

COOPERATIVE URBAN AGRICULTURAL AUCTION ALAMAR

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Complex Projects Havana Graduation Studio - P4

14-12-2017

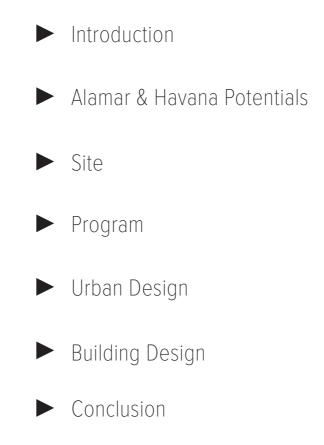


Tutor: Olindo Caso & Gilbert Koskamp

SUMMARY

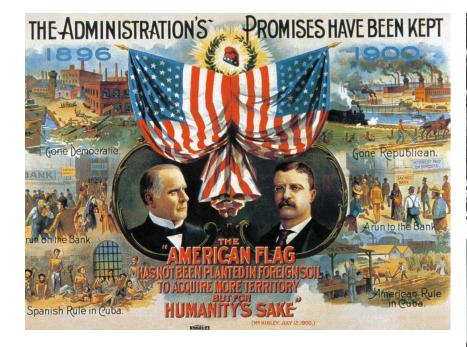
- Manifesto: Transforming Alamar into a Resilient Community
- Urban Agriculture as main potential and catalyst for the further development of a local community-driven sustainable economy in Alamar, and for Alamar as a vital component in a larger regional network of Havana
- Development of **Urban Agriculture in danger**, mainly as a result of the single-sided support approach by the state and a failing centralized distribution system that offers little food security, material incentives and marketing opportunities
- Facilitating the decentralization and re-urbanization of the Cuban food economy by introducing a new economic platform for distribution and marketing of urban agricultural products
- **Project**: Cooperative Urban Agricultural Auction Alamar
- Ambition: Creating a resilient, sustainable, community-based local food economy

PRESENTATION STRUCTURE



INTRODUCTION

CUBA



USA ownership and control dominant in Cuba's politics and economic sectors







ALAMAR



1898 -

BACKYARD USA

American -style suburbian paradise 'Plan El Olimpo'

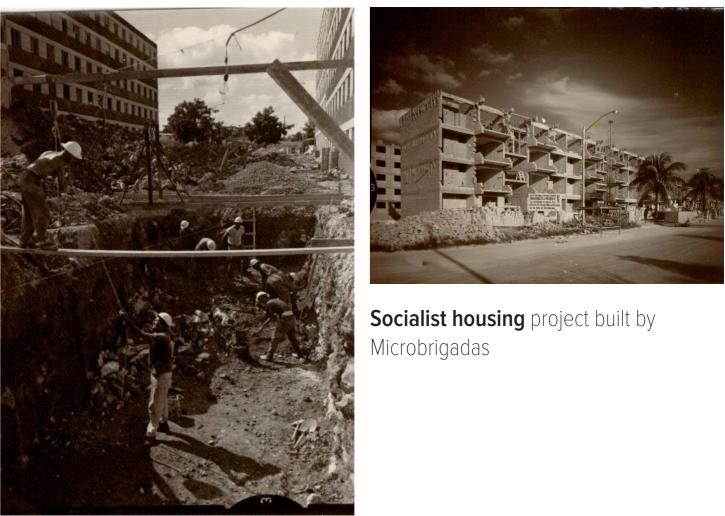
CUBA

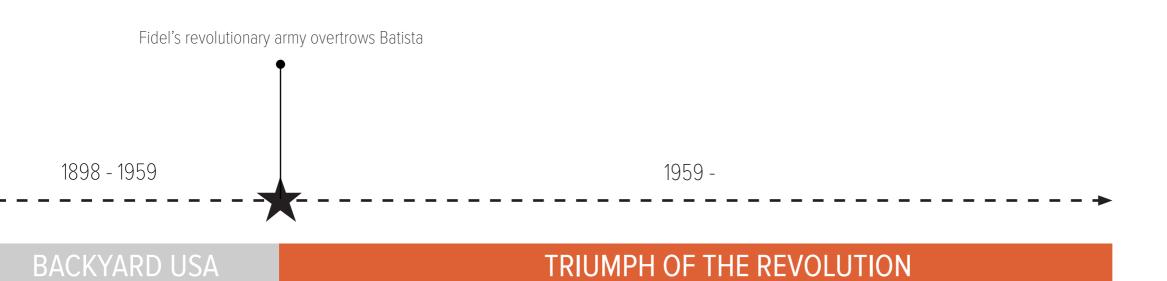


Nationalization and socialization of society and economic sectors. **USA** embargo results in new economic dependence on ideological partner **USSR**









ALAMAR

CUBA



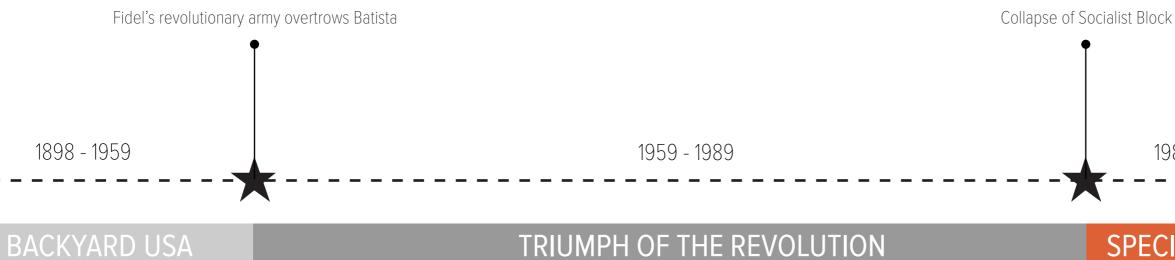
Loss of economic support and import-export market results in collapse national economy, creating a severe **scarcity in** gasoline, food and materials











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ALAMAR

Alamar isolated from the rest of Havana. Out of necessity the vacant areas of the unfinished urban fabric are **cultivated to** ensure the local food security

1989 -

SPECIAL PERIOD

ALAMAR

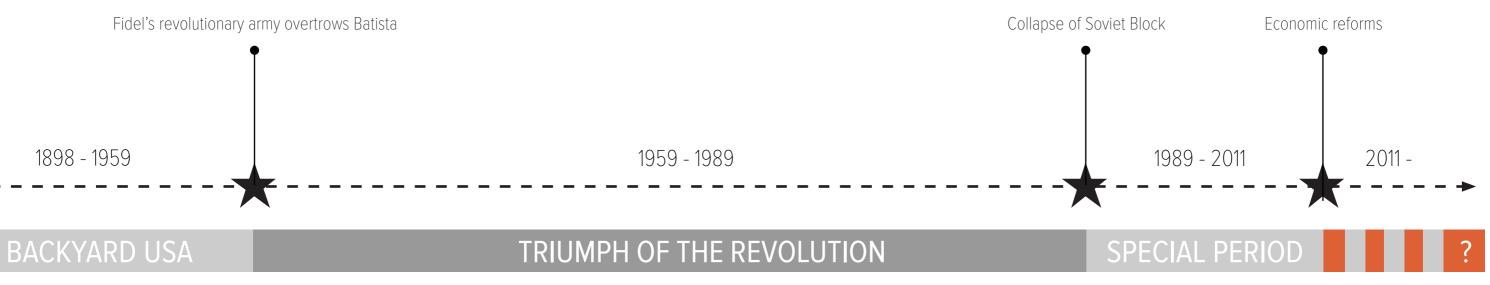
CUBA





Start of **decentralization and** privatization of politics and economy and the reinforcement of international relations



