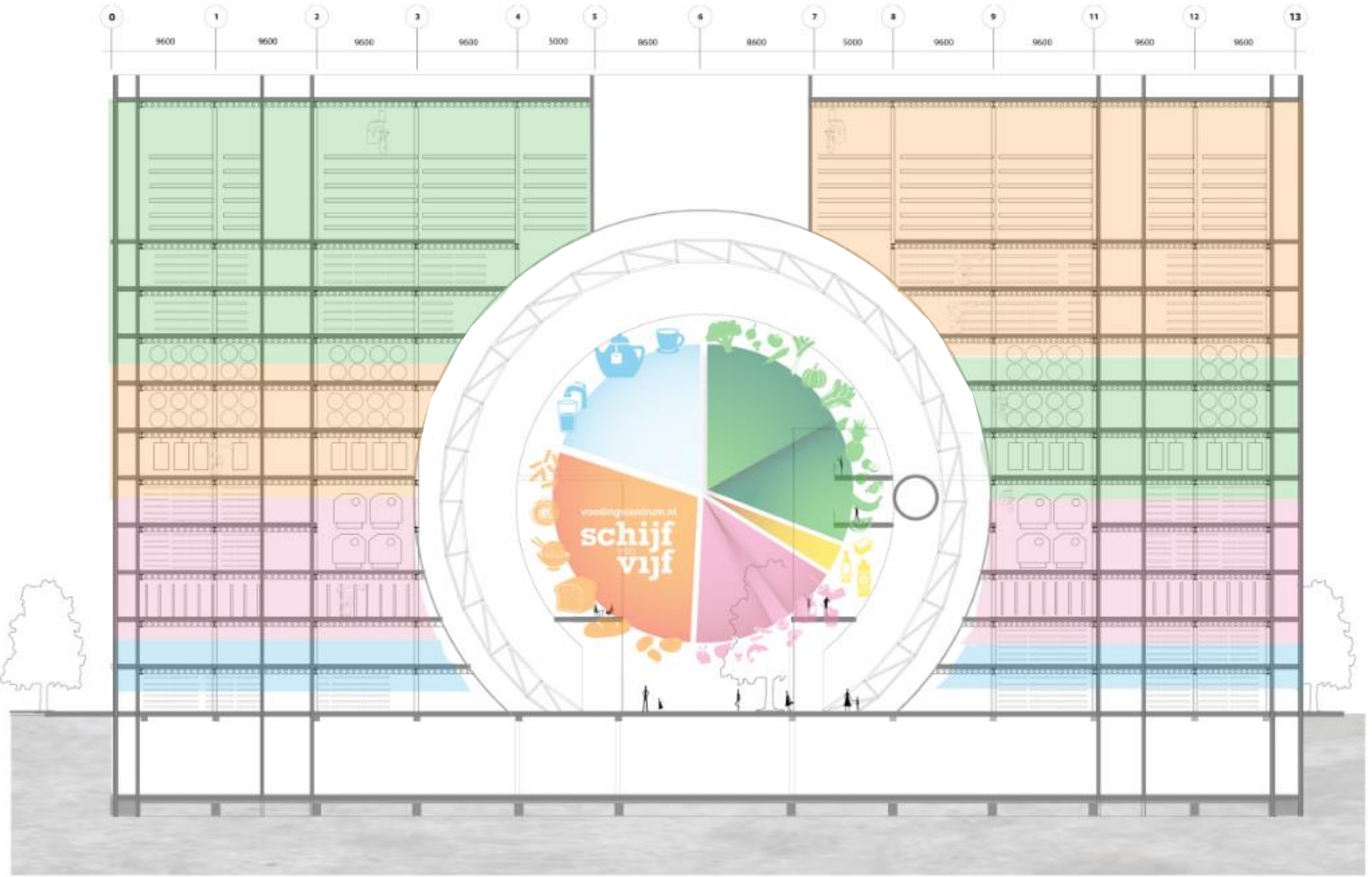
Production Programs Organization

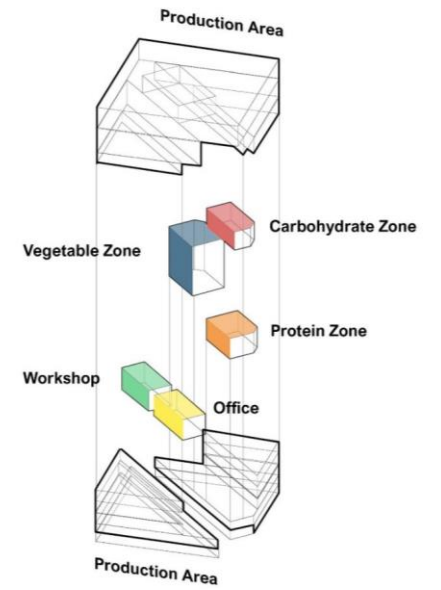
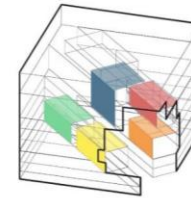
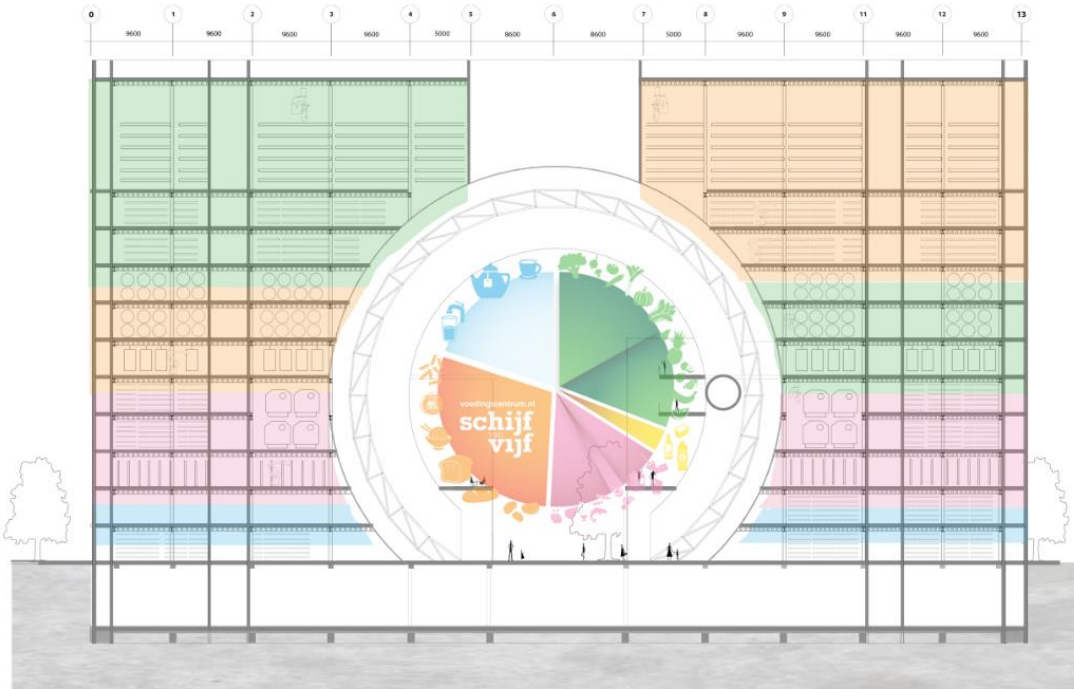


Nutrition Zone



Climate Zone





DESIGN GOAL



+



Integrated Space

with Urban Contexts



A Machine

DESIGN GOAL



+



Integrated Space

with Urban Contexts



A Machine

DISLOCATION from FOOD



FORMER CONDITION

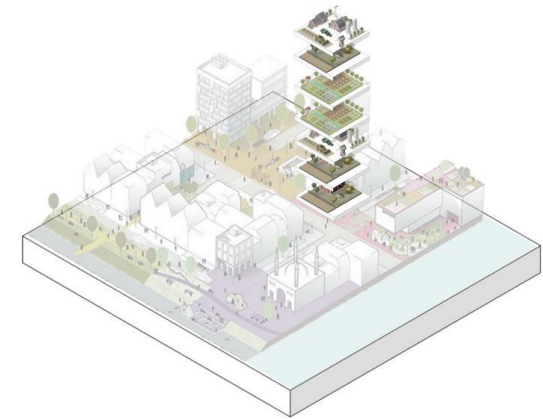


Horizontal Development (Area)

NEW CONDITION



Vertical Development (Volume)



