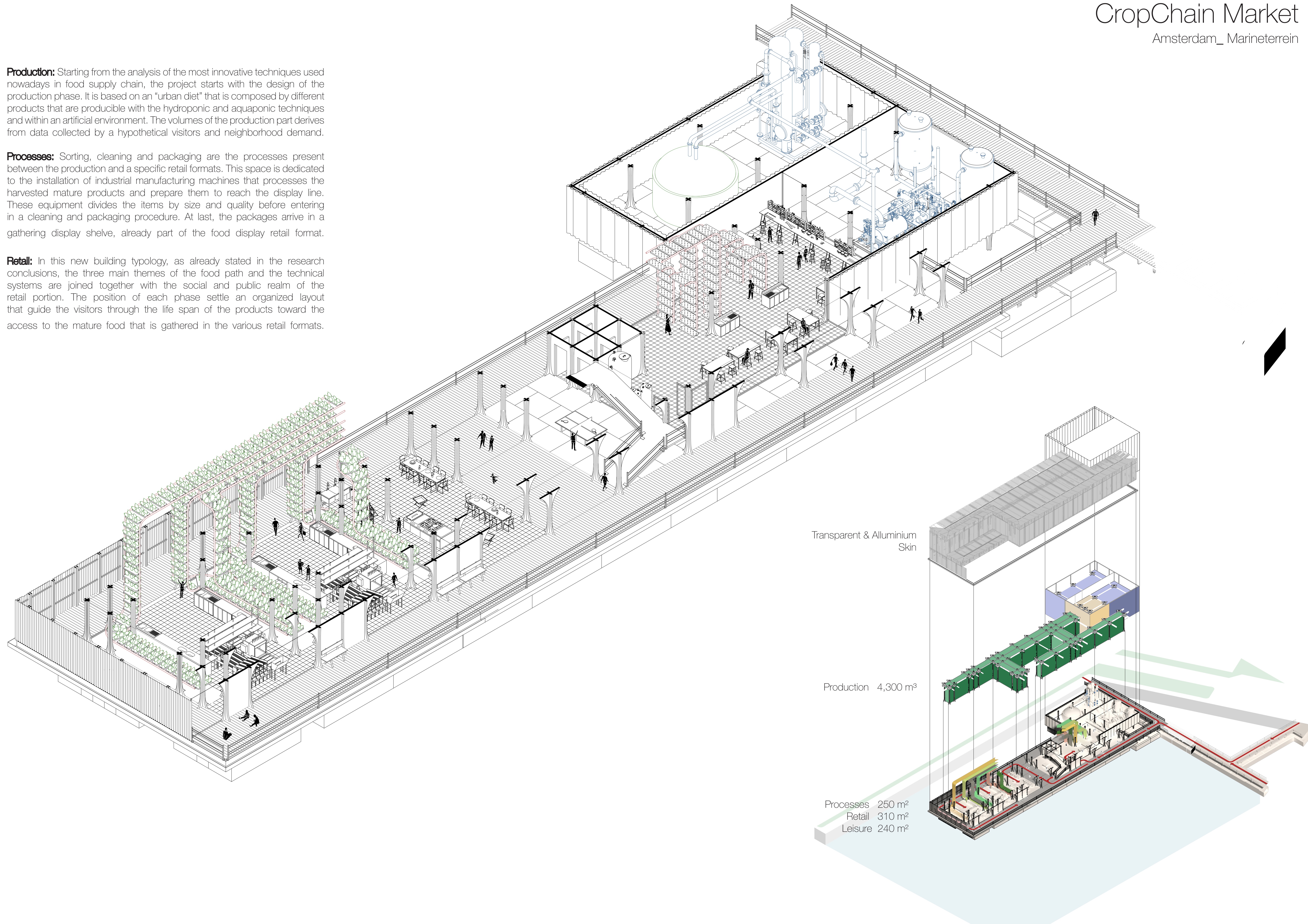**Production:** Starting from the analysis of the most innovative techniques used nowadays in food supply chain, the project starts with the design of the production phase. It is based on an "urban diet" that is composed by different products that are producible with the hydroponic and aquaponic techniques and within an artificial environment. The volumes of the production part derives from data collected by a hypothetical visitors and neighborhood demand.

Processes: Sorting, cleaning and packaging are the processes present between the production and a specific retail formats. This space is dedicated to the installation of industrial manufacturing machines that processes the harvested mature products and prepare them to reach the display line. These equipment divides the items by size and quality before entering in a cleaning and packaging procedure. At last, the packages arrive in a gathering display shelve, already part of the food display retail format.
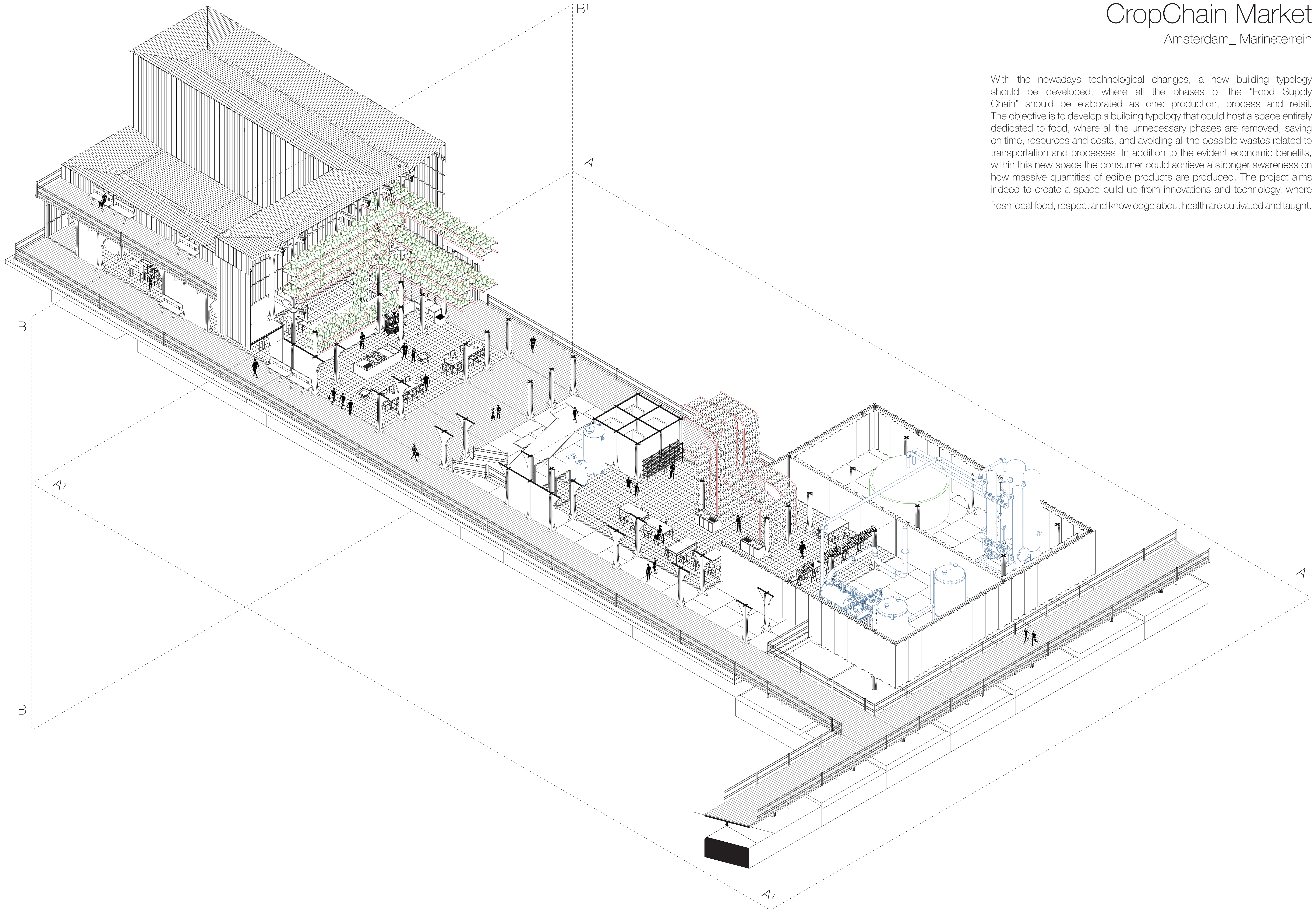
Retail: In this new building typology, as already stated in the research conclusions, the three main themes of the food path and the technical systems are joined together with the social and public realm of the retail portion. The position of each phase settle an organized layout that guide the visitors through the life span of the products toward the access to the mature food that is gathered in the various retail formats.