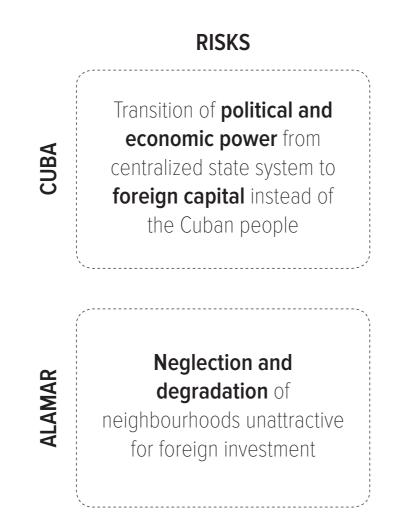




Alamar frontrunner in **sustainable** urban agriculture, but also referred to as 'City of Dreams'

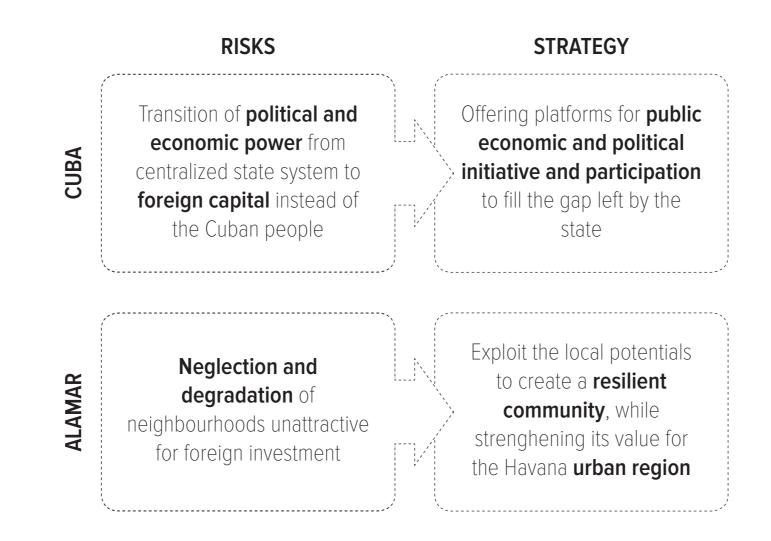
PROBLEM STATEMENT MANIFESTO

Cuba is on the brink of yet another **drastic political and economic change**



PROBLEM STATEMENT MANIFESTO

Cuba is on the brink of yet another drastic political and economic change



ALAMAR POTENTIALS

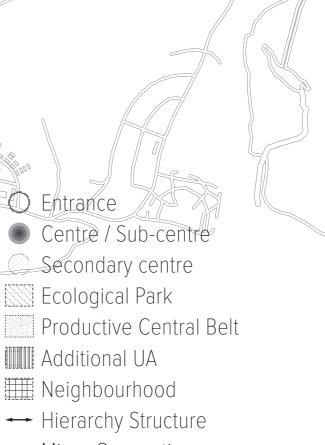
ALAMAR STRATEGY



ALAMAR STRATEGY

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- Professional level of Urban Agricultural practice
- Position Alamar within the Havana region



----- Minor Connection

ALAMAR POTENTIAL

Alamar is a frontronner in Sustainable Urban Agriculture



- Ensuring the local food security
- Providing **employment** and social benefits
- Important centers of social community life
- **Vivero**: center of UA research and innovation



Promotion and support of farming and healthy

• Catalyst for local entrepreneurship

ALAMAR POTENTIAL

Local processing and retail of agricultural produce

THE SUGARCANE WORKSHOP



THE ORGANOPÓNICO STAND

THE MOBILE SHOP

- Ensure the accessibility to a varied selection of high quality fresh products
- Provide employment and extra income

THE STATE-RUN SHOP



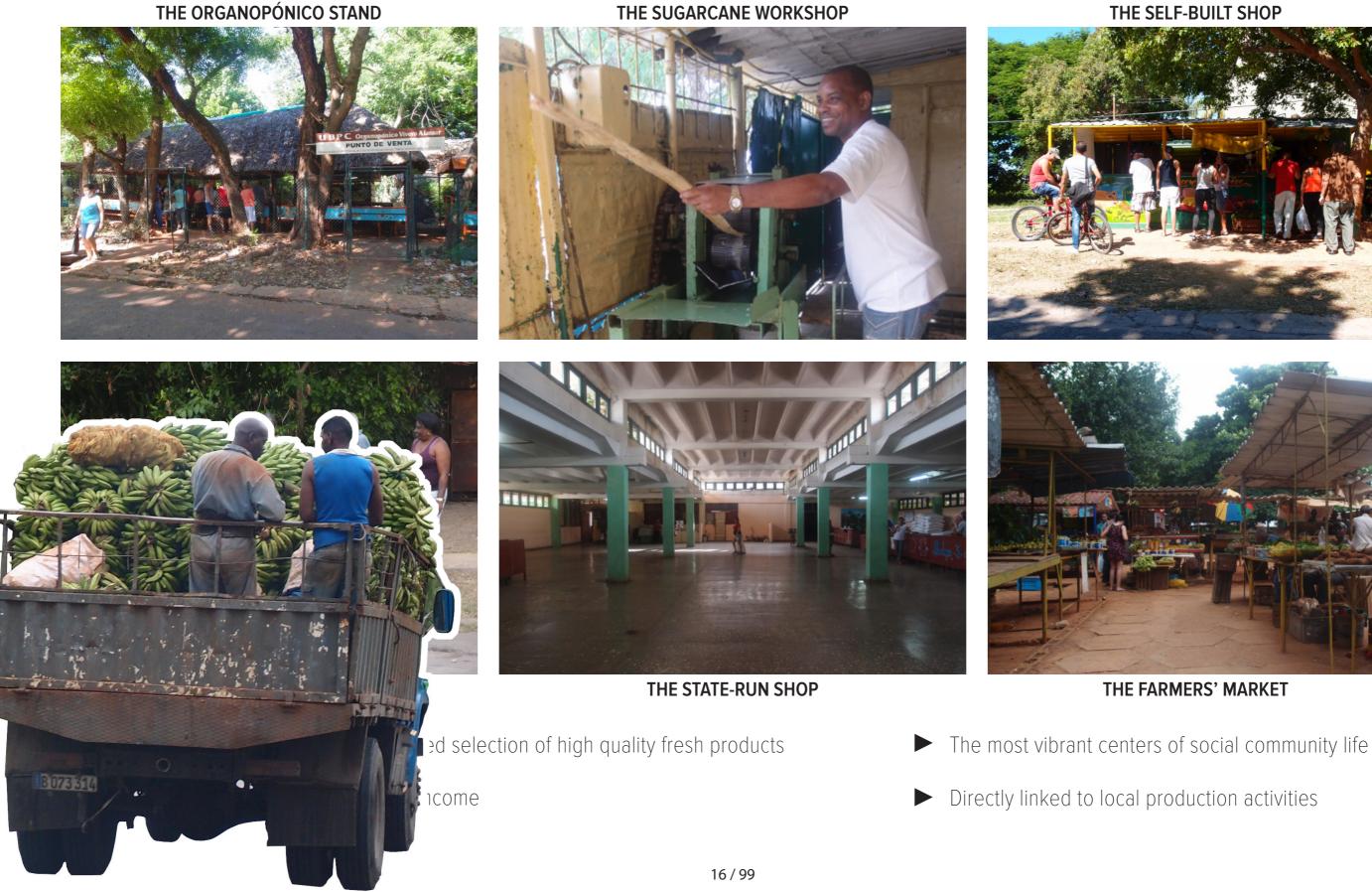
THE FARMERS' MARKET

► The most vibrant centers of social community life

Directly linked to local production activities

ALAMAR POTENTIAL

Local processing and retail of agricultural produce







THE FARMERS' MARKET

Alamar as endpoint of Havana's **Agricultural Belt** and **centre of Havana del Este**