Locating in Urban Context



Concert, Sports Events

Shopping

Outdoor Activity

Water-Related Activity



SITE PROBLEM

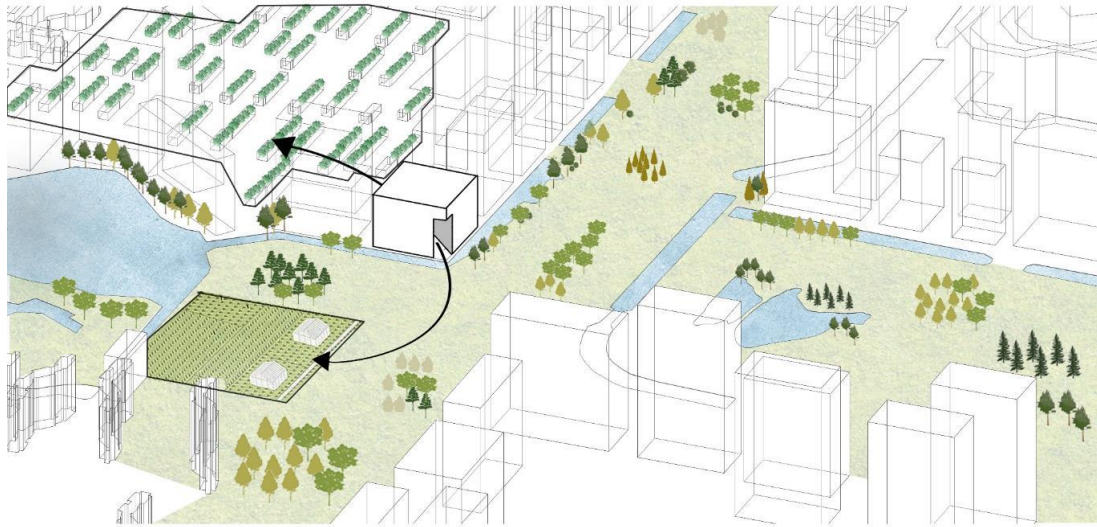
- Event & Activity Perspective -



BLANK SPOT

Disconnected Urban Experience

Integrated Urban Space



Linking Different Agriculture Zones



Introducing Destination for Public Activity

DESIGN GOAL



+



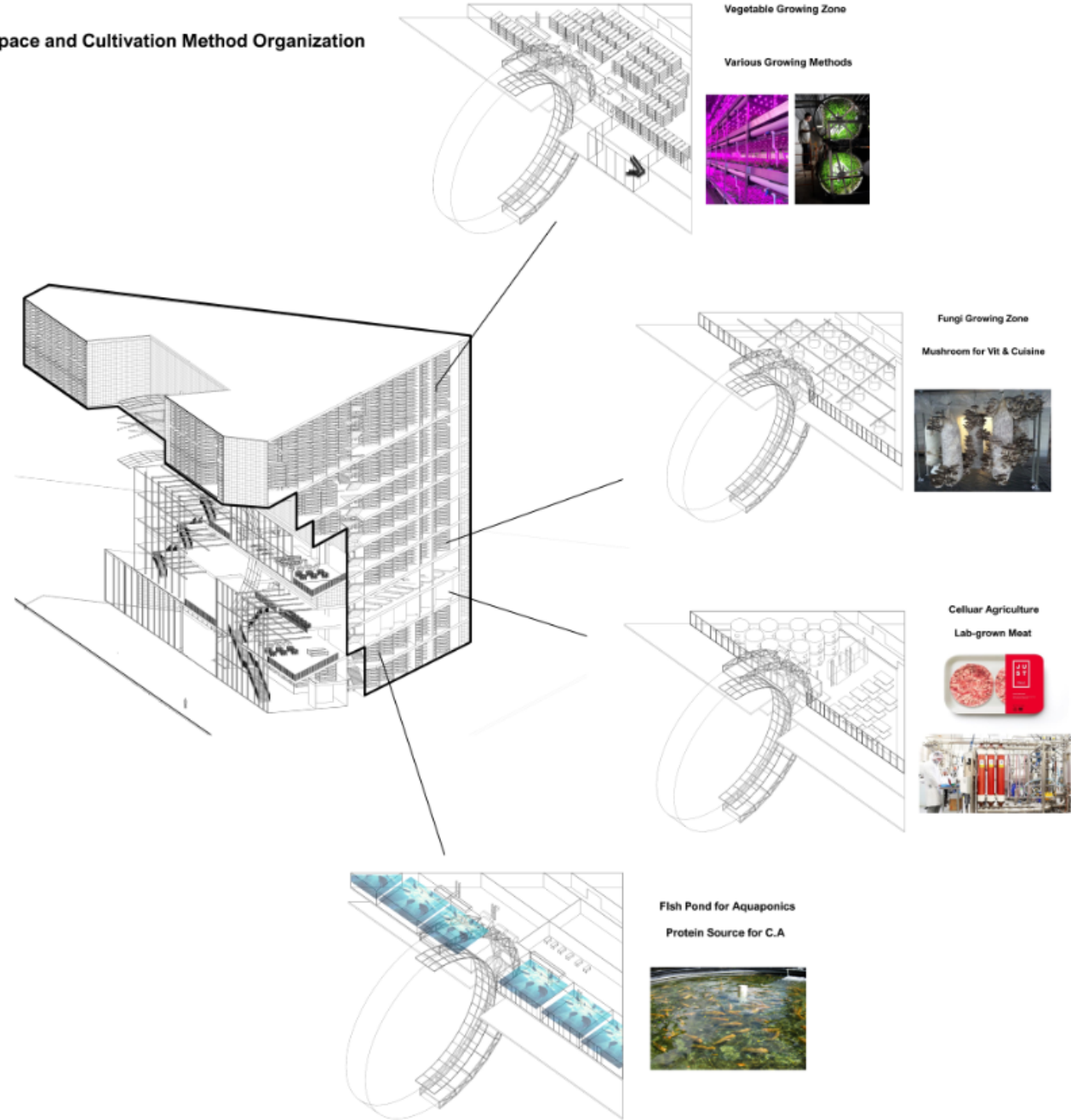
Integrated Space

with Urban Contexts



A Machine