Transparent & Alluminium Skin

Production   4,300 m³

Processes   250 m²
Retail   310 m²
Leisure   240 m²

CropChain Market
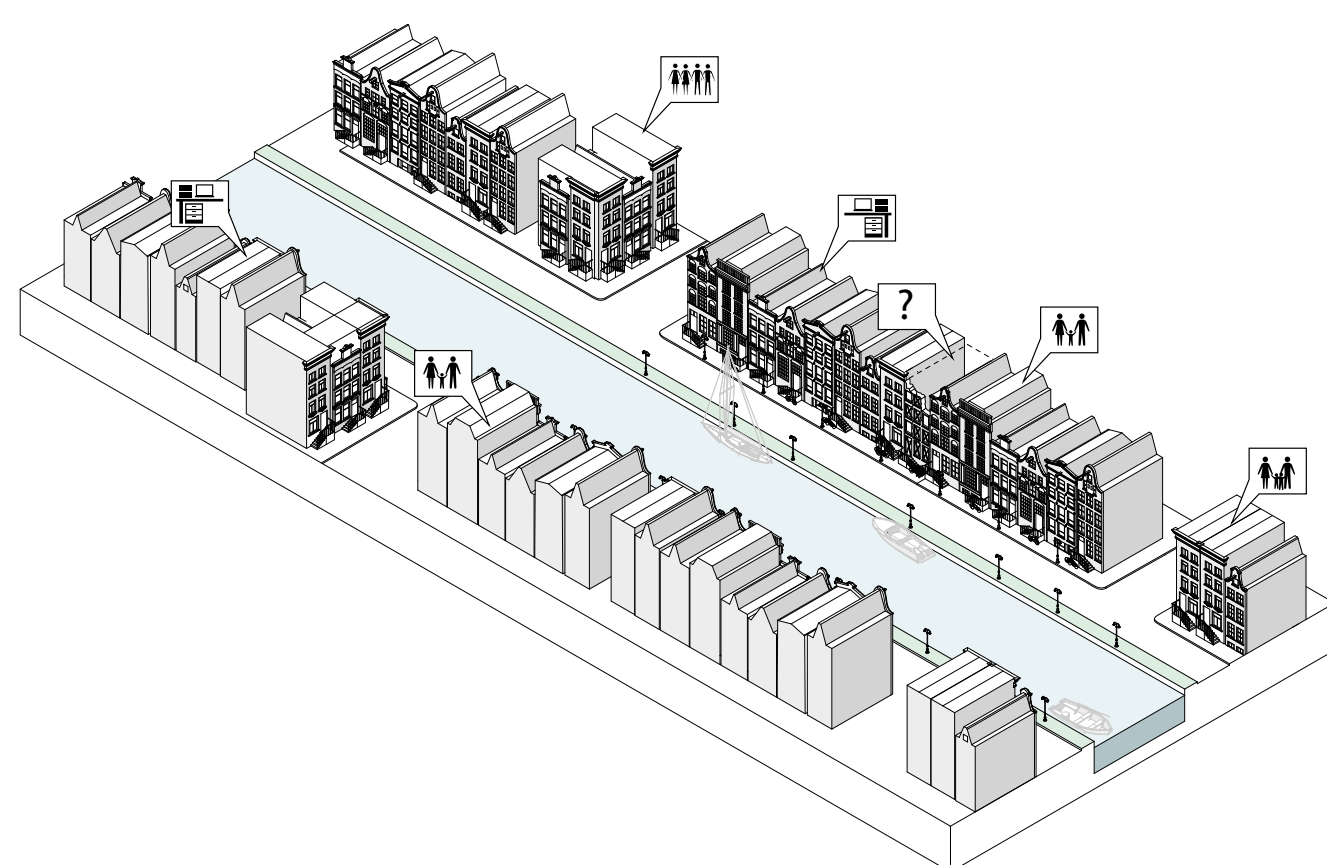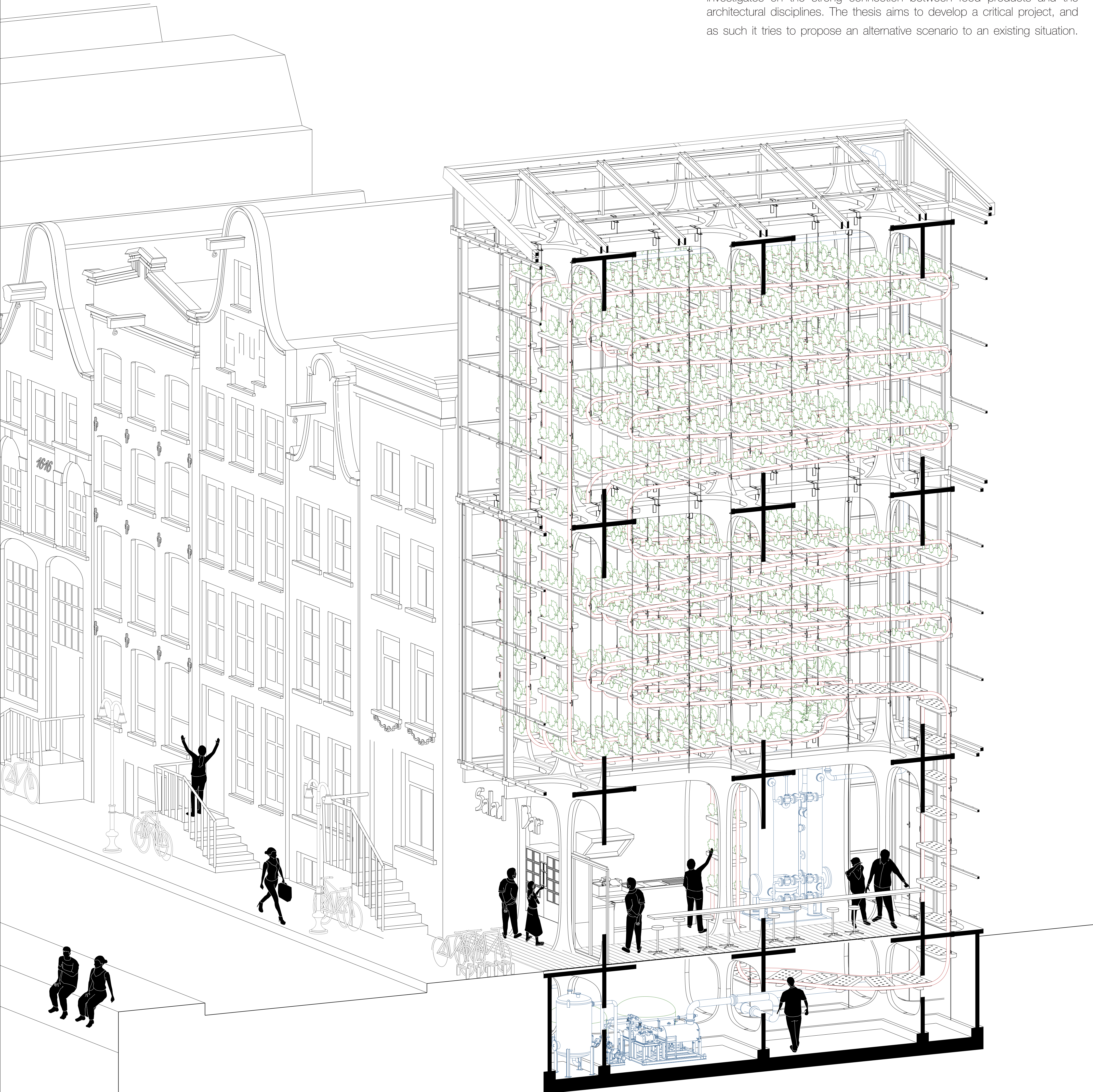## Amsterdam_ Marineterrein

With the nowadays technological changes, a new building typology should be developed, where all the phases of the "Food Supply Chain" should be elaborated as one: production, process and retail. The objective is to develop a building typology that could host a space entirely dedicated to food, where all the unnecessary phases are removed, saving on time, resources and costs, and avoiding all the possible wastes related to transportation and processes. In addition to the evident economic benefits, within this new space the consumer could achieve a stronger awareness on how massive quantities of edible products are produced. The project aims indeed to create a space build up from innovations and technology, where fresh local food, respect and knowledge about health are cultivated and taught.
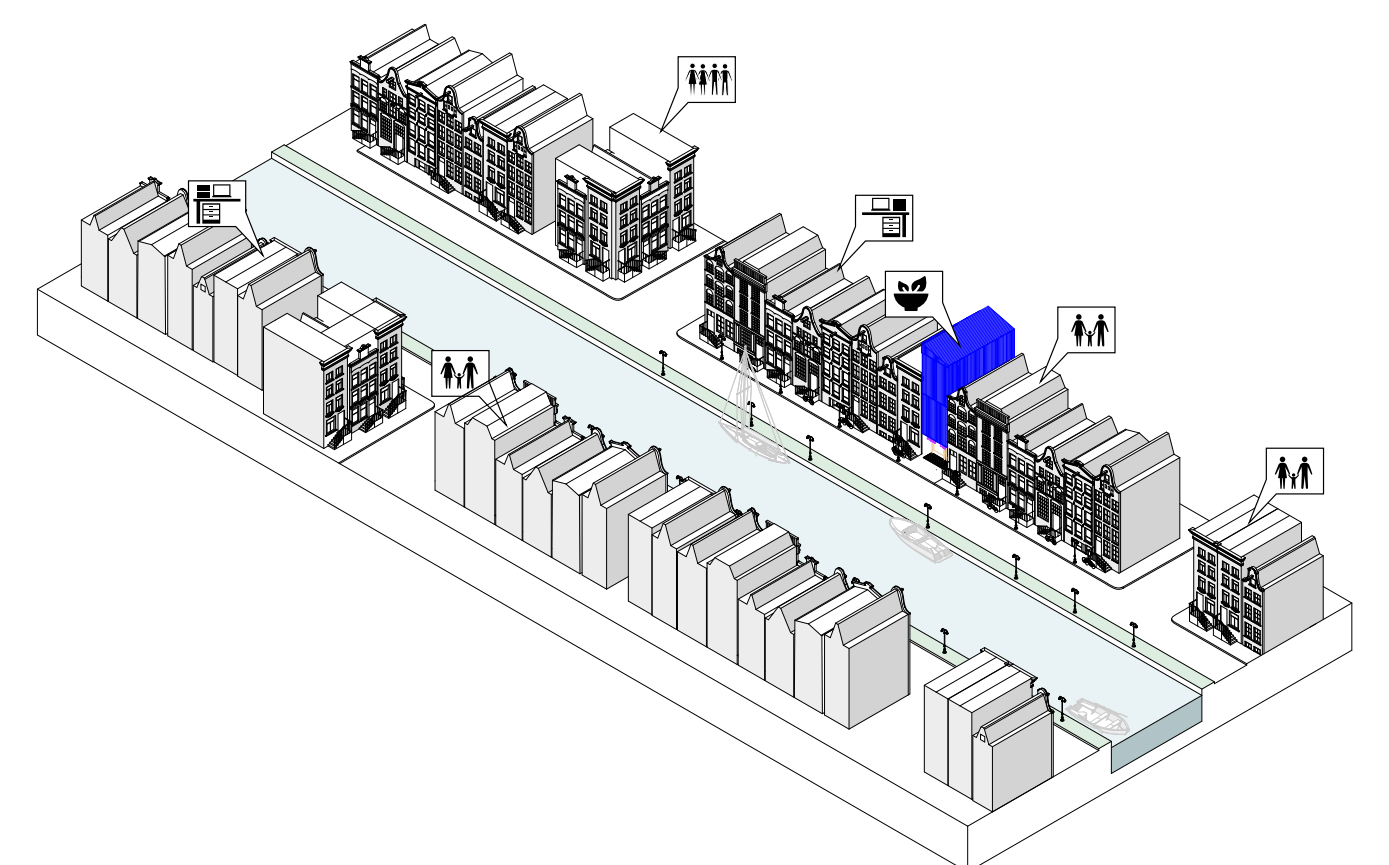
CropChain Market