HAVANA AGRICULTURAL BELT

B073314

Havana has a total area of ±72.826 ha, with a cultivated area of ±35.900 ha

- 5 agricultural enterprises, which manage about 700 crop farms, 170 cattle farms, 27 tree production units, 2 pig and livestock production companies and 29 agricultural cooperatives
- **97 high-yielding organopónicos** and 318 intensive gardens, which can achieve yields of up to 20 kg/m²

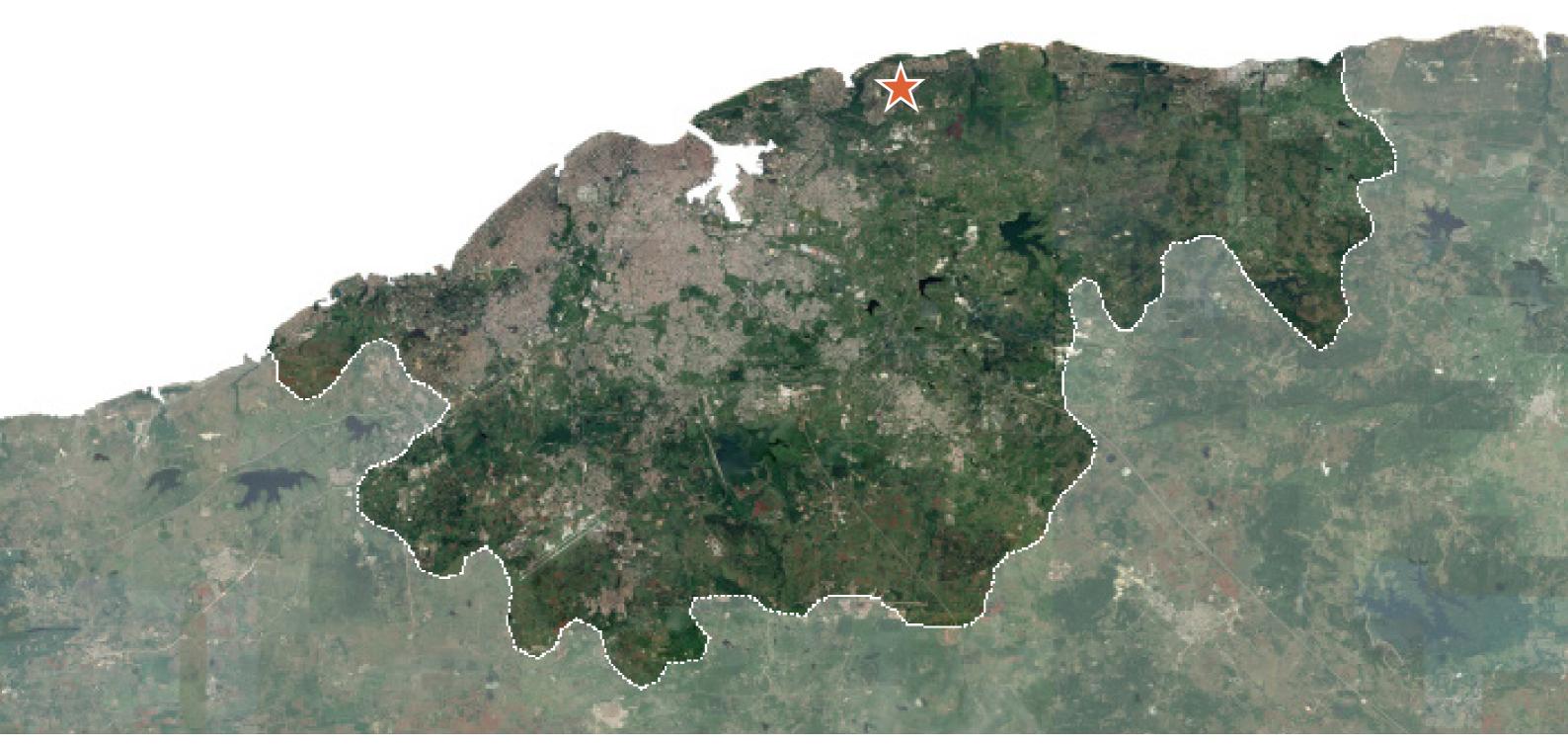
inhabitants

89.000 household gardens and 5.100 popular gardens cultivated by local



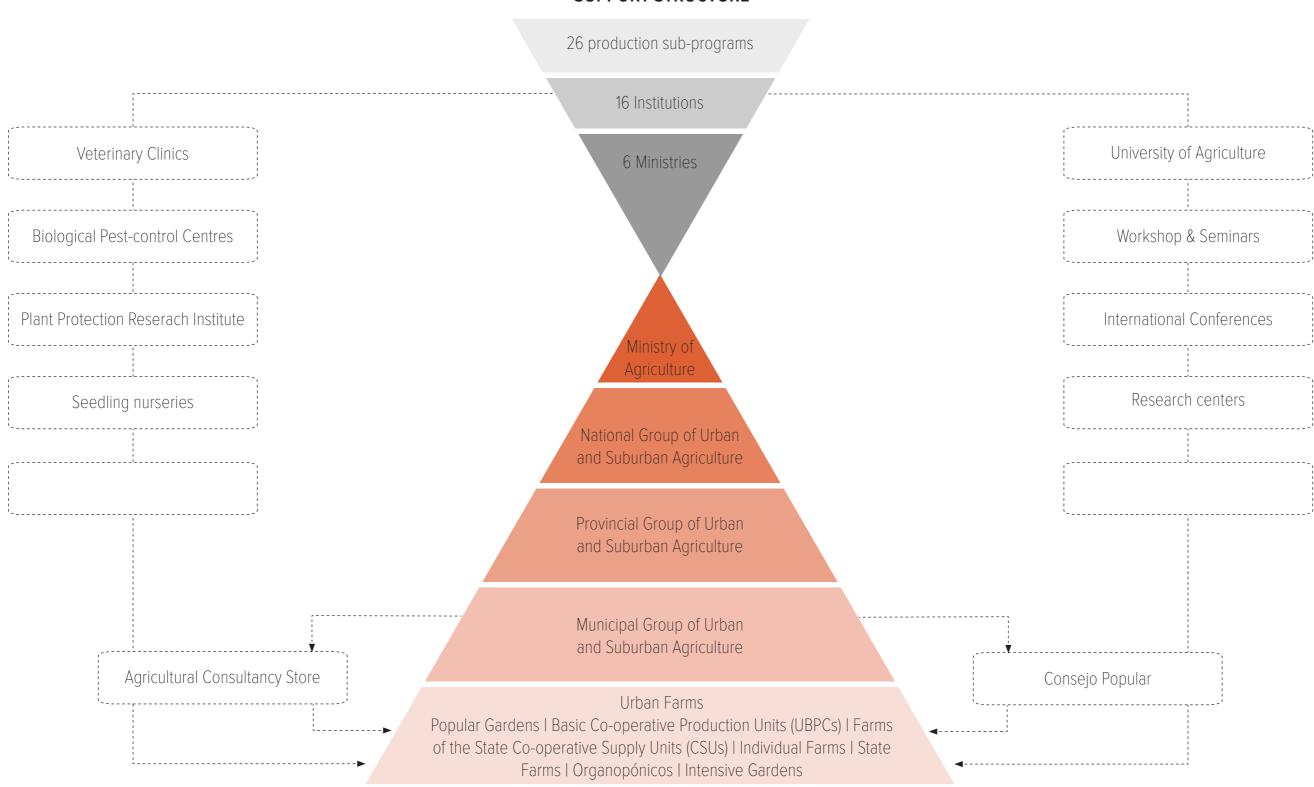
Production provides in 70% of all fresh vegetables consumed in Havana