Space and Cultivation Method Organization





**FROM
A GIFT**



**TO
A RESULT**

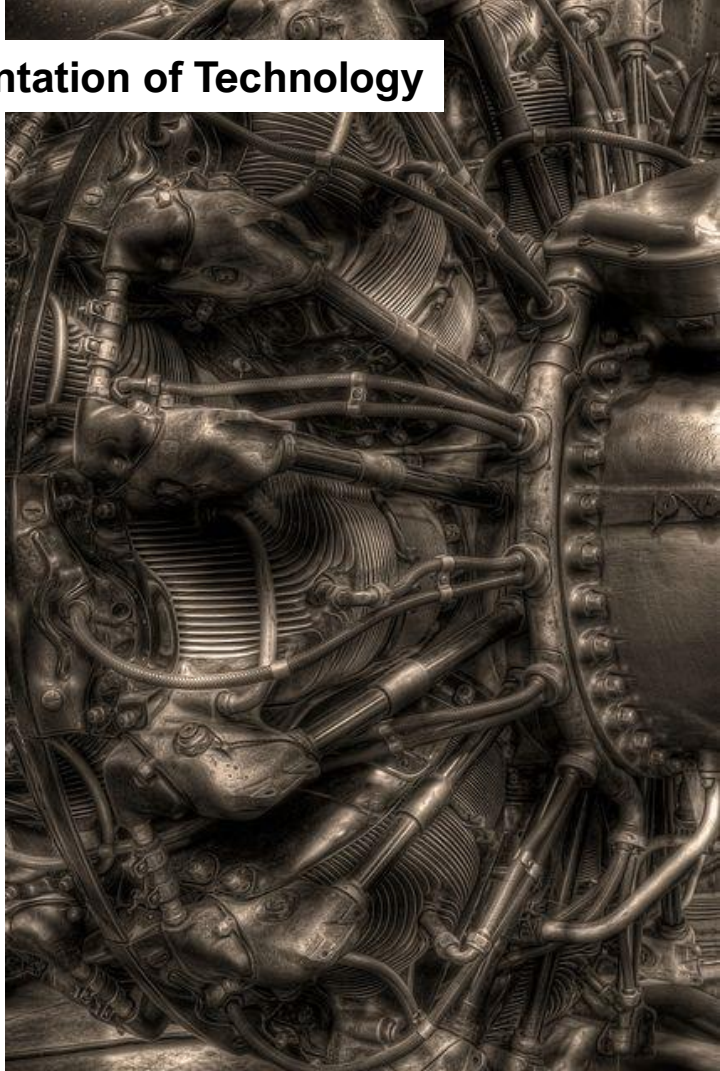
Outdoor Process

Dependent on Natural Condition

Indoor Process

Dependent on Controlled Causality

Representation of Technology

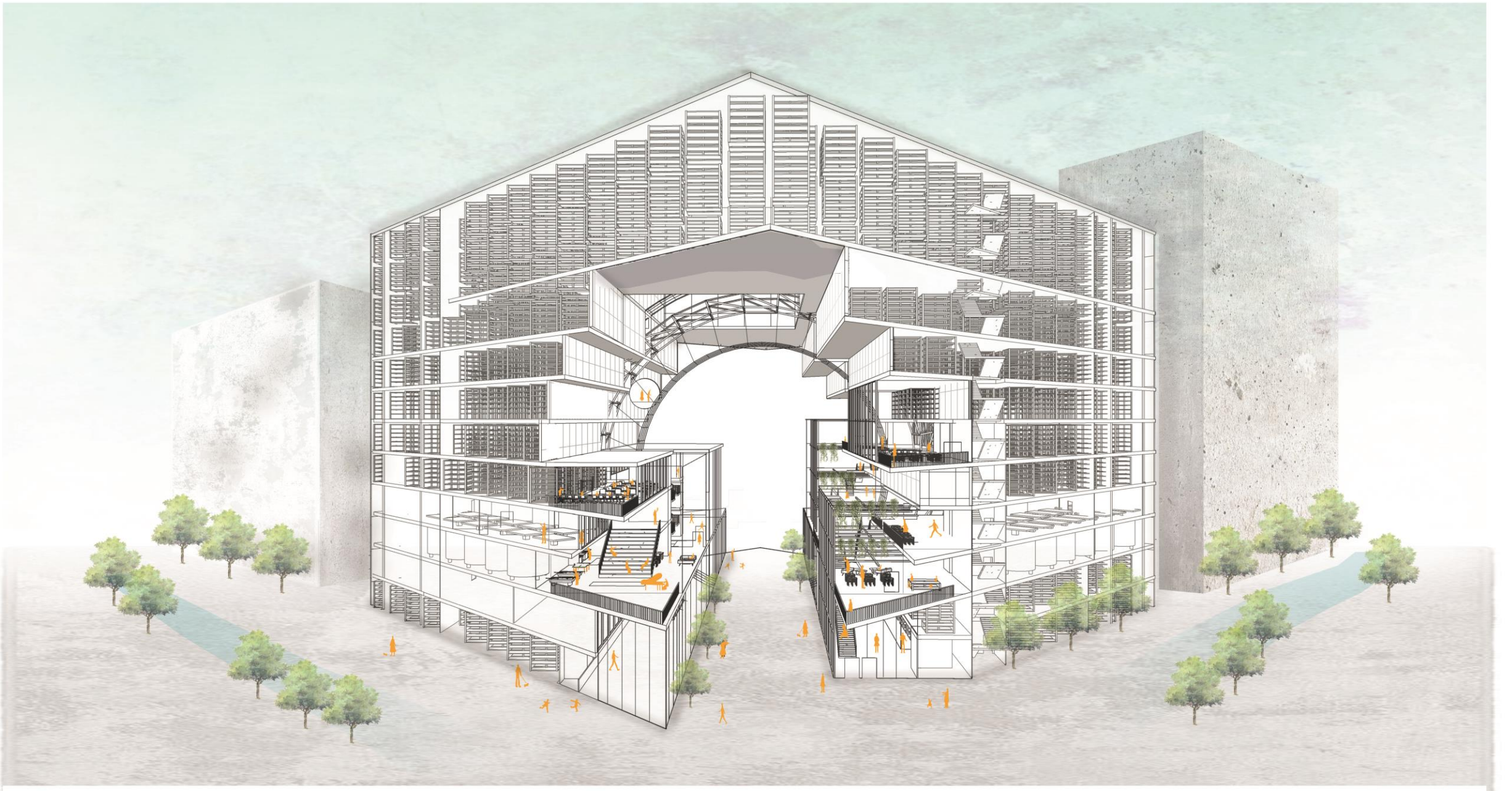


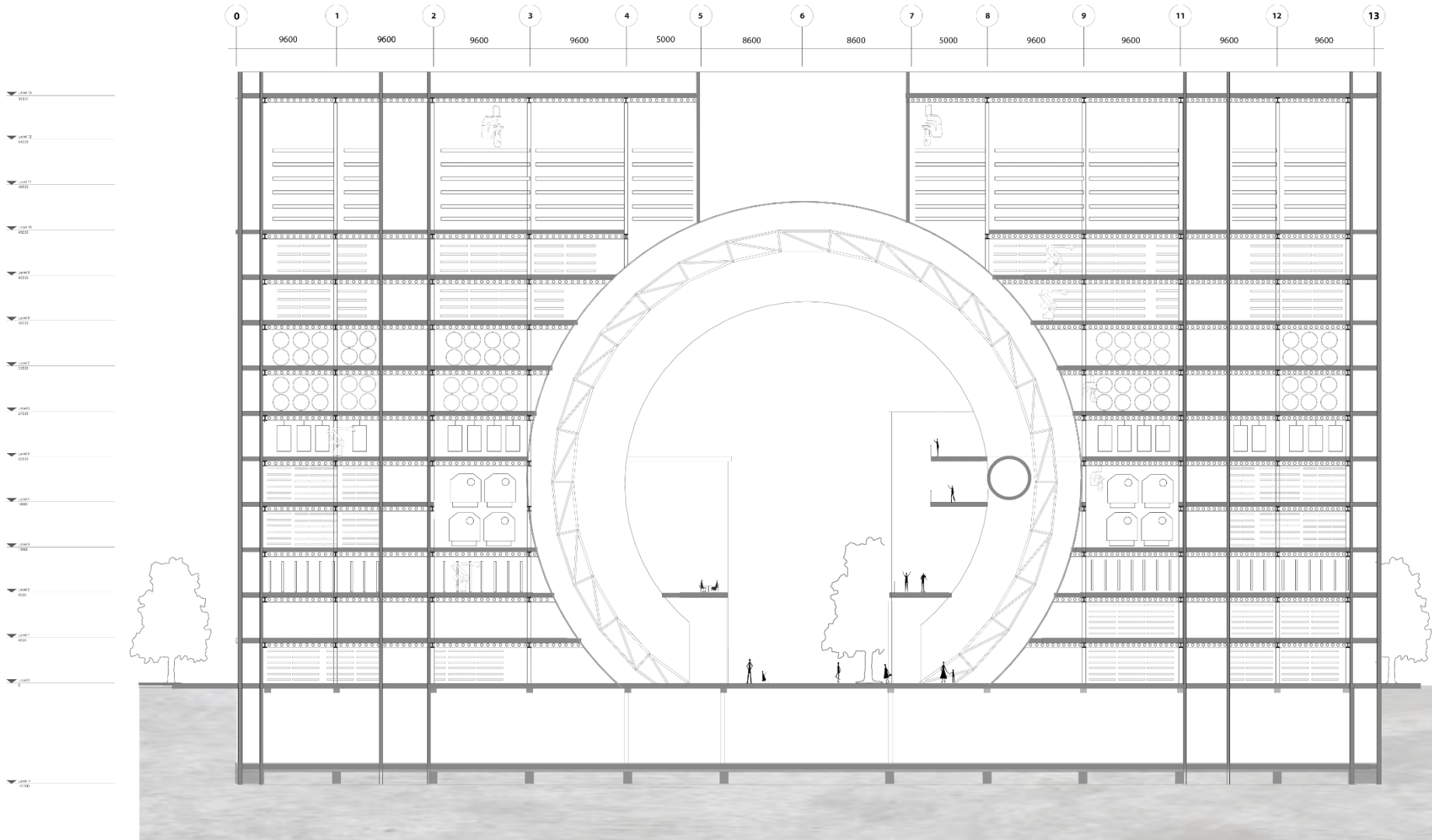
Building as A MACHINE

Purpose

Efficiency

Mechanical Aesthetic

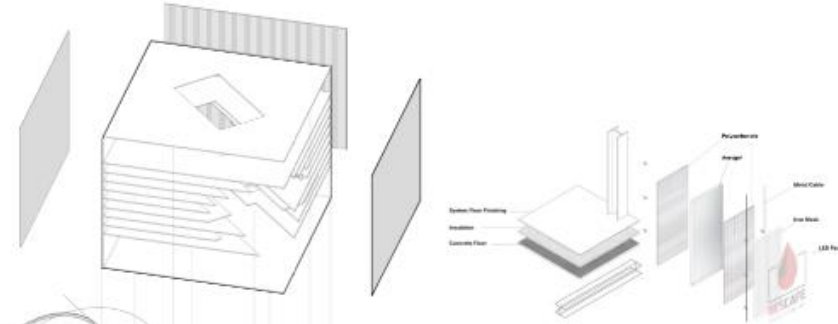




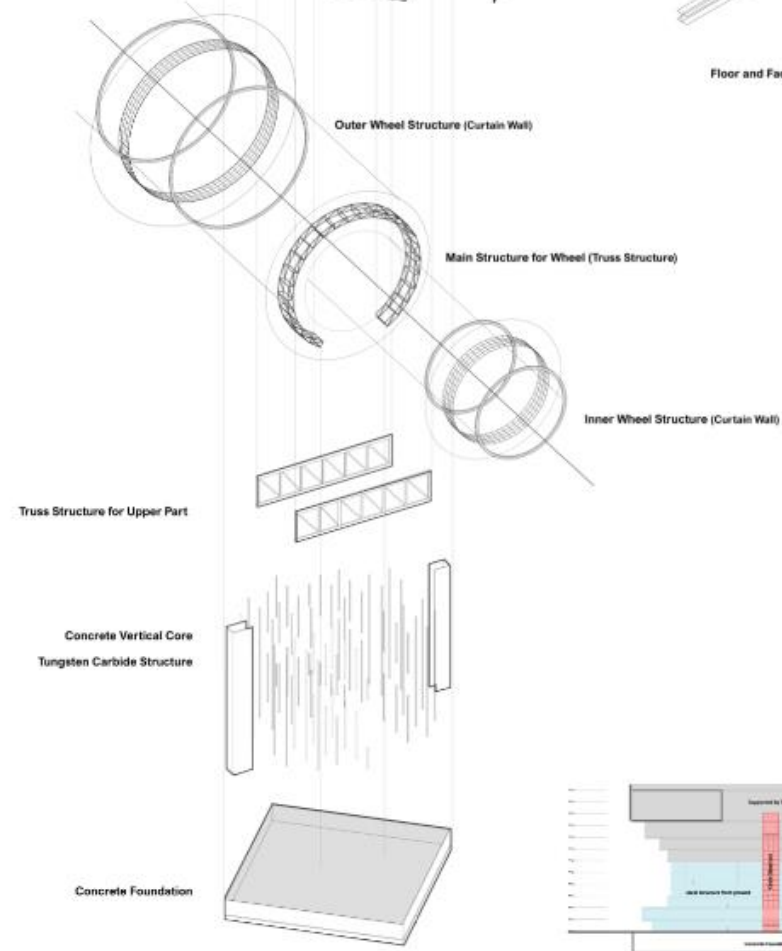
Structure Diagram