Amsterdam_ Jordaan district

With this new building typology production, processes, retail and culinary experiences are combined together in other to be part of the same atmosphere and let the visitors walking by all the phases and be informed on the products life span. The efficiency of reassembling the production phases in the unique design strategy results in a project that investigates on the strong connection between food products and the architectural disciplines. The thesis aims to develop a critical project, and as such it tries to propose an alternative scenario to an existing situation.
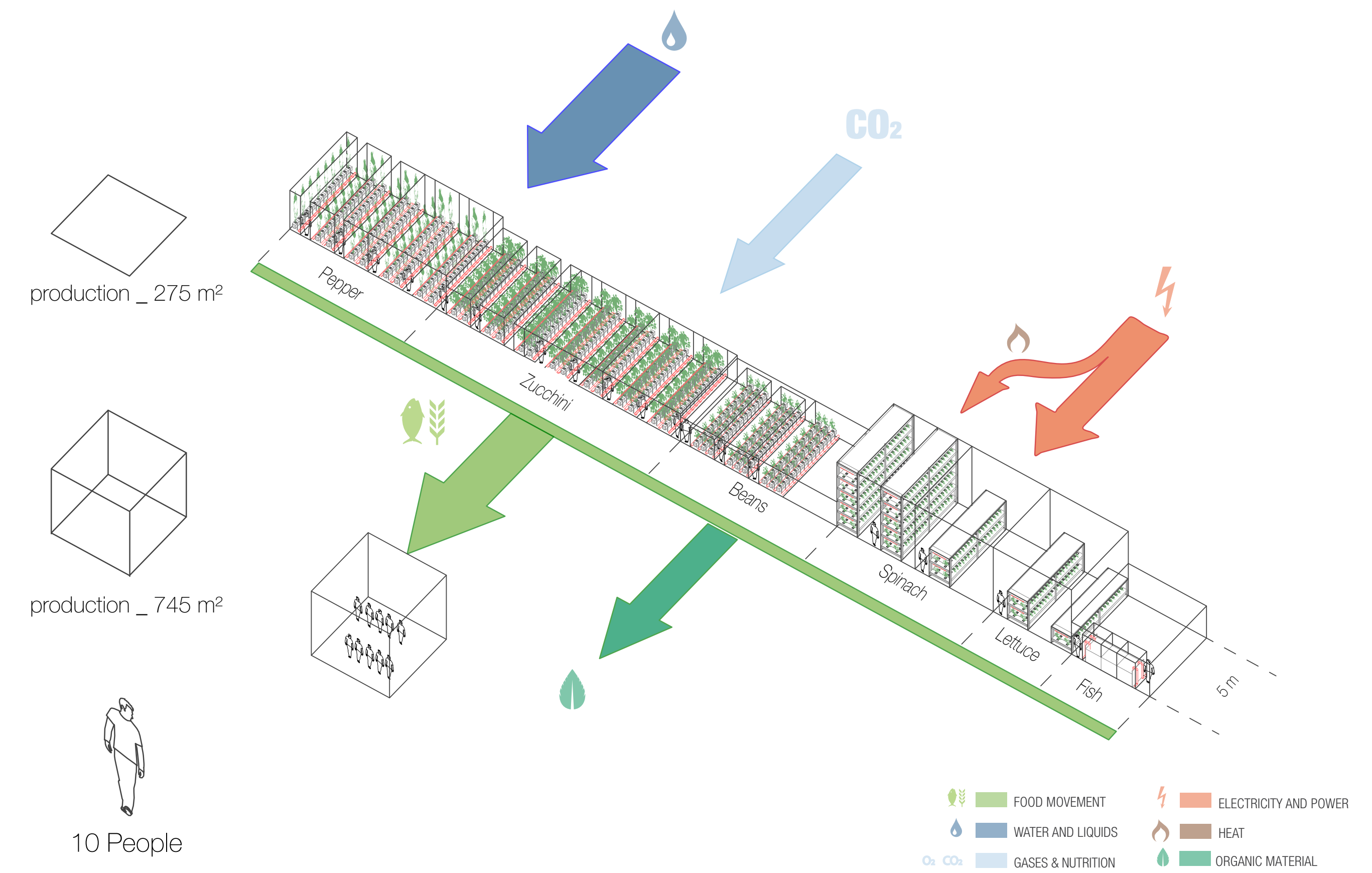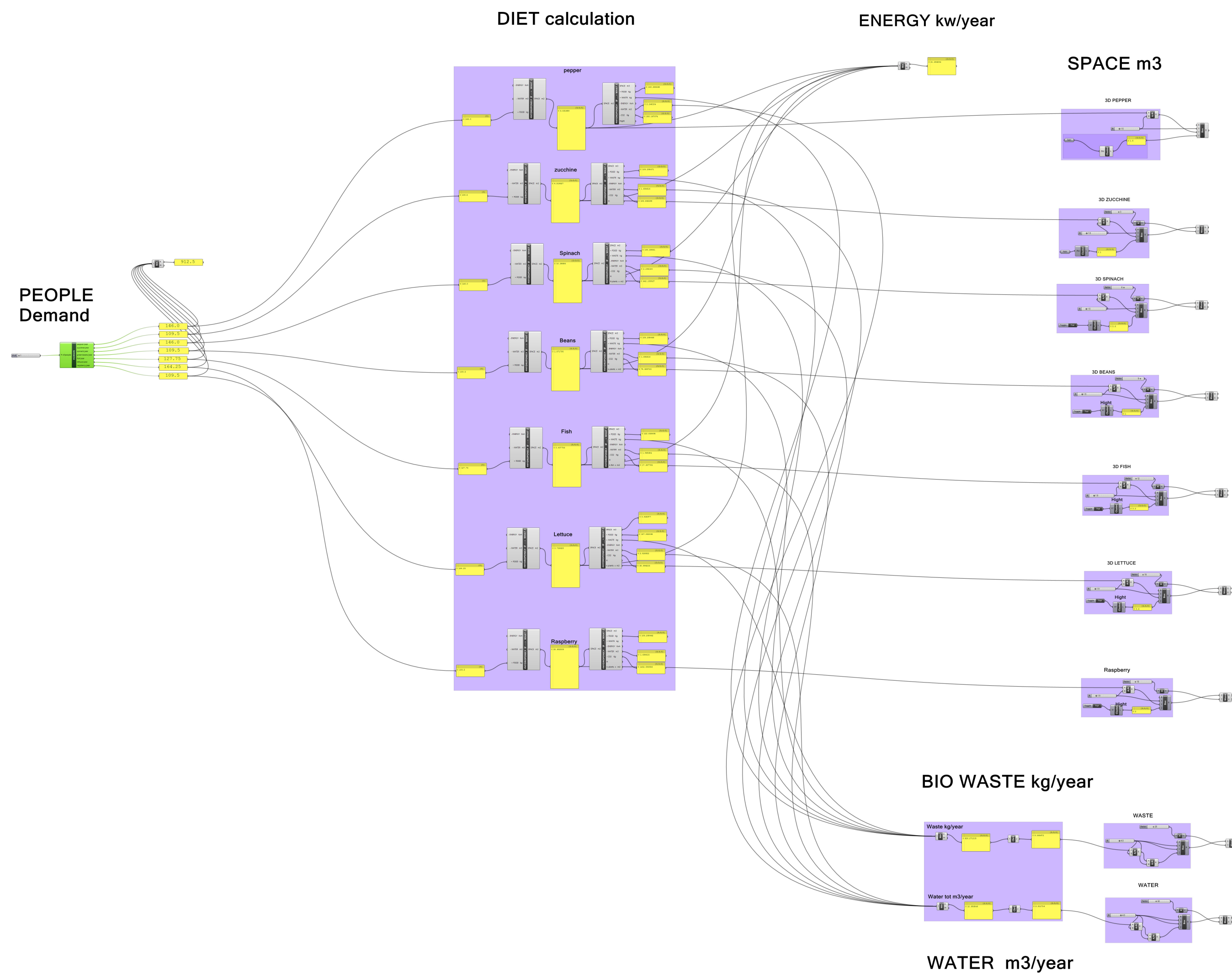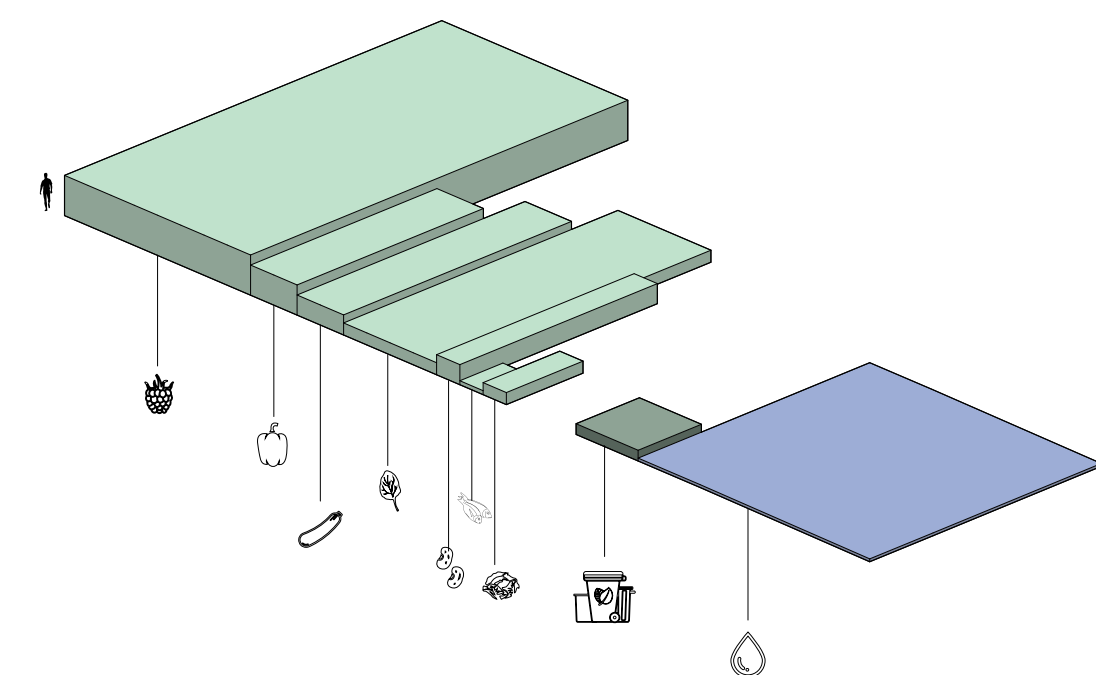
Space vacancy inbetween buildings