► WHO and FAO recommend a minimum of 400gr of vegetables and fruits per day ► Havana has a population of **2,2 million** people, requiring 321.200 tonnes of fresh produce a year



Currently, Havana's UA production in Havana can provide in **25% of the cities** recommended consumption

Urban Agricultural production widespread, state-supported and institutionalized



SUPPORT STRUCTURE

MAIN STRUCTURE

Urban Agricultural production widespread, state-supported and institutionalized



ITEMS FOR SALE AT CENTER FOR AGRICULTURAL AND RURAL COOPERATION (CIA) IN ALAMAR

PROBLEM STATEMENT

Development of Urban Agriculture in danger

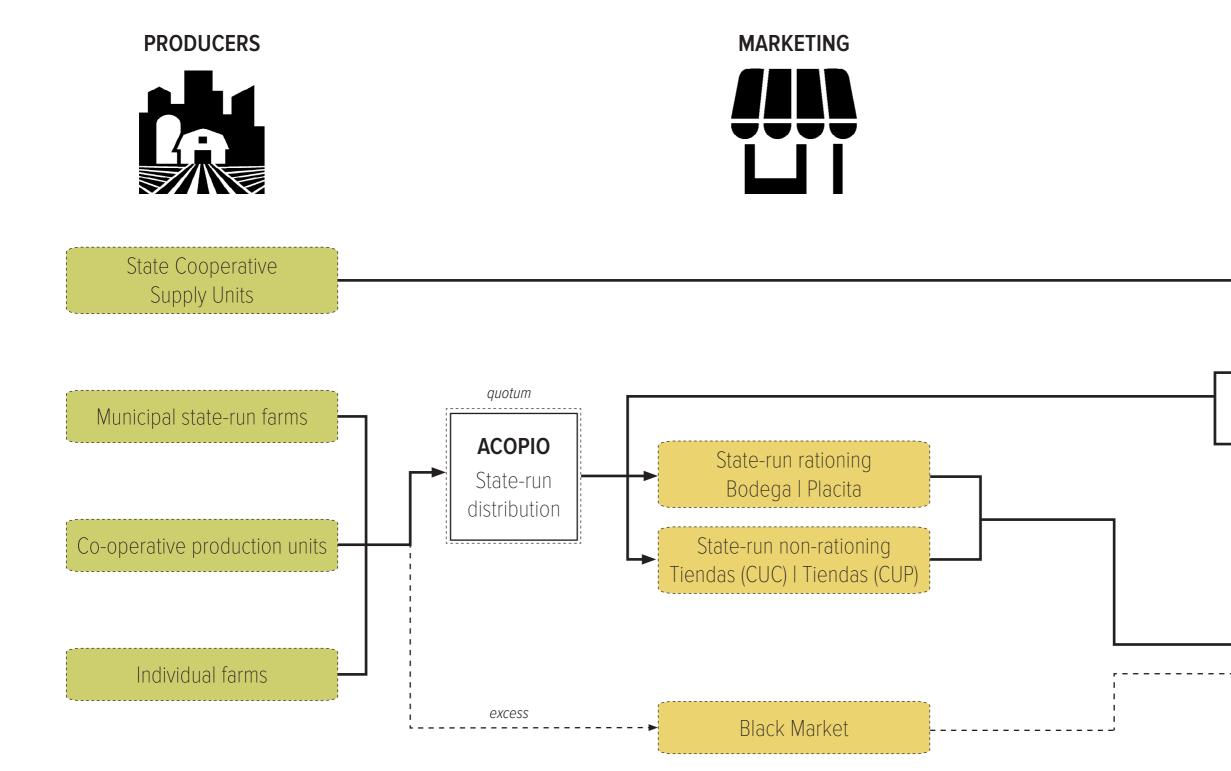
FRAGILE SYSTEM

Scarcity of resources such as tools, materials machinery, irrigation water and seedlings.

Support by Cuban government has been limited to the urbanization and decentralization of 'production', **neclecting the transformation of the food economy as a whole.**

Highly centralized food distribution system (Acopio) is inefficient and offers little material incentives and marketing opportunities.