Secondary Structure Scheme

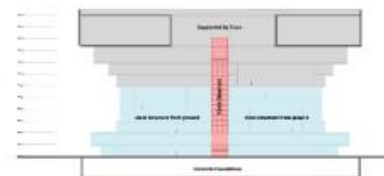
4719860 Joon Hyung Park

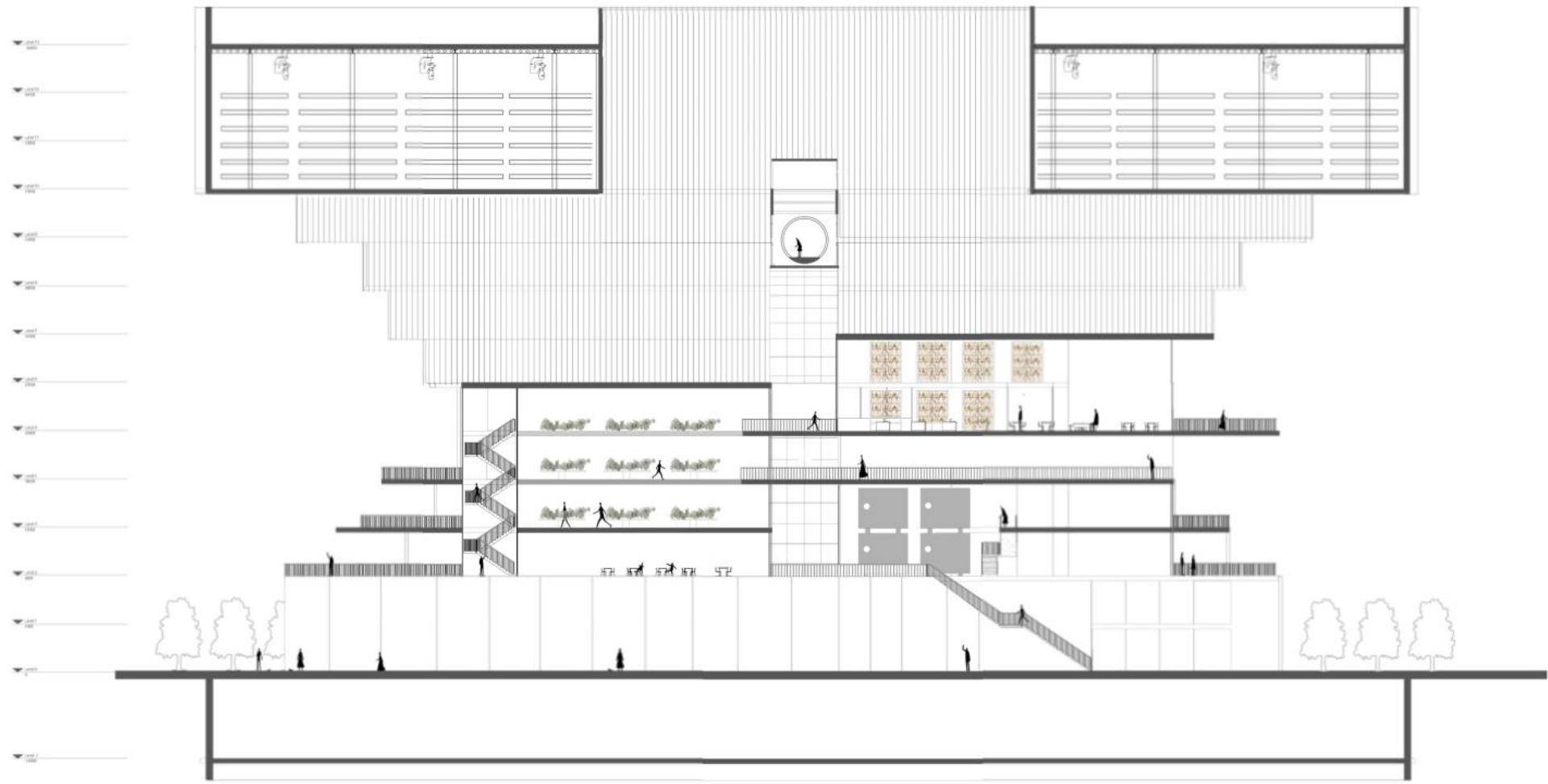


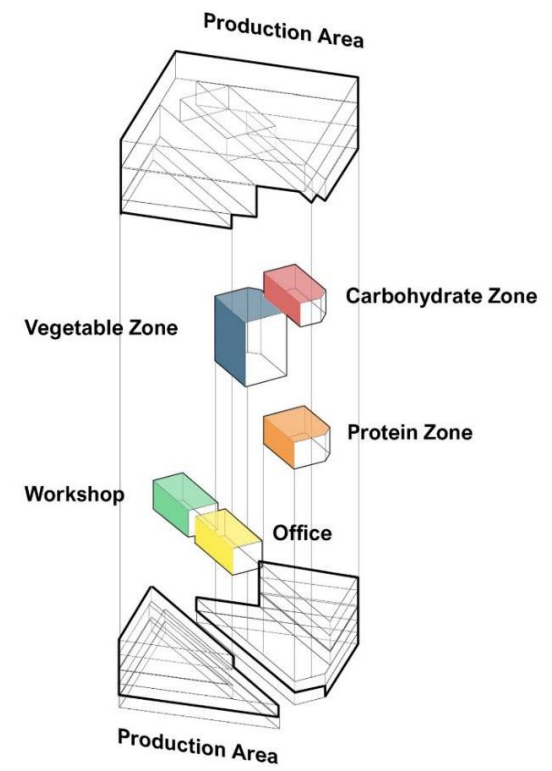
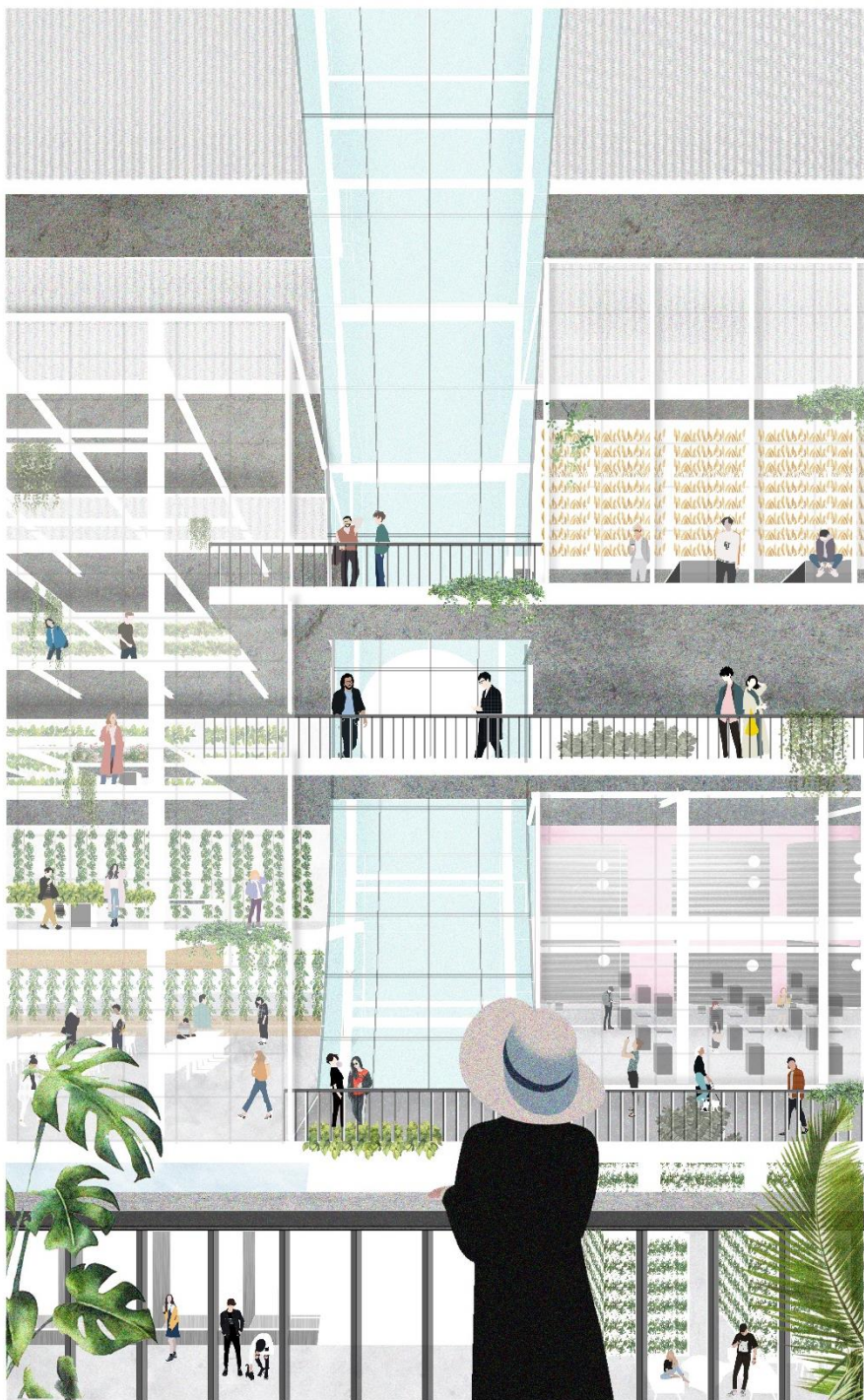
Floor and Facade Assembly Diagram



Primary Structure Scheme







Different Zone, Different Experience



Physical Experience



Since we will be able to manage to bring food production site to urban area and we can experience physical interaction with food.