Infill food production salad bar building
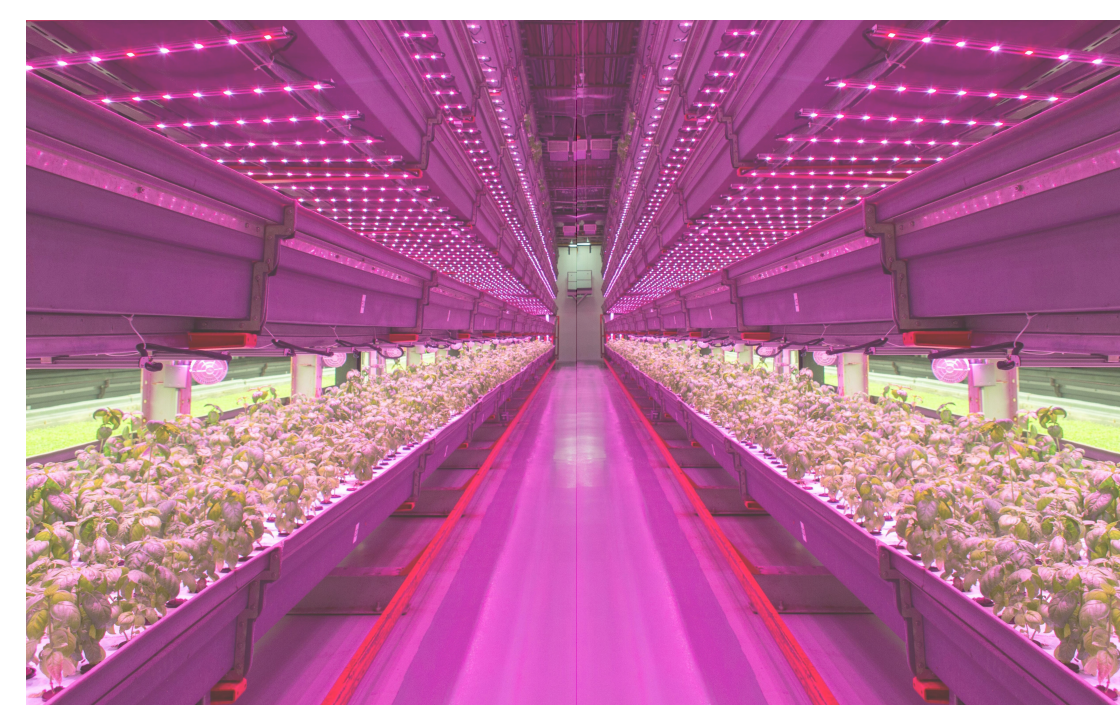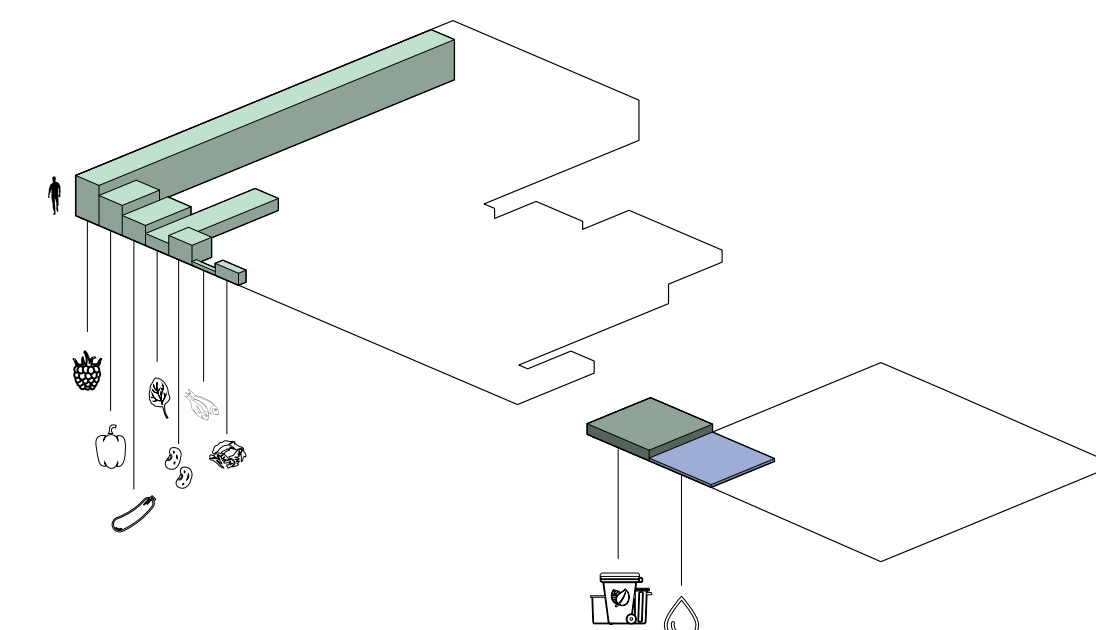
CropChain Market
People demand script