FOOD DISTRIBUTION IN CUBA



CONSUMERS



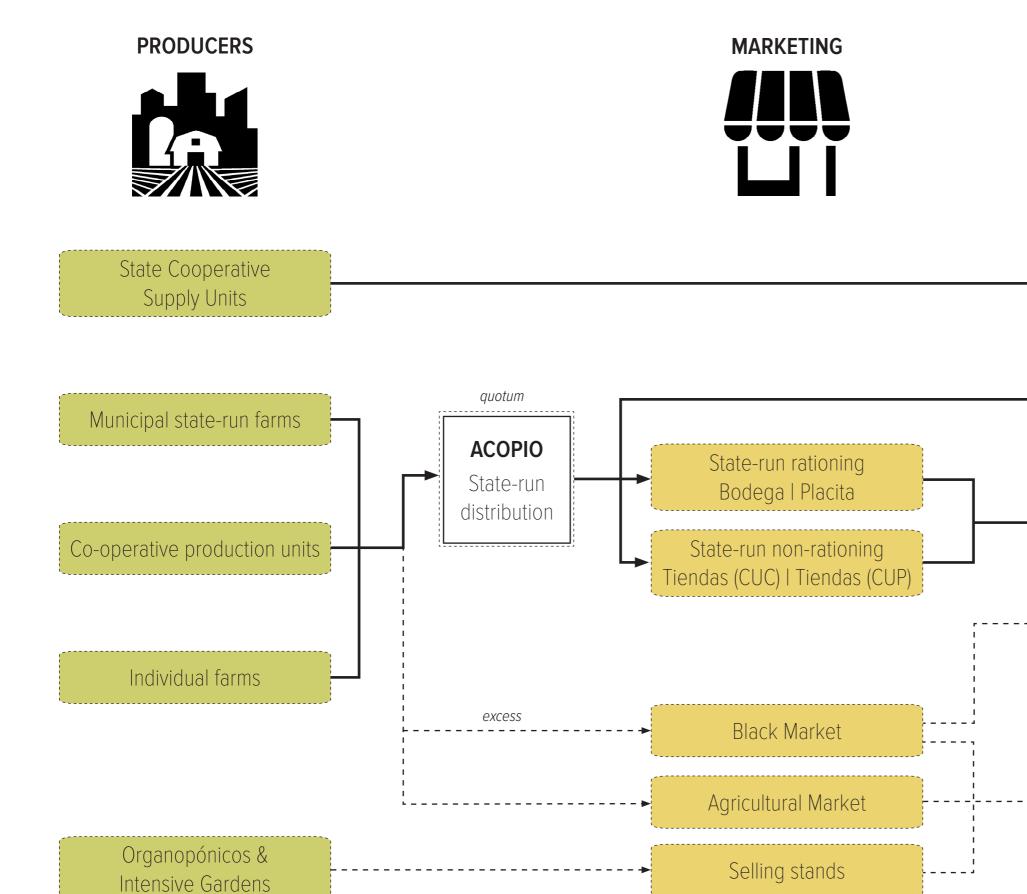
Industry

Export Market

Public Institutions



FOOD DISTRIBUTION IN CUBA



Popular Gardens

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CONSUMERS



Industry

Export Market

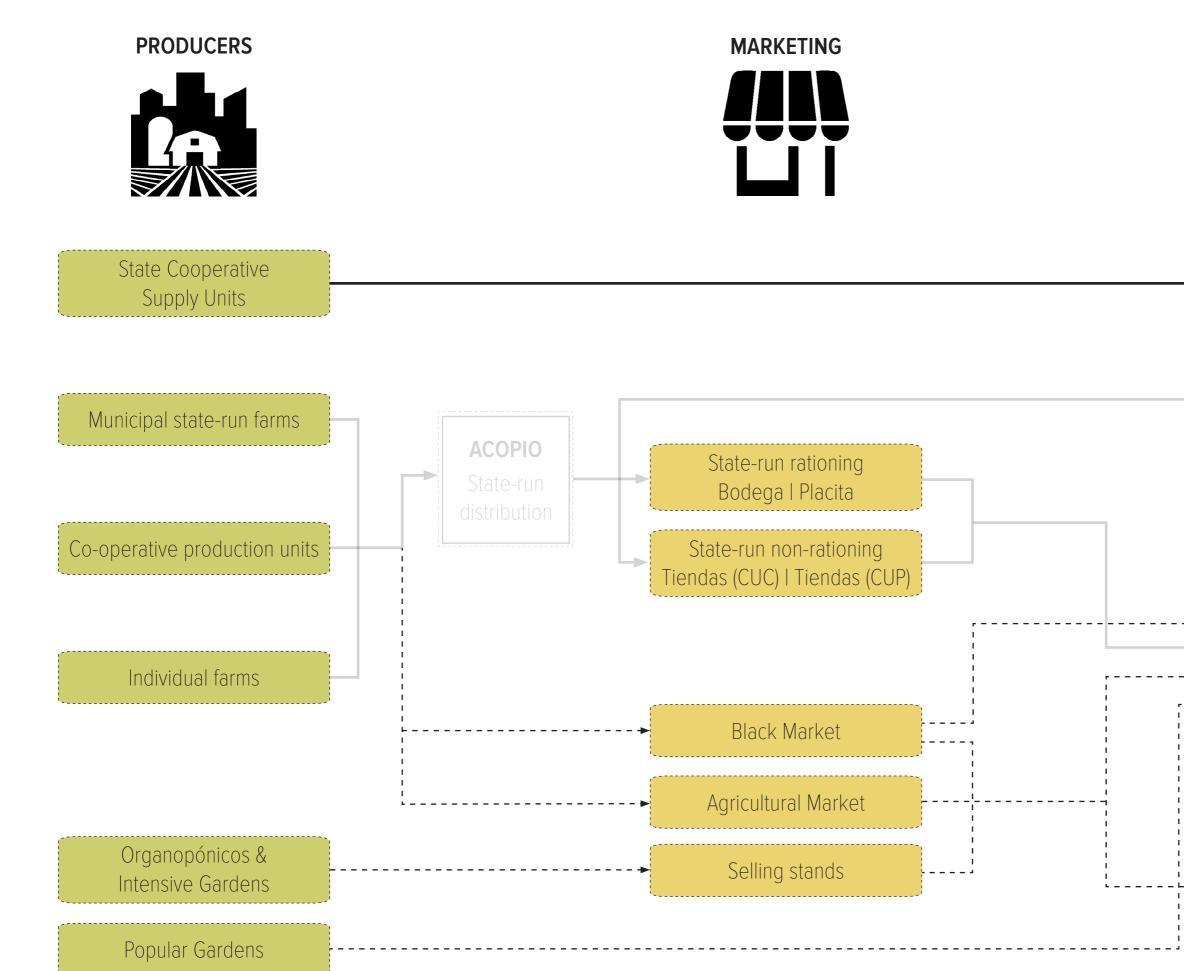
Public Institutions

Tourist Industry

Citizens

Paladares

FOOD DISTRIBUTION IN CUBA



CONSUMERS



Industry

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WHOLESALE IN CUBA

"El Trigal"

The rise and fall of Cuba's first wholesale market 2011-2016

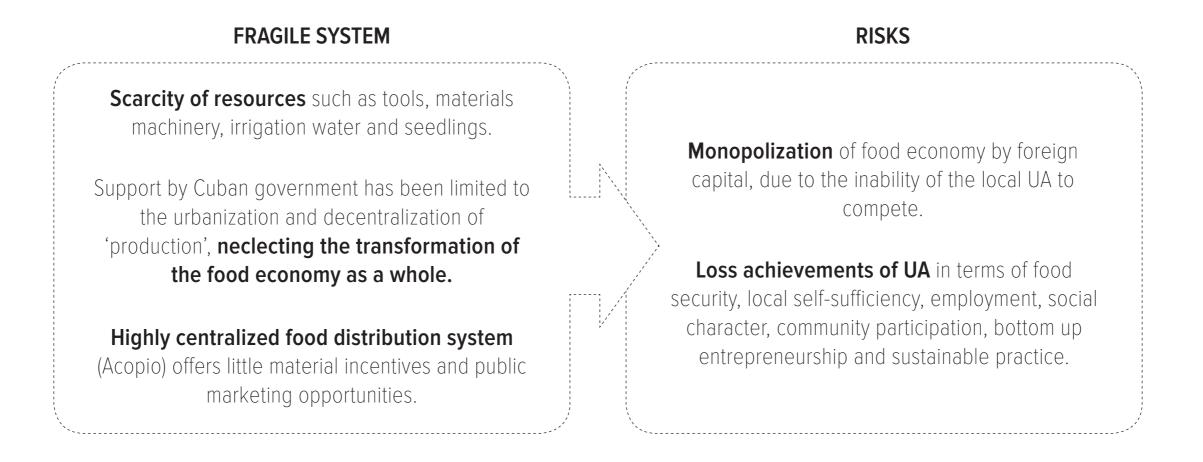


"This is providing a solution to the problem that farmers have been complaining about, that when their harvast surpassed the amount contracted by the government they didn't have anywhere to market the excess, to sell wholesale."

- Claudio Sabron, cooperative member of El Trigal

PROBLEM STATEMENT

Development of Urban Agriculture in danger



RESEARCH QUESTION

How can the introduction of a new economic platform for the distribution and marketing of urban agricultural products protect and facilitate the decentralization, democratization and re-urbanization of Alamar's local food system?

INTERVENTION PROPOSAL

Cooperative Urban Agricultural Auction Alamar

AMBITION :

Creating a resilient, sustainable, community-based local food economy



INTERVENTION LOCATION

Why in Alamar?