3D Printed Food Experience



With 3d printing technology, cooking will change its own way of execution. Basically, food consists of connection between different nutrition values. For instance, meat is combination of connections with protein and fat and variation of these connections make different taste and texture in meat

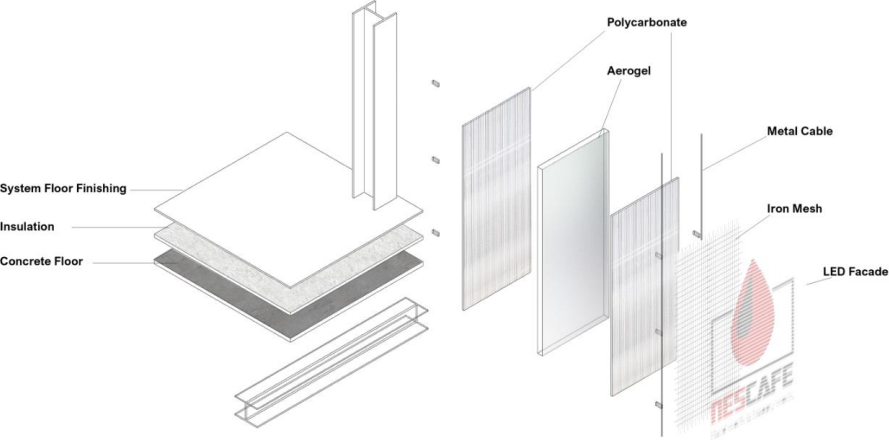


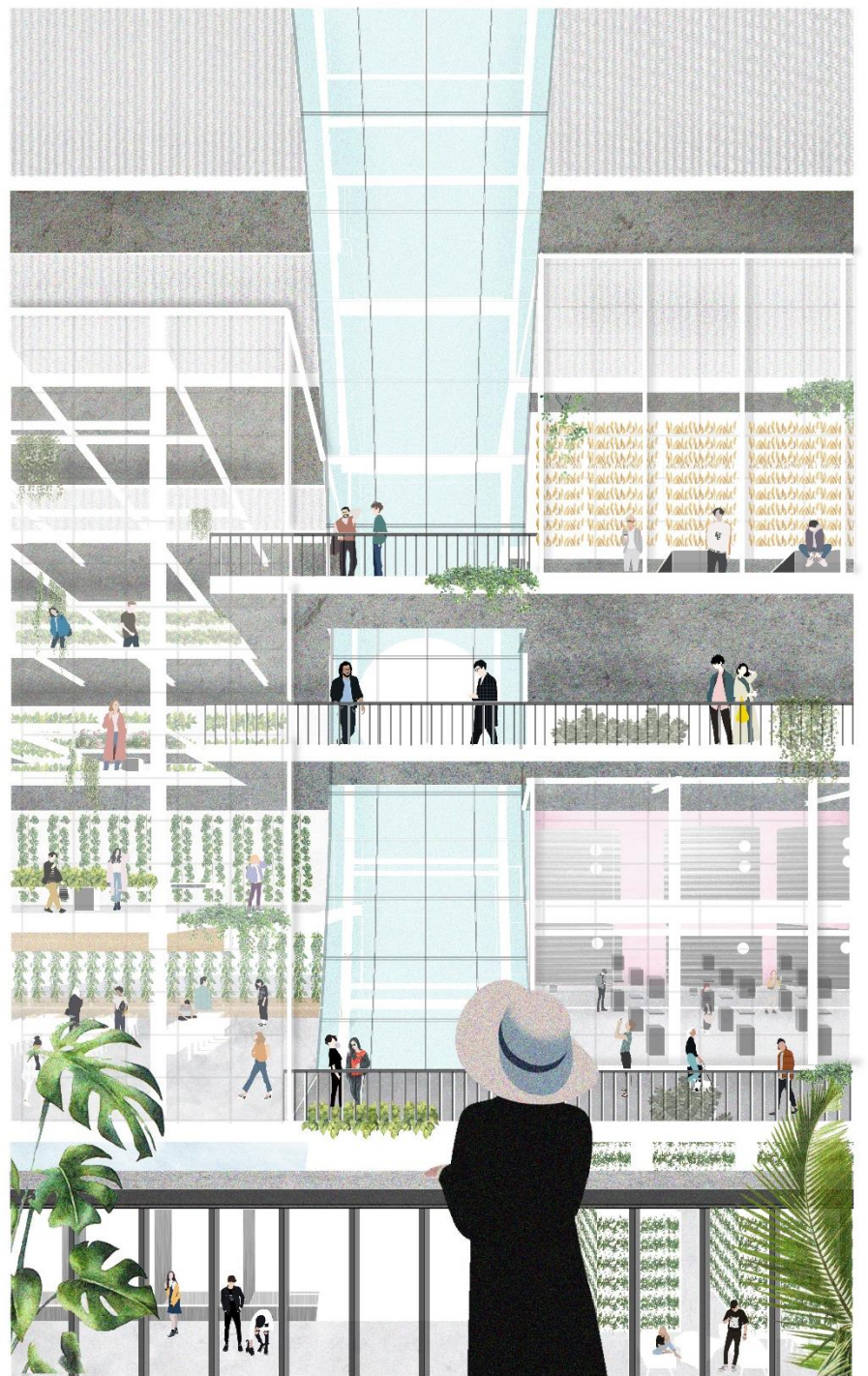
New Consumption Environment

With all these technology, we will be able to feed ourselves healthy and it will provide totally different consuming environments using new approach and technologies. Fresh crops will be produced at the background and it will be cooked following customer's nutrition supplement.