DIET calculation

ENERGY kw/year

SPACE m3

pepper

zucchine

Spinach

Beans

Fish

Lettuce

Raspberry

3D PEPPER

3D ZUCCHINE

3D SPINACH

3D BEANS

3D FISH

3D LETTUCE

Raspberry

PEOPLE
Demand

BIO WASTE kg/year

WASTE

WATER

Waste kg/year

Water lot m3/year

WATER m3/year

production _ 275 m²

production _ 745 m²

10 People

CO₂

Pepper
Zucchini
Beans
Spinach
Lettuce
Fish

5 m

	FOOD MOVEMENT		ELECTRICITY AND POWER
	WATER AND LIQUIDS		HEAT
	GASES & NUTRITION		ORGANIC MATERIAL

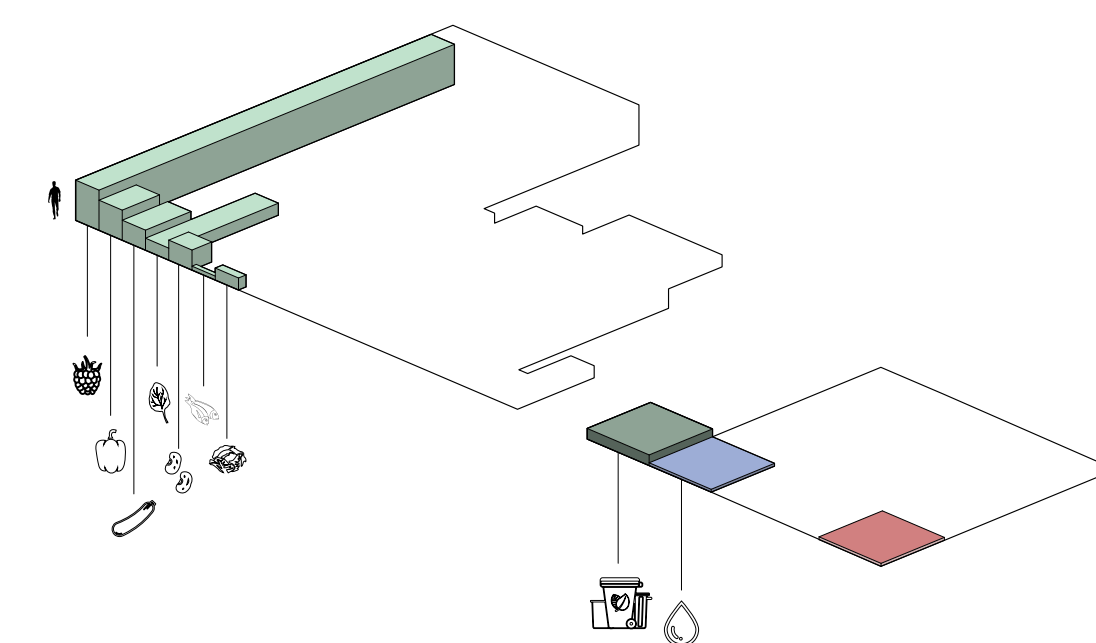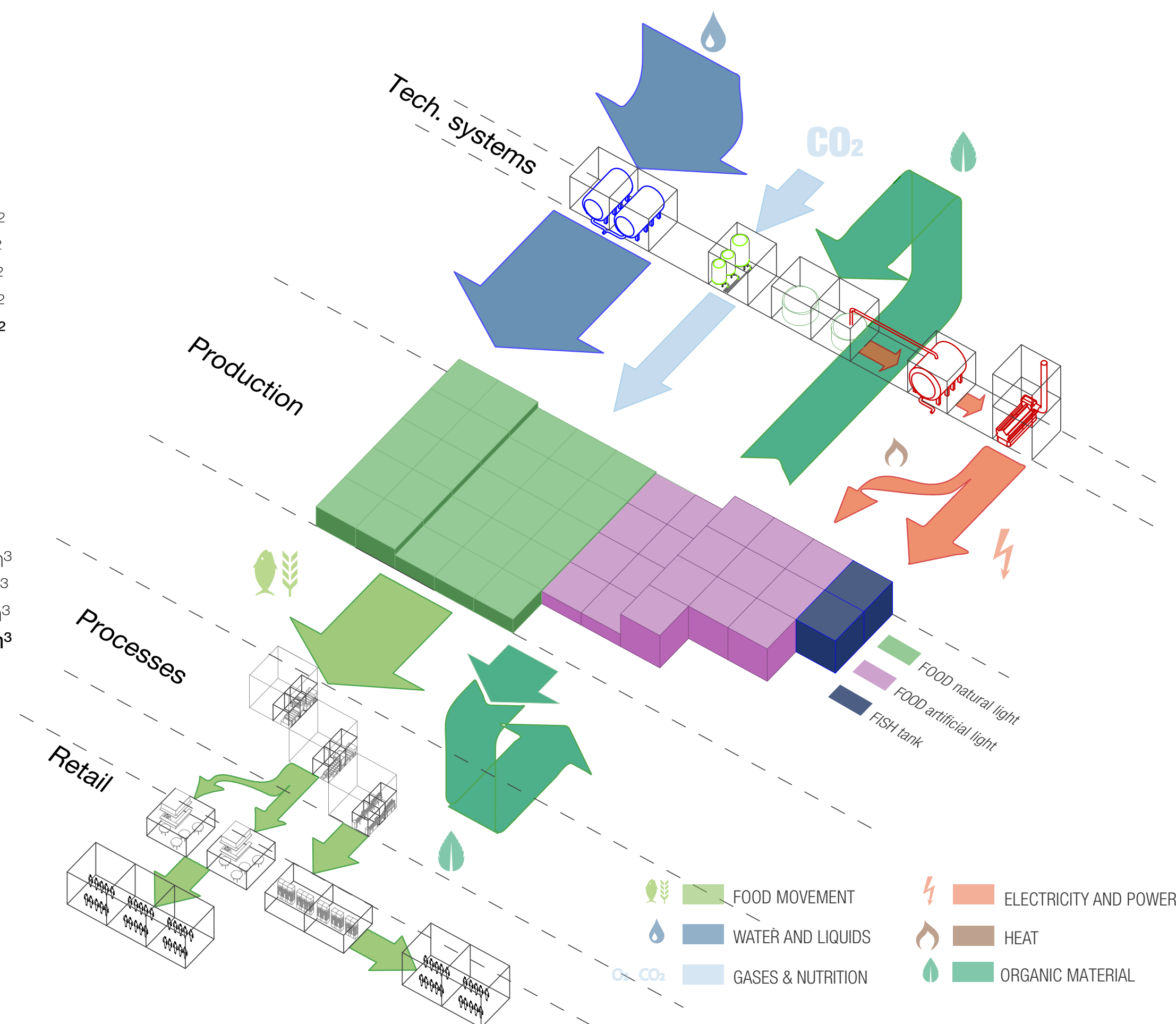Traditional
food production
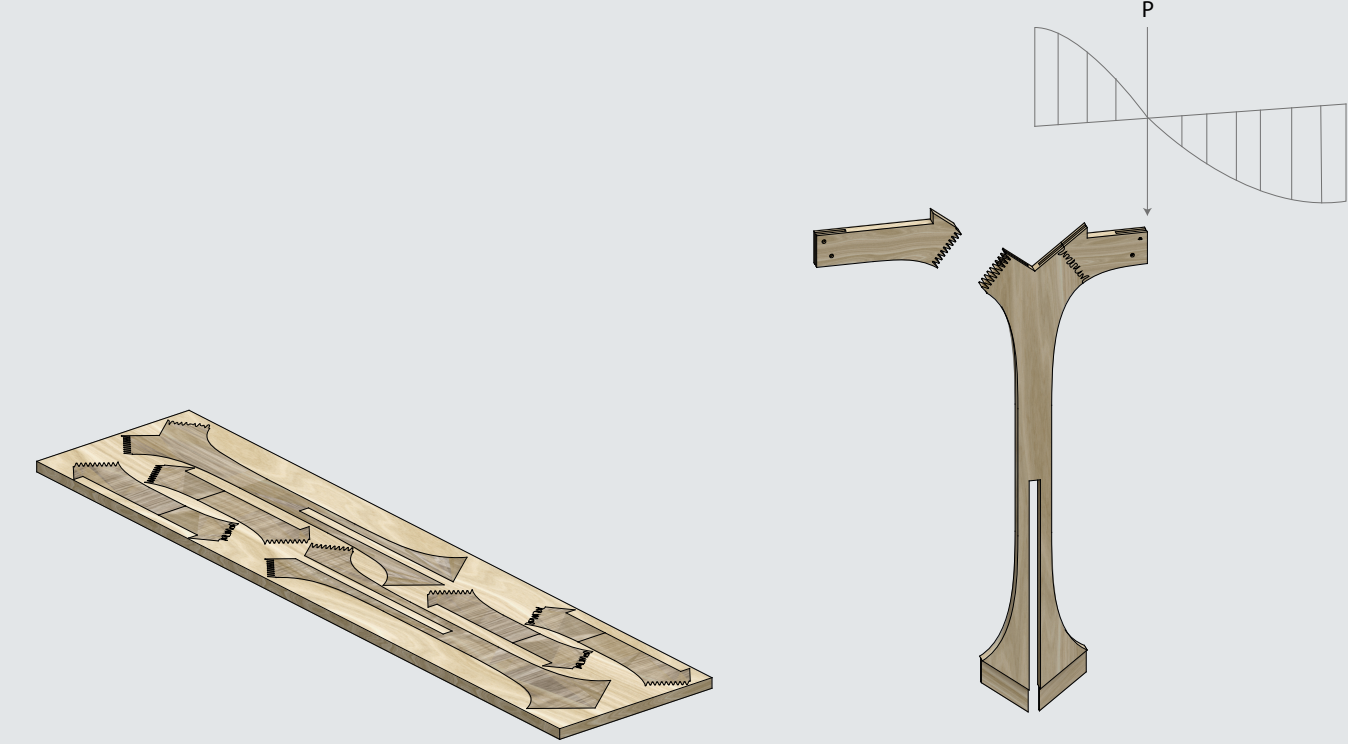
Greenhouse
food production

LEDFarm
food production

Production 1375 m²
Tech. systems 175 m²
Processes 75 m²
Retail 100 m²
Total 1725 m²