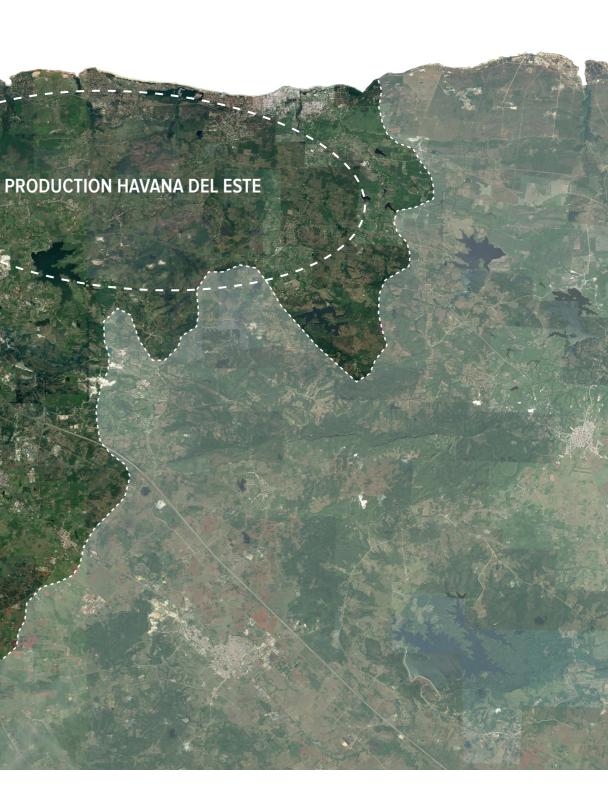
Convenient position between the regional UA productional areas of Habana del Este and the Havana Agricultural belt on one side, and the densely populated consuming city of Havana on the other side.

Accessible for all scales of both urban and peri-urban agricultural practice

Home to internationally most celebrated example of sustainable urban farming and related research: Organoponico Vivero

CONSUMING CITY OF HAVANA

HAVANA AGRICULTURAL BELT



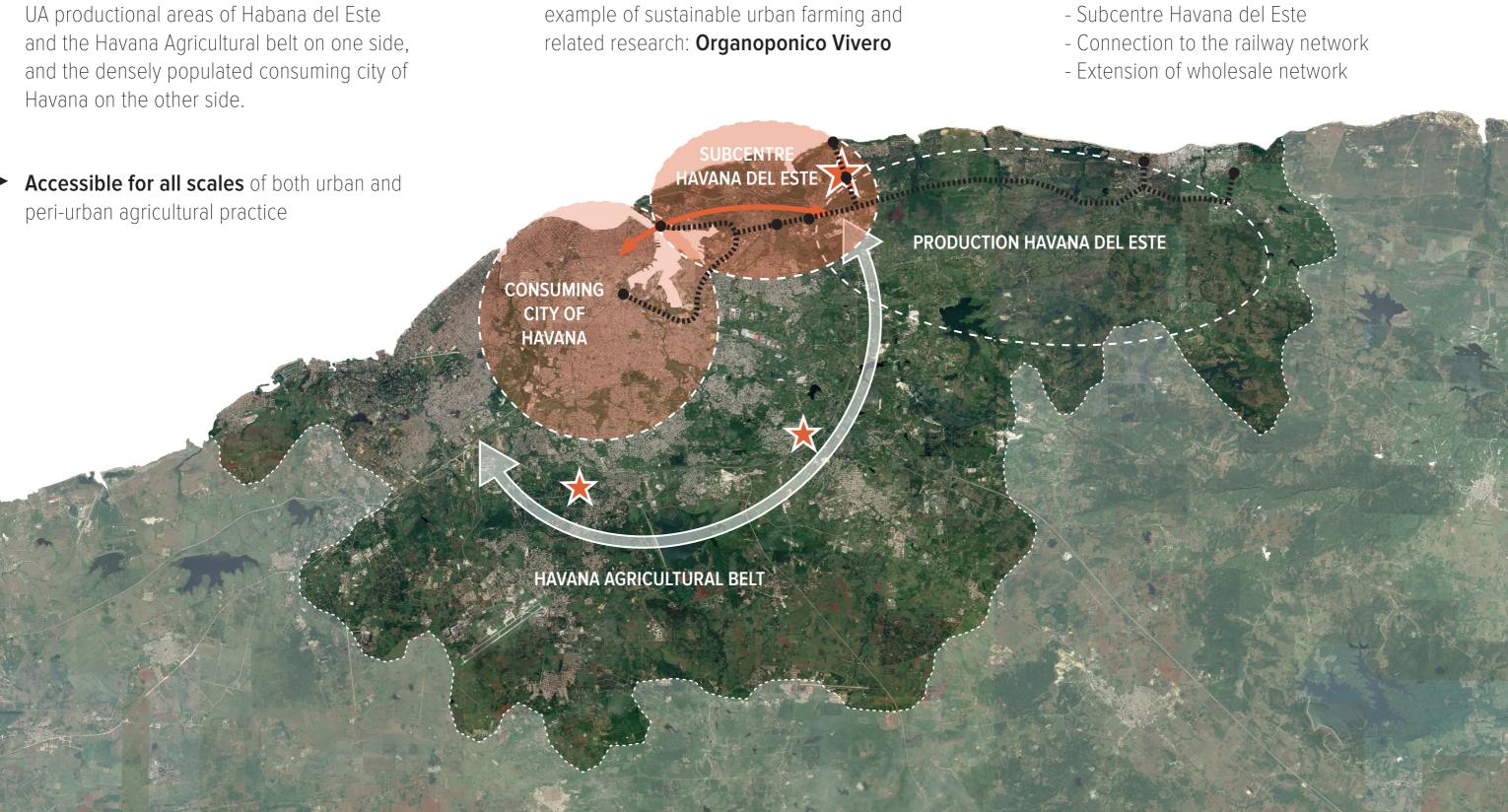
INTERVENTION LOCATION

Why in Alamar?

Home to internationally most celebrated example of sustainable urban farming and related research: Organoponico Vivero

Convenient position between the regional

Anticipating the future:



INTERVENTION LOCATION

Camilo Cienfuegos

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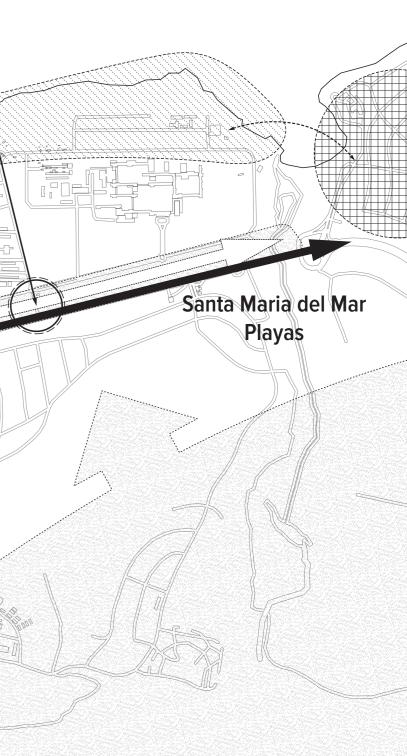
Connection to local and regional distribution network

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WALLAND TO A CONTRACT OF THE OWNER OWNER OF THE OWNER OWNER

- Connection to urban and peri-urban production
- Accessible for both **local individuals** and regional professionals