FACADE ASSEMBLY







Thank You

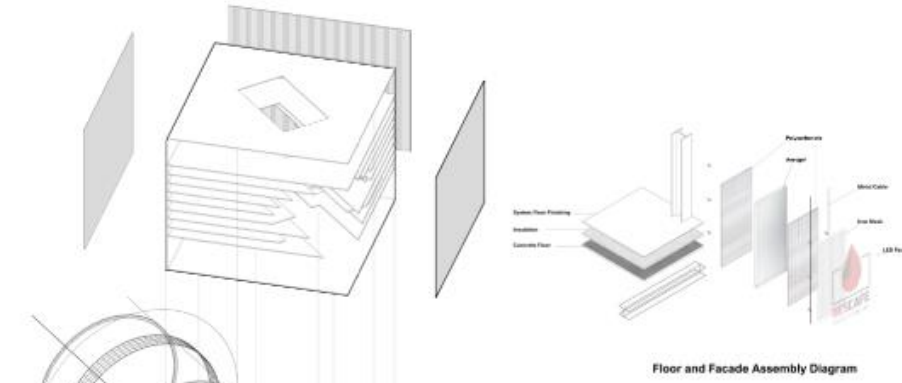


Complex Project

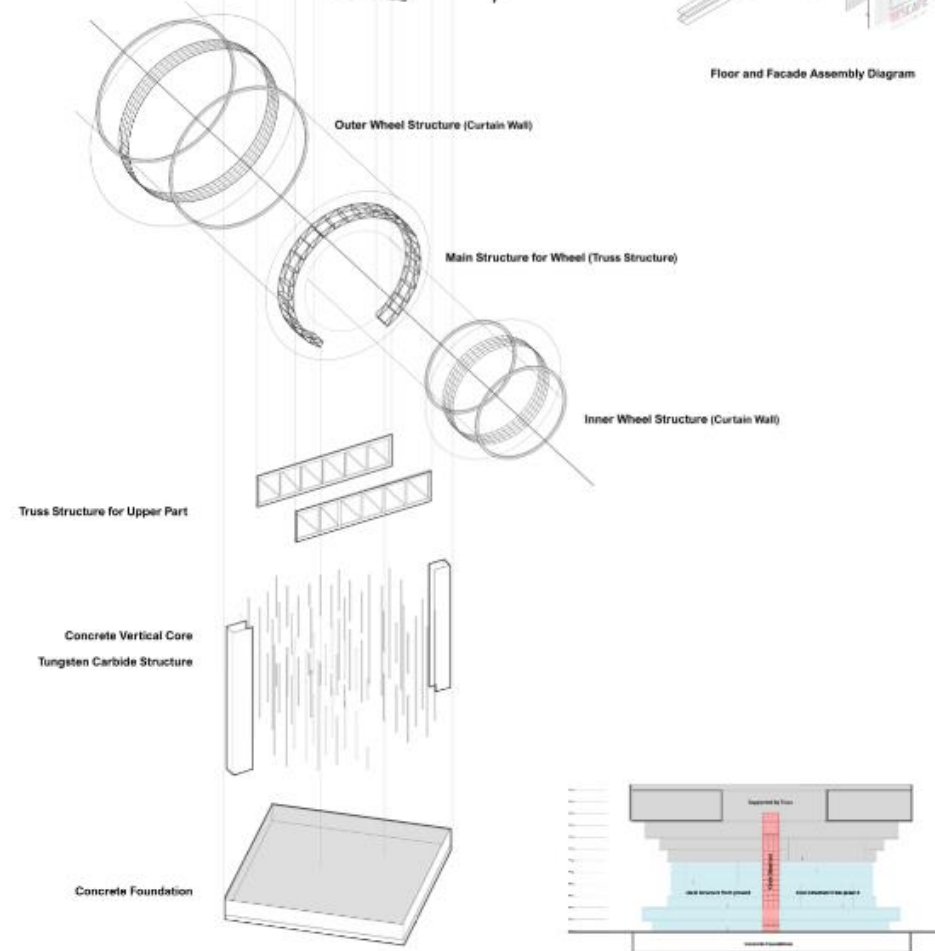
Structure Diagram

Secondary Structure Scheme

4719860 Joon Hyung Park

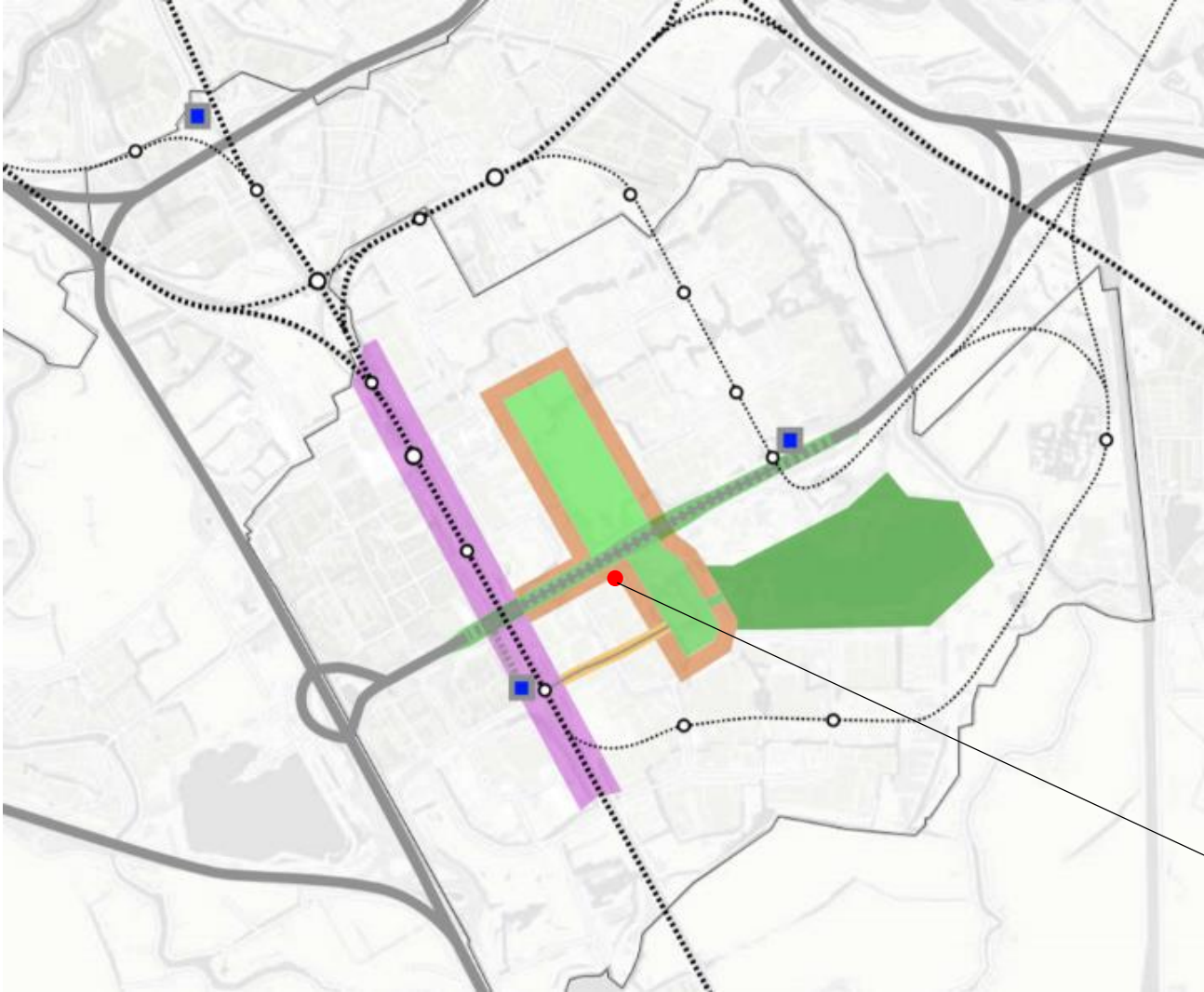


Floor and Facade Assembly Diagram



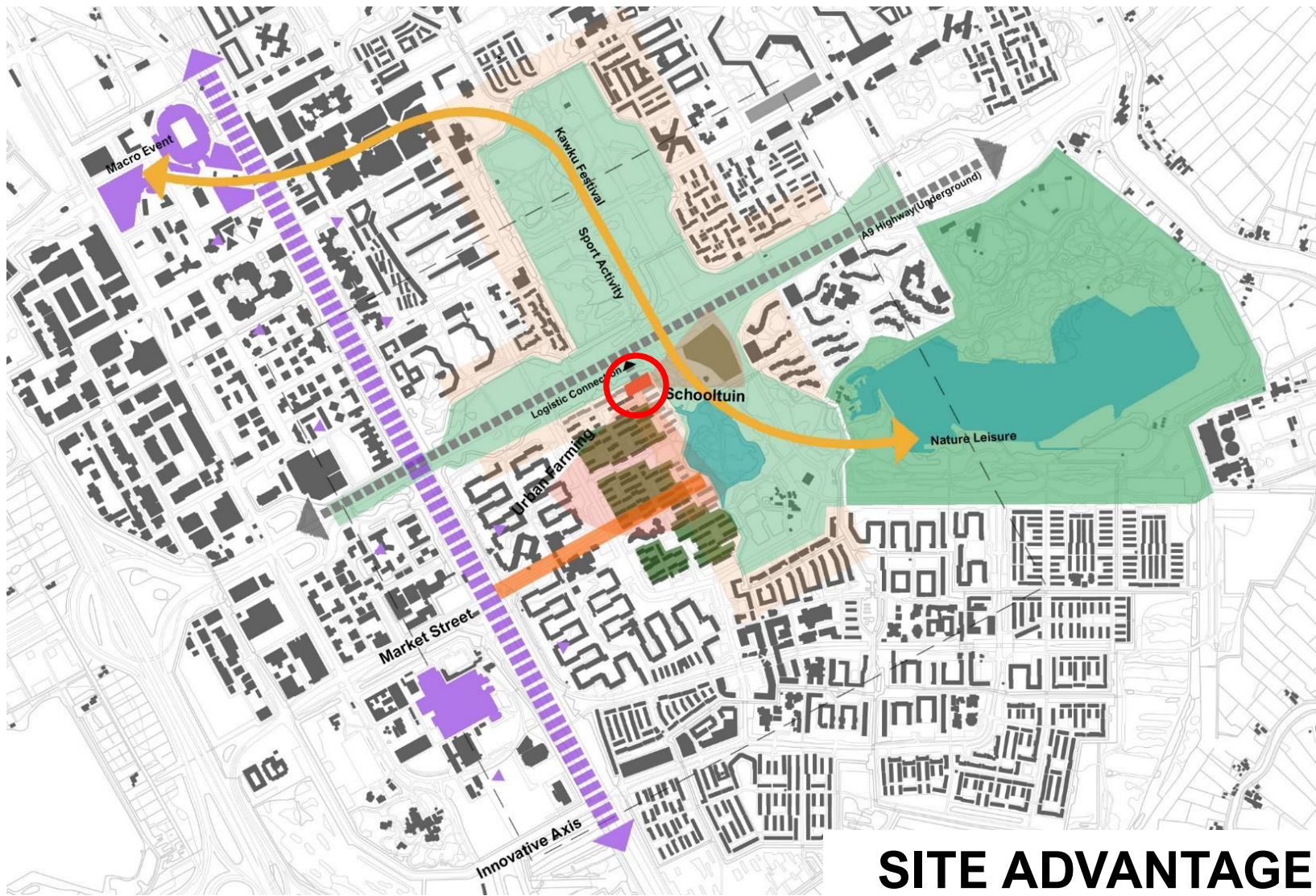
Primary Structure Scheme

SITE LOCATION



- Innovative Axis
- Residential Oriented Area
- Water-related Event Park
- Activity & Event Park
- Promenade Park
- Railway
- Motorway