Production 3725 m³
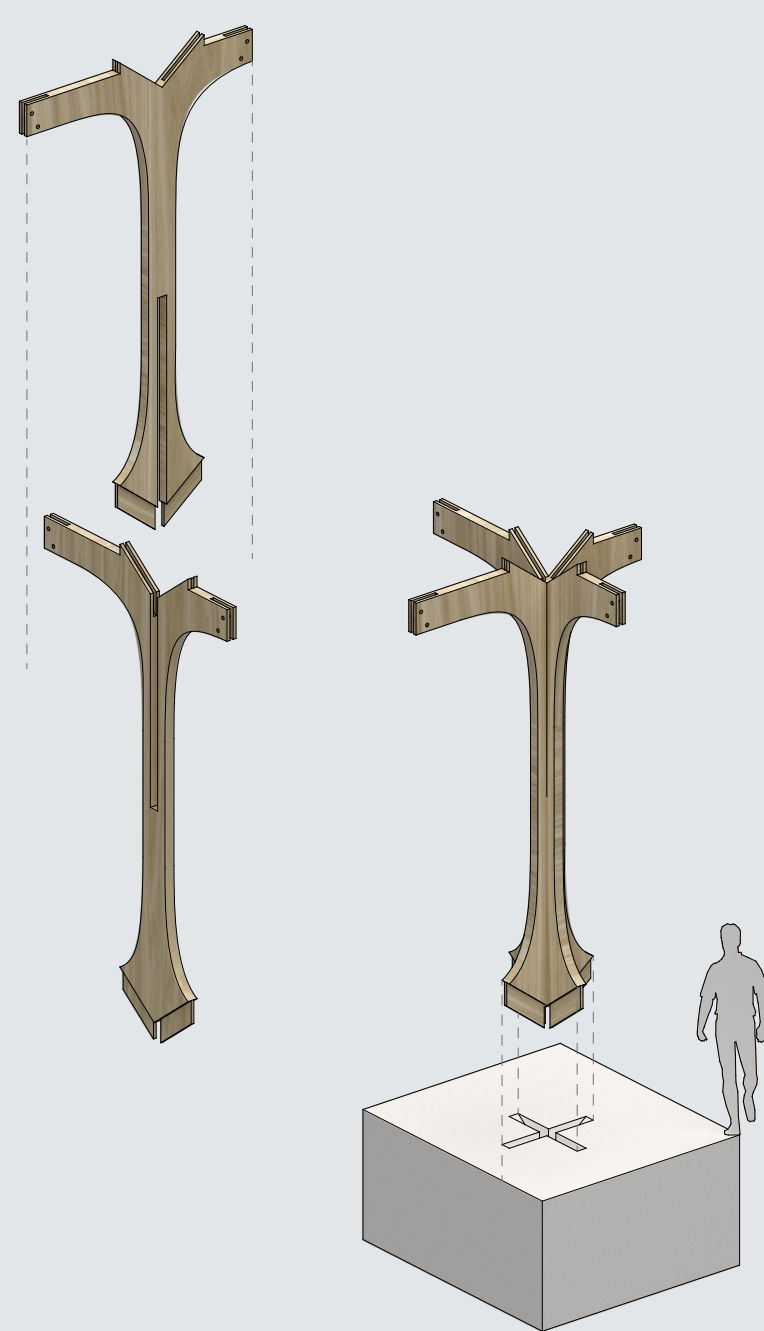Tech. systems 175 m³
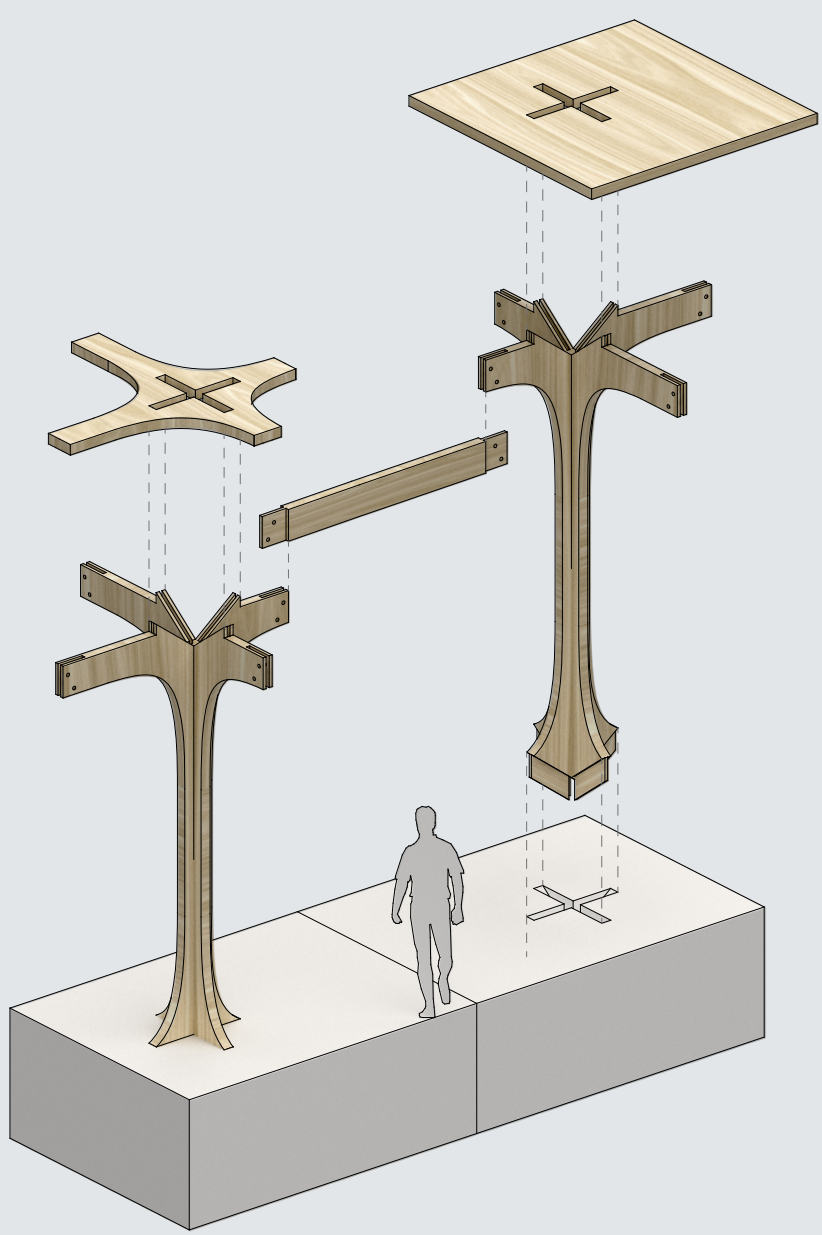Processes 225 m³
Total 4125 m³