Havana Vieja Havana del Este



Production Havana del Este

PROGRAM

WHY AUCTION? *Objectives*

AMBITION OF PLATFORM

- Facilitating the seemingly inevitble **transition** to a free market economy
- Transfering economic power from centralized state system to the cuban public
- Protecting the achievements of the urban agricultural practice

Advocates of locally driven food systems:

"The auction is a promising platform for the **aggregation of products** and **brokering relations** between consumer, producer and buyer in a sustainable locally based resilient food economy"

WHY AUCTION? Characteristics

MAIN CHARACTERISTICS AUCTION

- **Cooperative organization**, by and for the producers, stronger position in market
- Small producers can **sell in bulk**
- Not an economic stakeholder, but **intermediary** between buyers and producers
- Social responsibility for long term sustainability of price-forming and a stabile balance in the supply and demand

ACTIVITIES AUCTION

- **Transparent** marketing an pricemaking process
- **Objectivity** by quality control of size, weight and quality
- Collaboration with institutions specializing in production, selective breeding, processing, research and innovation concerning agriculture
- Logistic facilities: collecting, treatment, packaging, distribution
- **Catalyst** for economic opportunities in related sectors
- **Promotion** of agricultural products

PRECEDENTS

Should Havana follow international modern precedents?



URBAN SCALE



Fresh Food Wholesale Market Rome



Fresh Food Wholesale Market Chile





Mercabarna Flor Market, Spain



Punjab Fruit & Vegetable Market , India



International Flower Auction Store, India

BUILDING SCALE



Fresh Food Wholesale Market Berlin

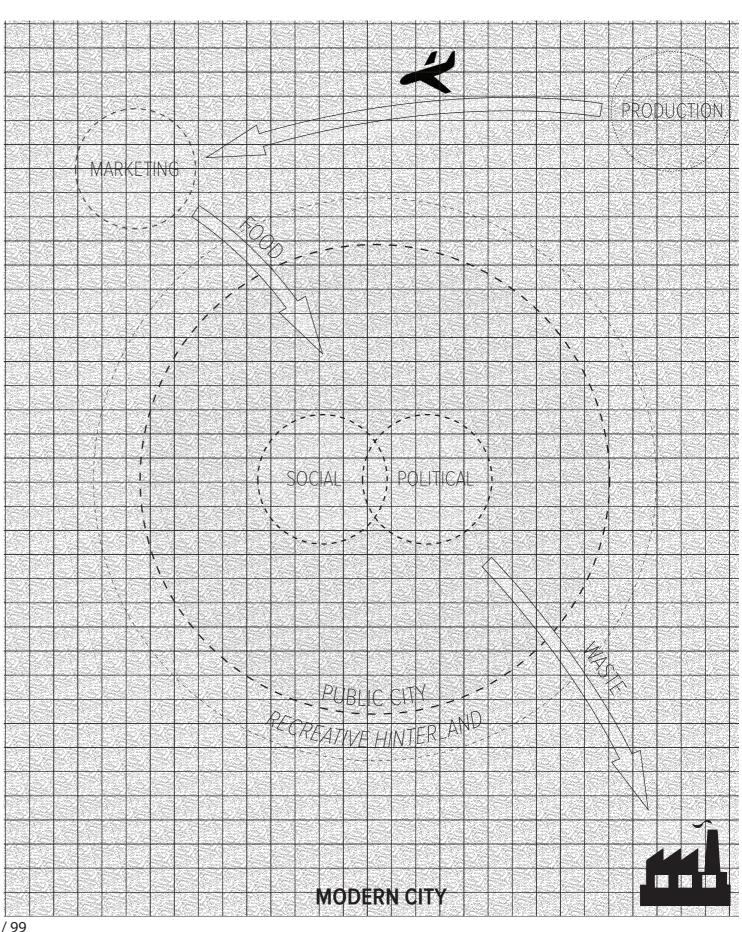


Taipei Flower Wholesale Market, Taiwan

MDERN FOOD ECONOMY

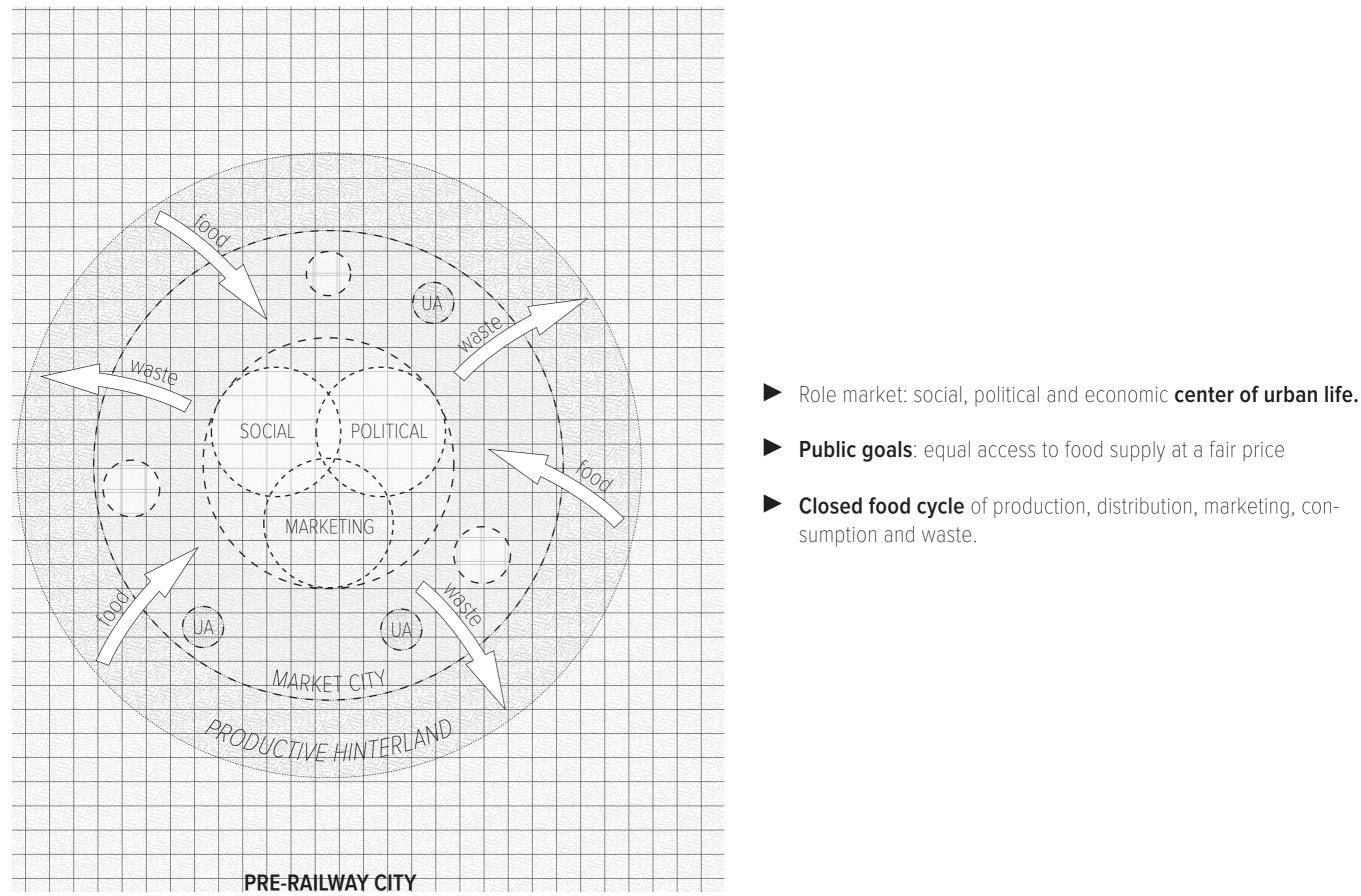
Reflection on the Existing Practice

- Role market: logistic sub-urb
- **Food cycle disconnected** from city life
- Private goals: major food monopolies controle supply ad prices
- Negative impacts: evironmental problems, neglection animal rights, social inequity, energy consumption, food monopolies, health issues, waste and a fragile food security.