Site



SITE ADVANTAGE

Connectivity

with Infrastructure

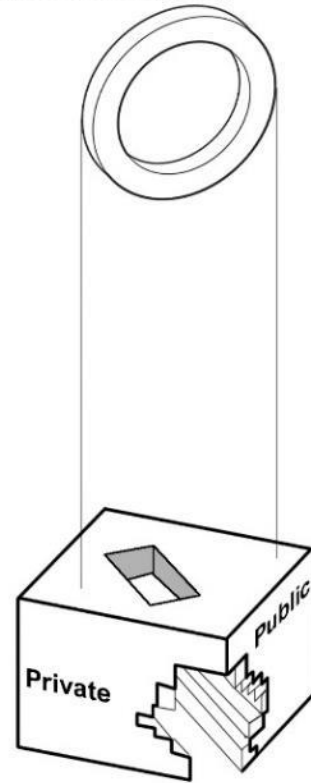
Future Education

with Agricultural Land

Boarder Region

Between Neighborhood and Public Space

Torus System for Circulation

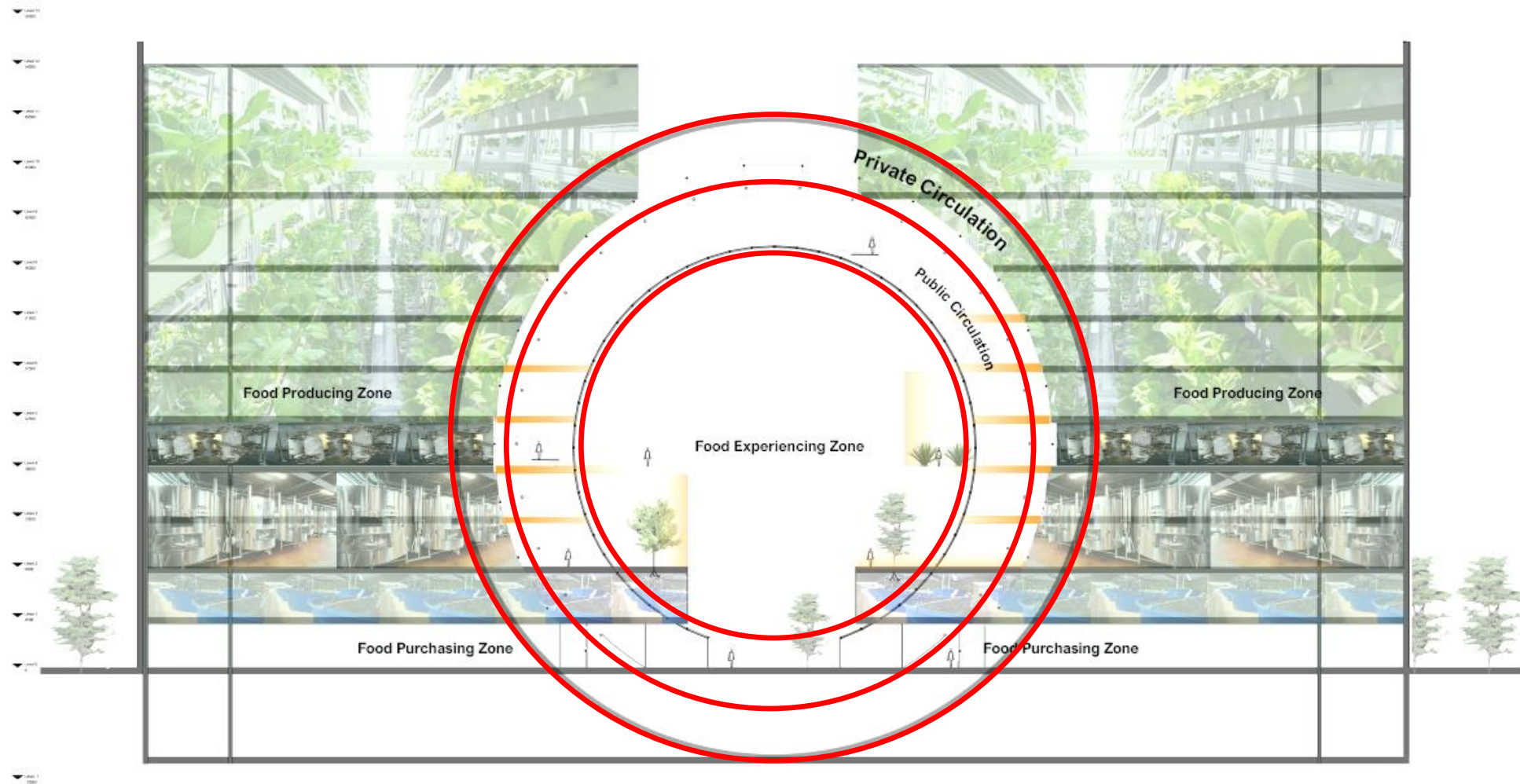


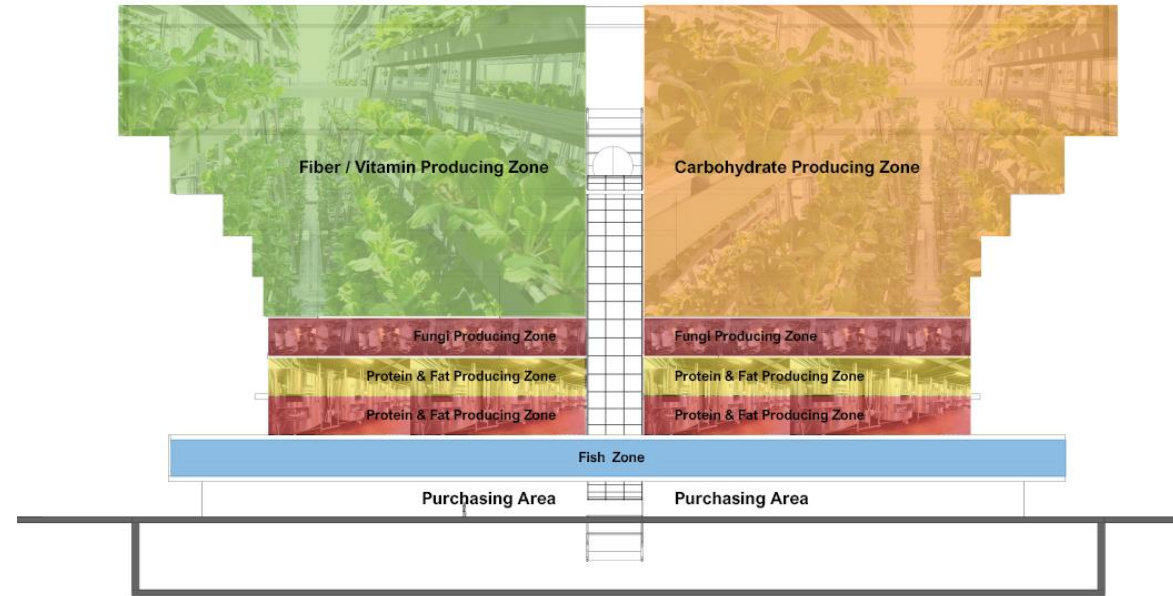
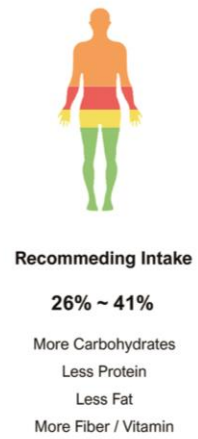
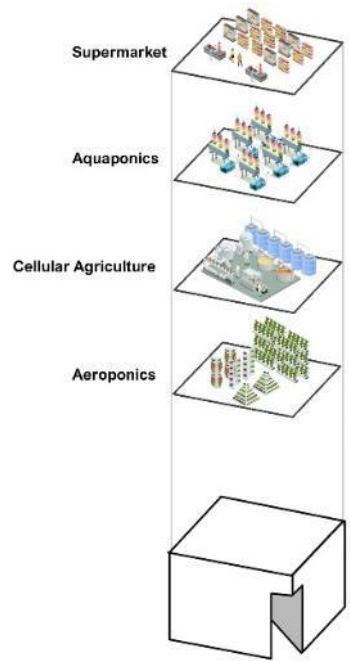
Logistic

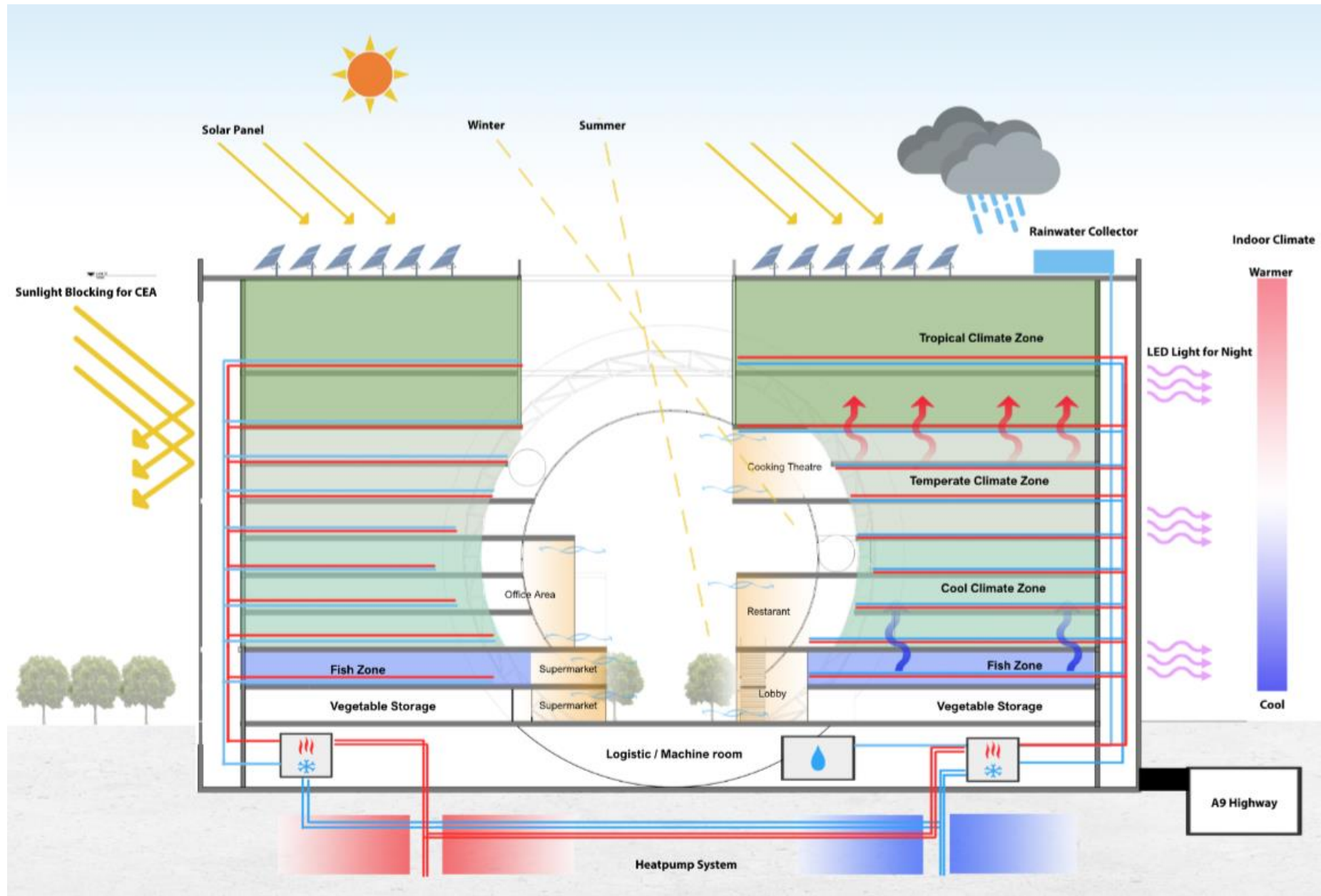
Binding Whole Building with Single System