50 People

Tech. systems

CO₂

Production

Processes

Retail

FOOD natural light
FOOD artificial light
FISH tank

	FOOD MOVEMENT		ELECTRICITY AND POWER
	WATER AND LIQUIDS		HEAT
	GASES & NUTRITION		ORGANIC MATERIAL

1_ CNC prefabrication

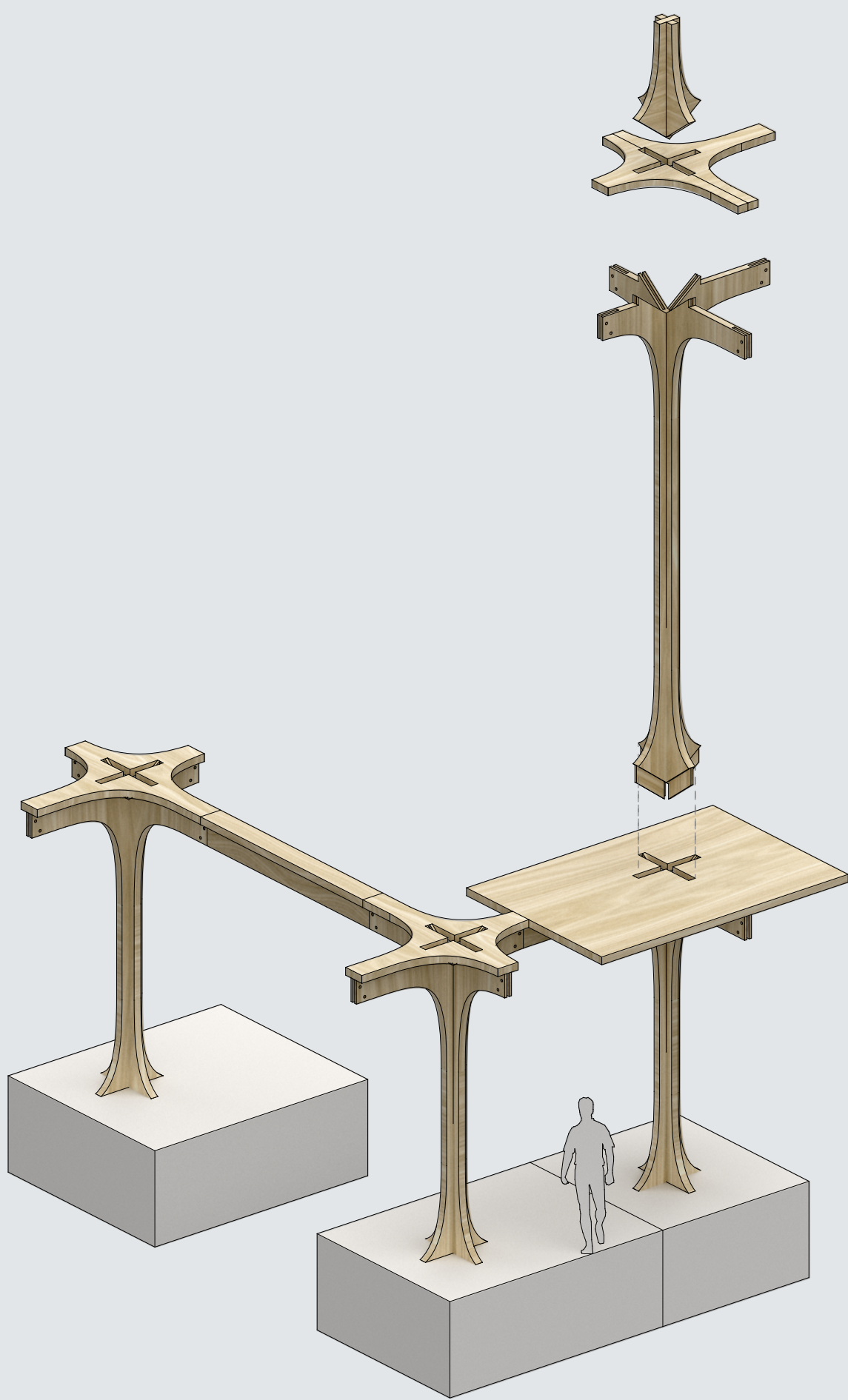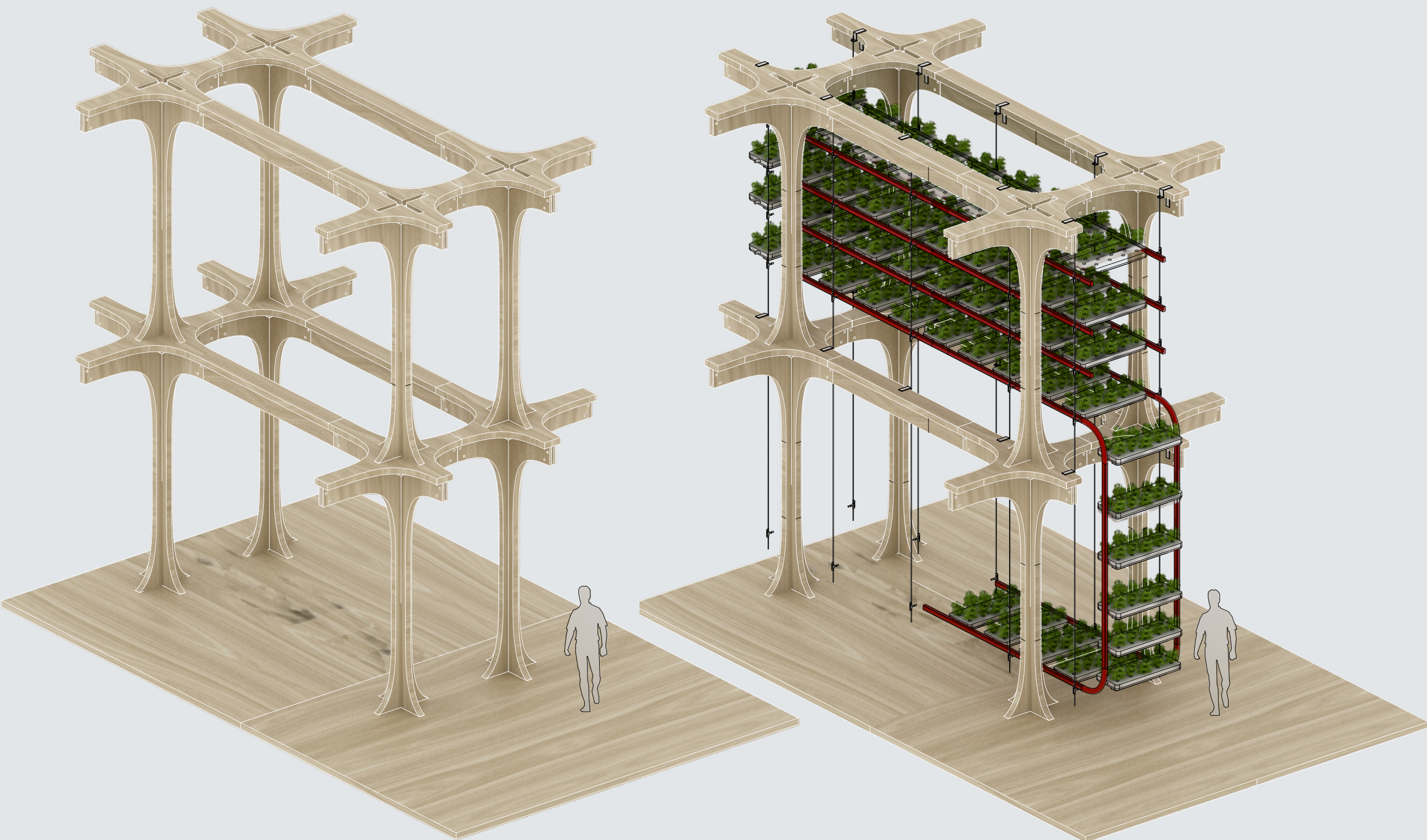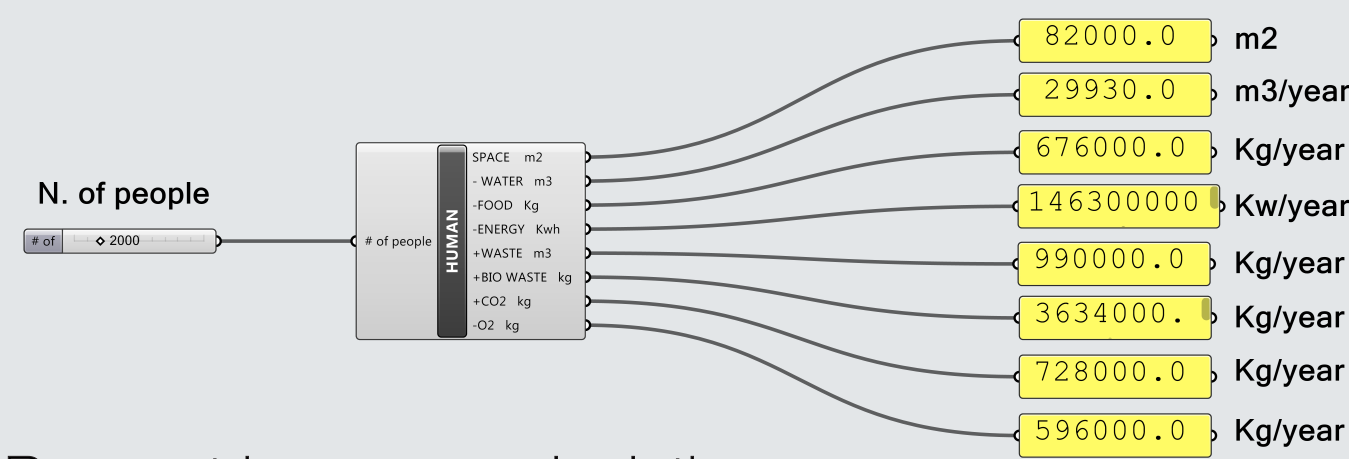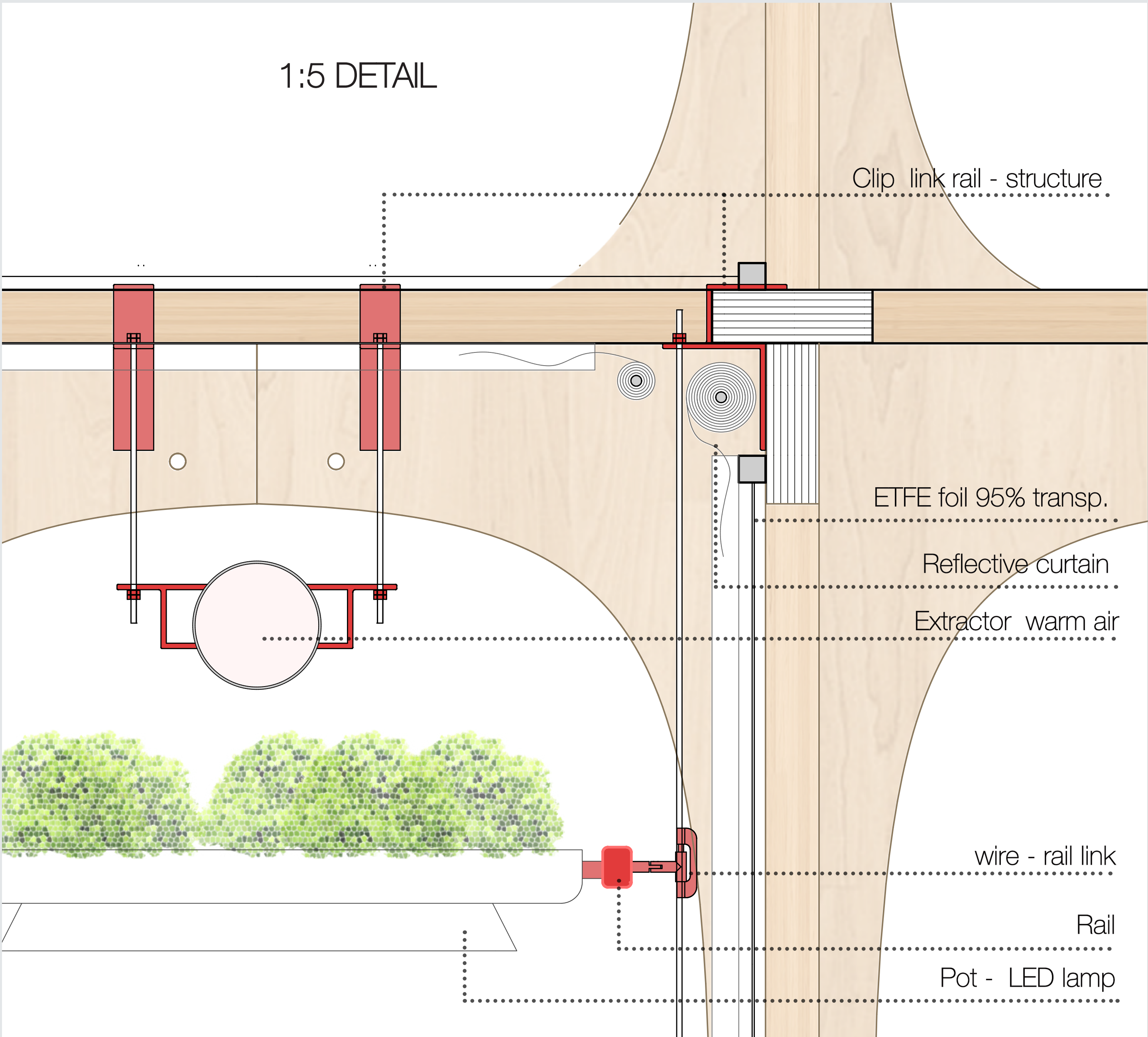## 2_ Cross connection