Outer Ring → Production Logistic

Inner Ring → Public Circulation



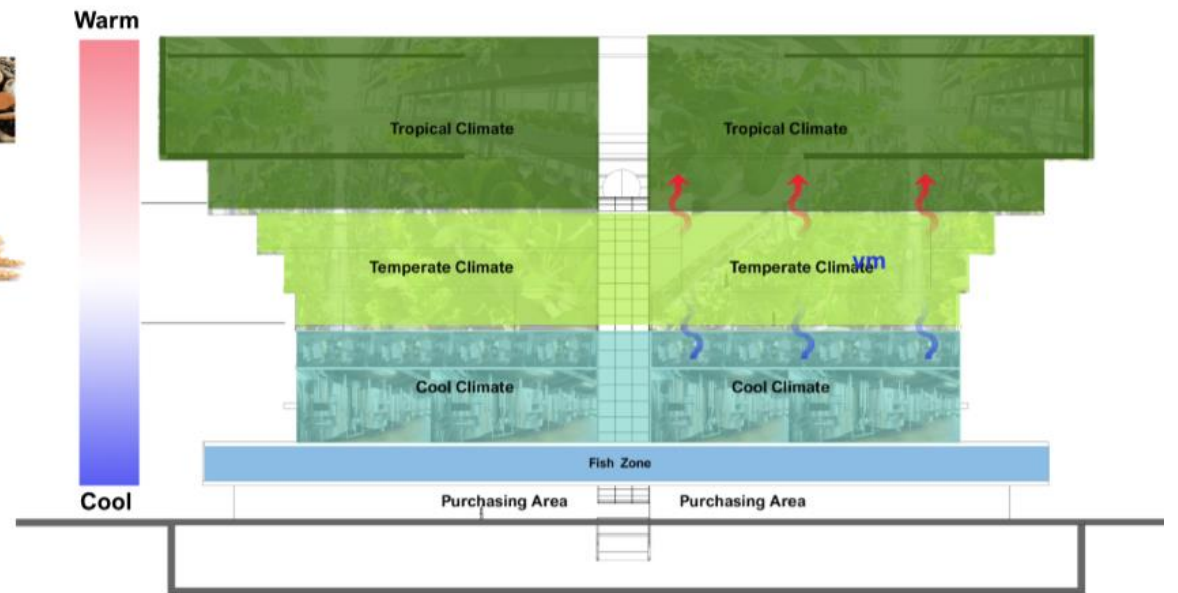




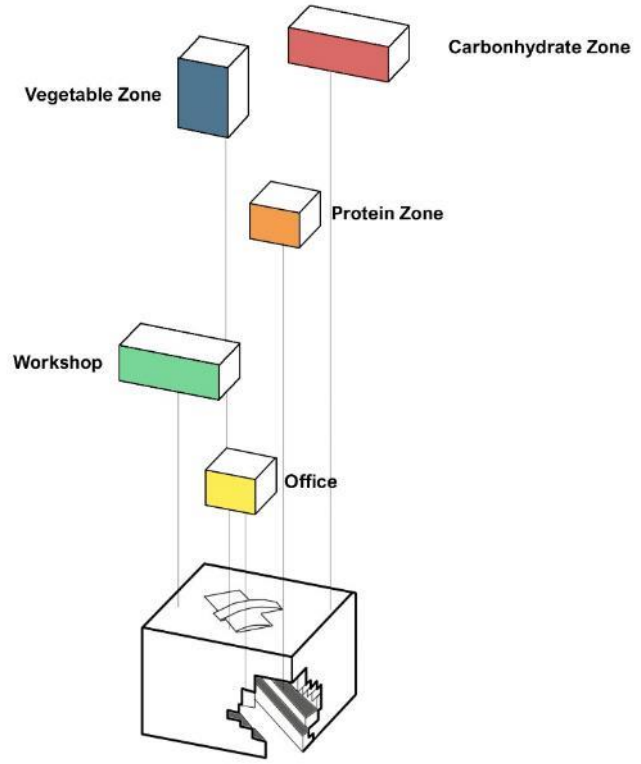
Production Programs Organization



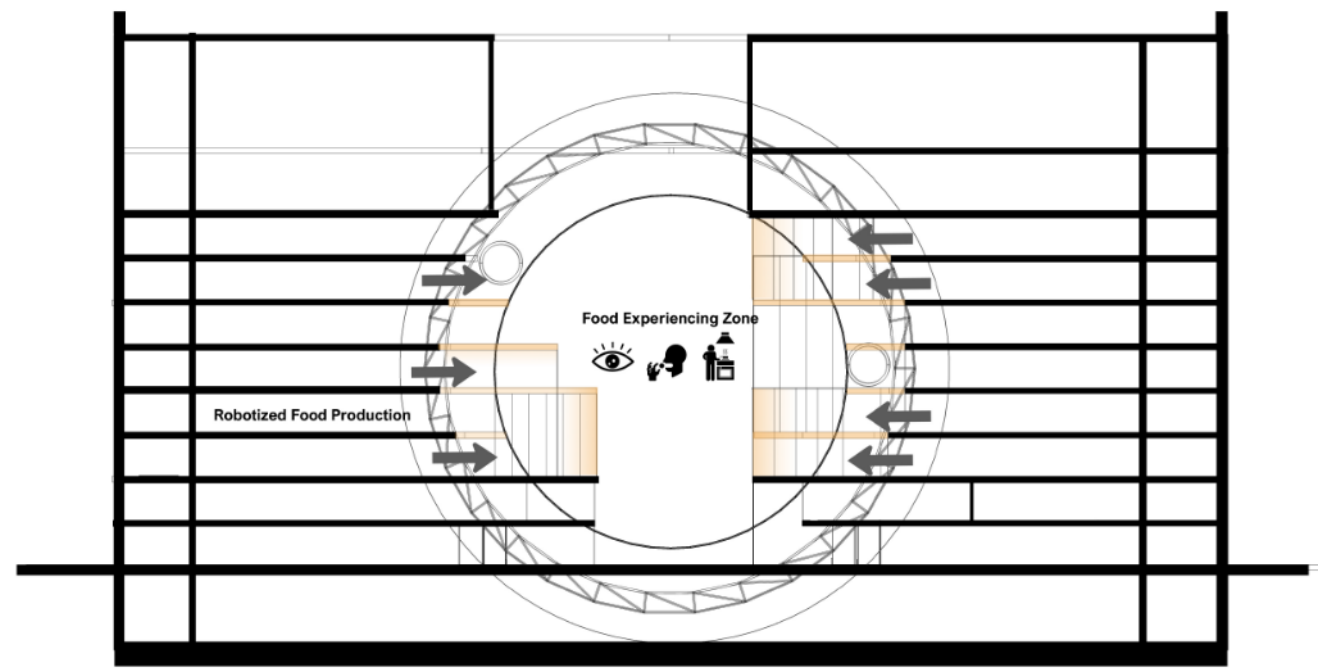
Nutrition Zone



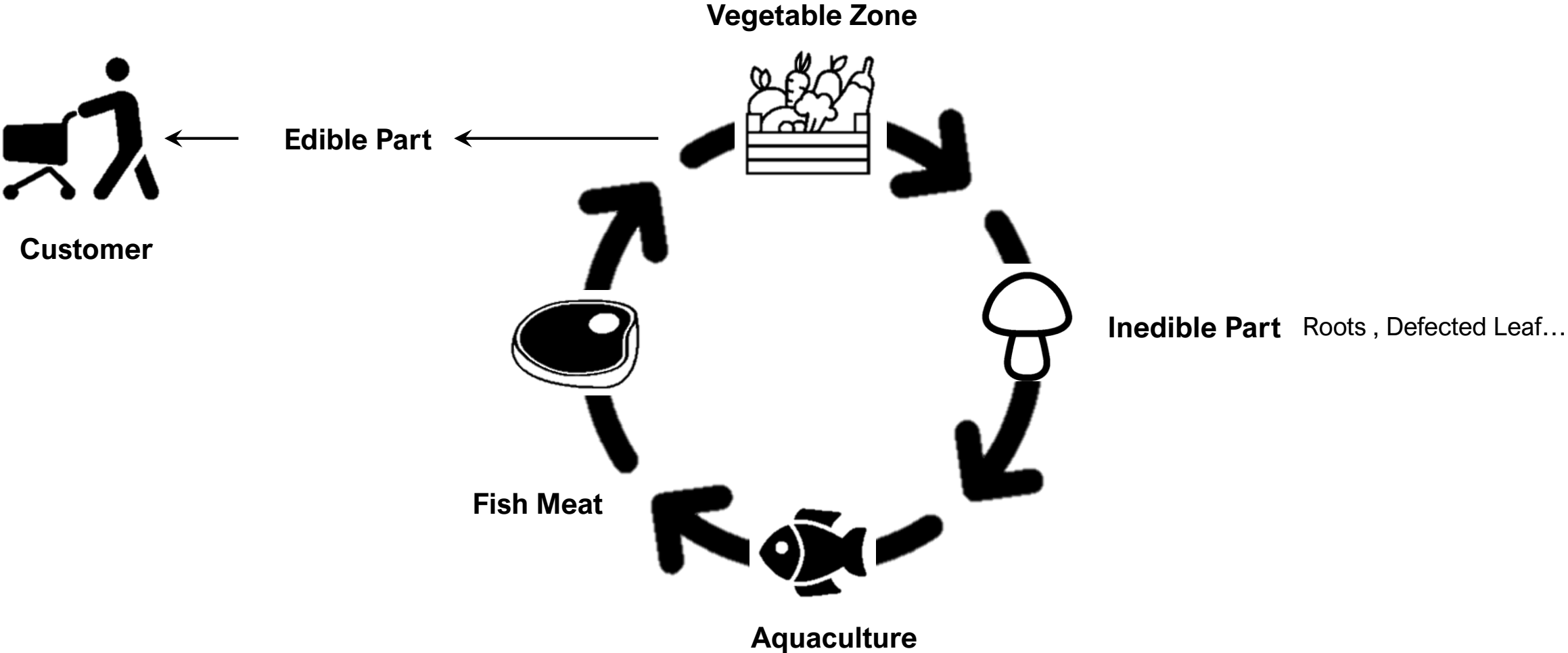
Climate Zone



Programs on Terrace



Building as a One System (Nutrition Circularity)



Different Zoning