3_ Assemblage
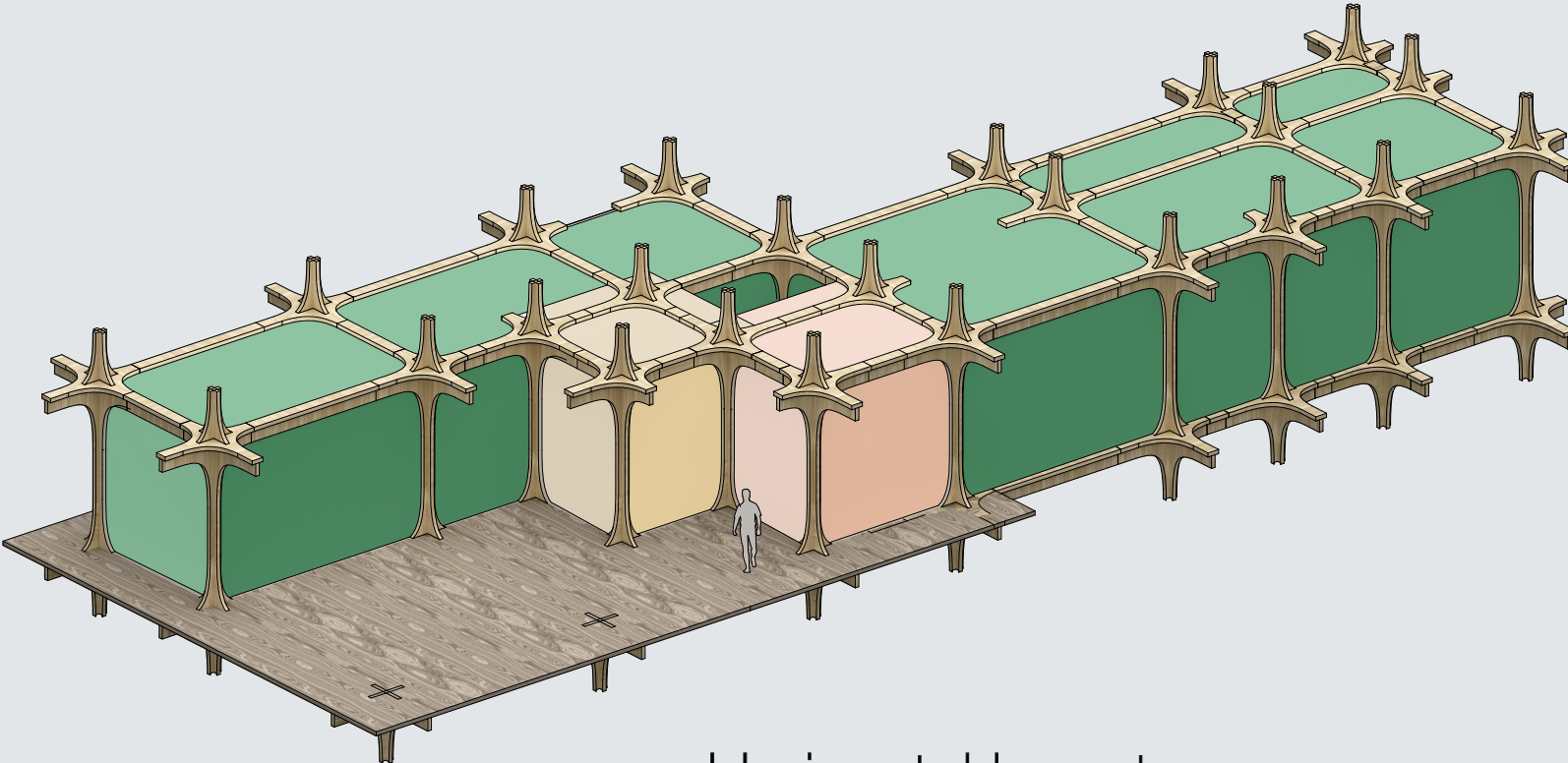

4_ Elevation

WOODEN STRUCTURE & FOOD RAIL SYSTEM
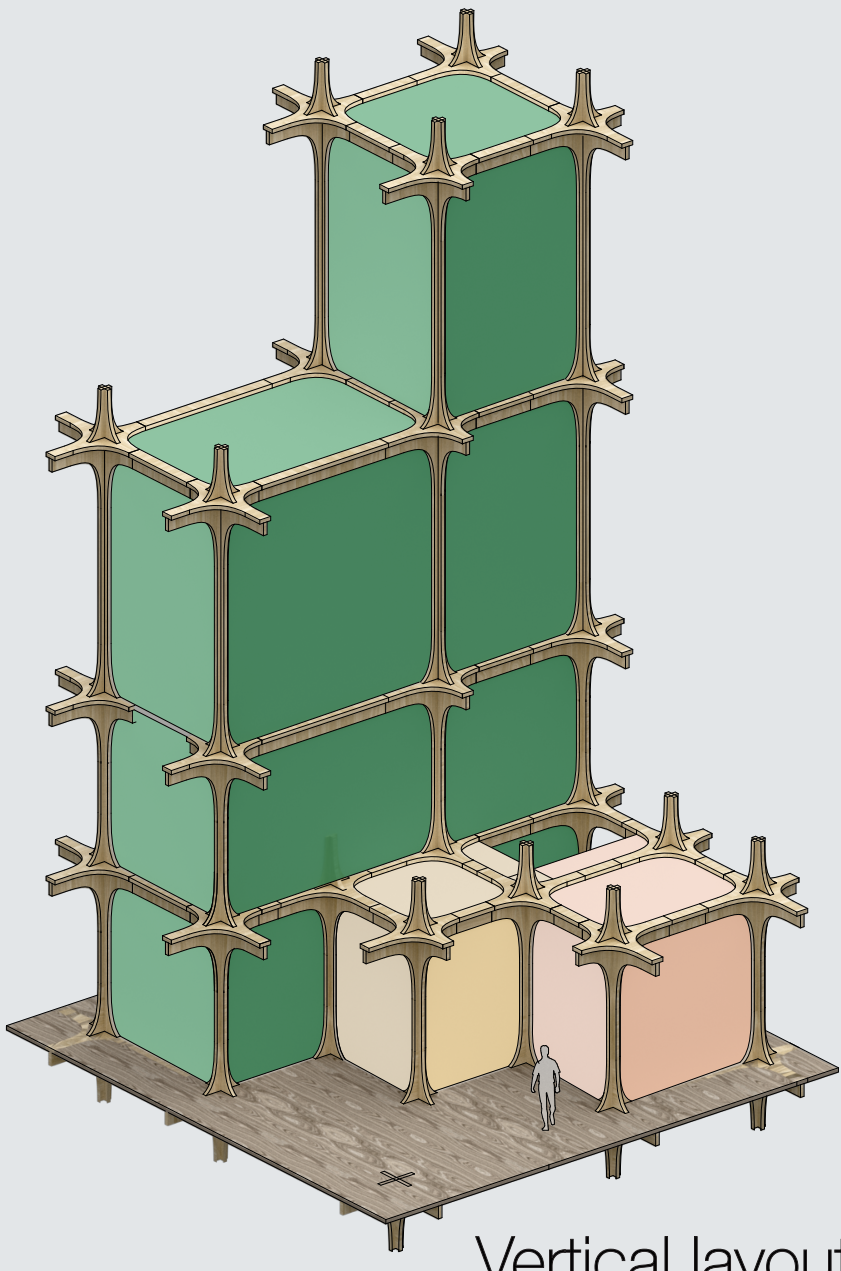

5_ Skeleton

6_ Rail system connection

1:5 DETAIL

Clip link rail - structure

ETFE foil 95% transp.

Reflective curtain

Extractor warm air

wire - rail link

Rail

Pot - LED lamp

Parametric space calculation

Value	Unit
82000.0	m2
29930.0	m3/year
676000.0	Kg/year
146300000	Kw/year
990000.0	Kg/year
3634000.	Kg/year
728000.0	Kg/year
596000.0	Kg/year

N. of people

Horizontal layout

Vertical layout