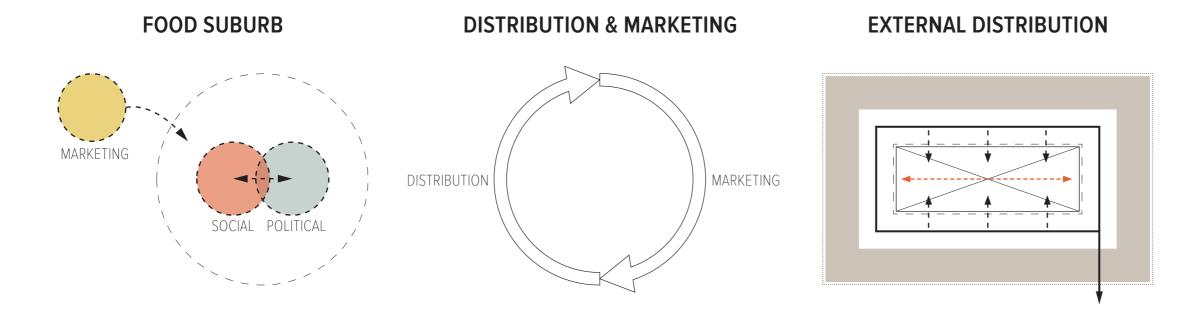
MODERN FOOD ECONOMY

Reflection on the Existing Practice

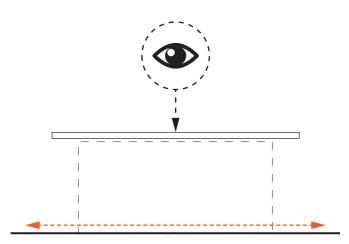


CONCLUSIONS TYPOLOGY RESEARCH

Main characteristics current practice

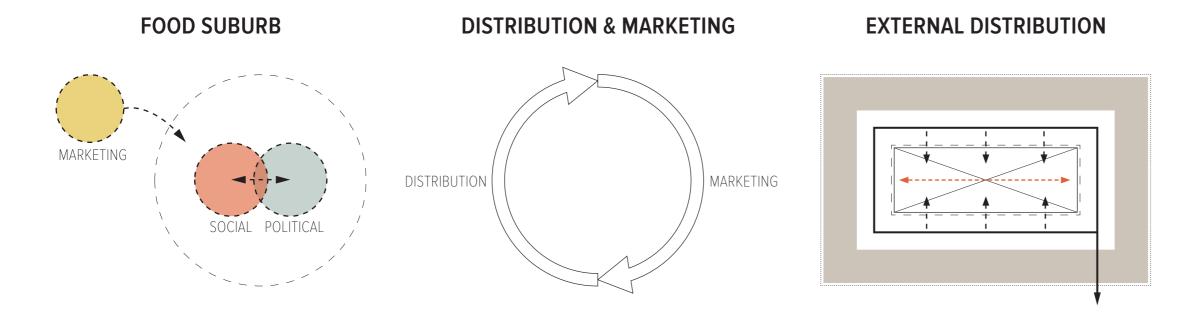


ROOF AS PROTAGONIST

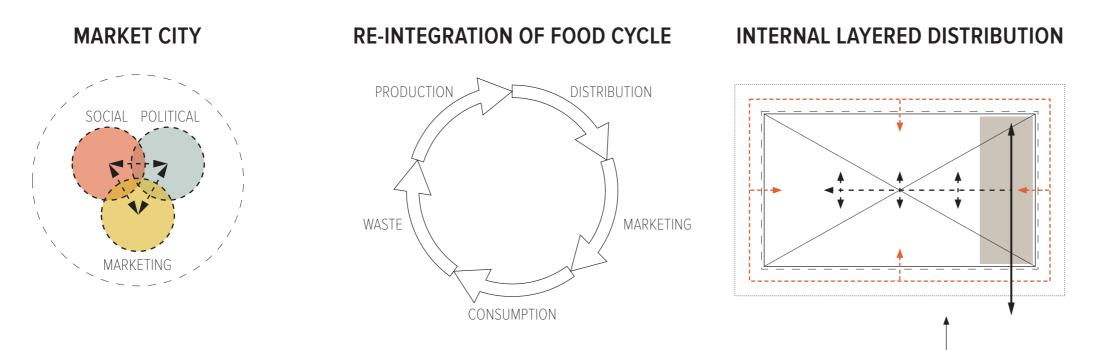


CONCLUSIONS TYPOLOGY RESEARCH

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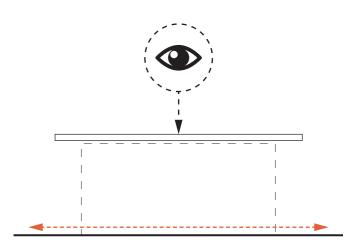


Strategy re-urbanization

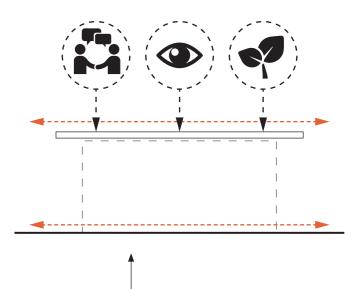


DENSIFICATION

ROOF AS PROTAGONIST



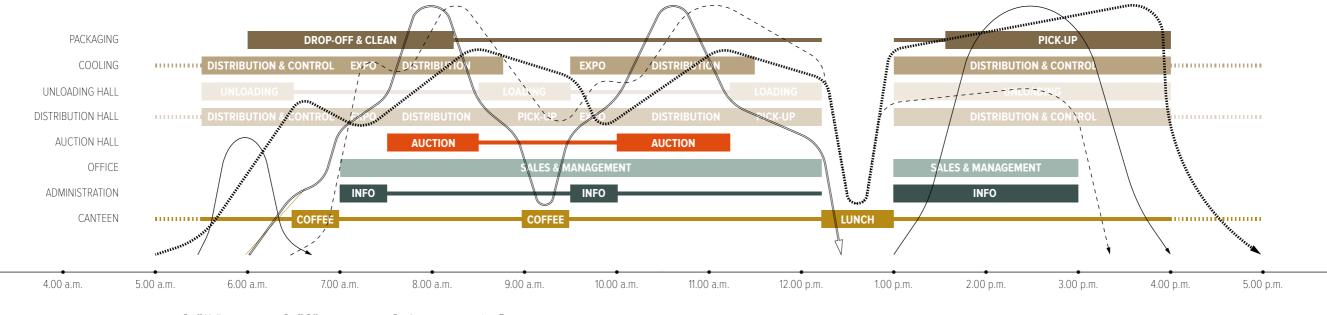
MULTIFUNCTIONAL ROOF



A DAY AT THE AUCTION

Research at the Cooperative Horticultural Auction Zaltbommel





····► Staff Hall --► Staff Office Producers ➡> Buyers

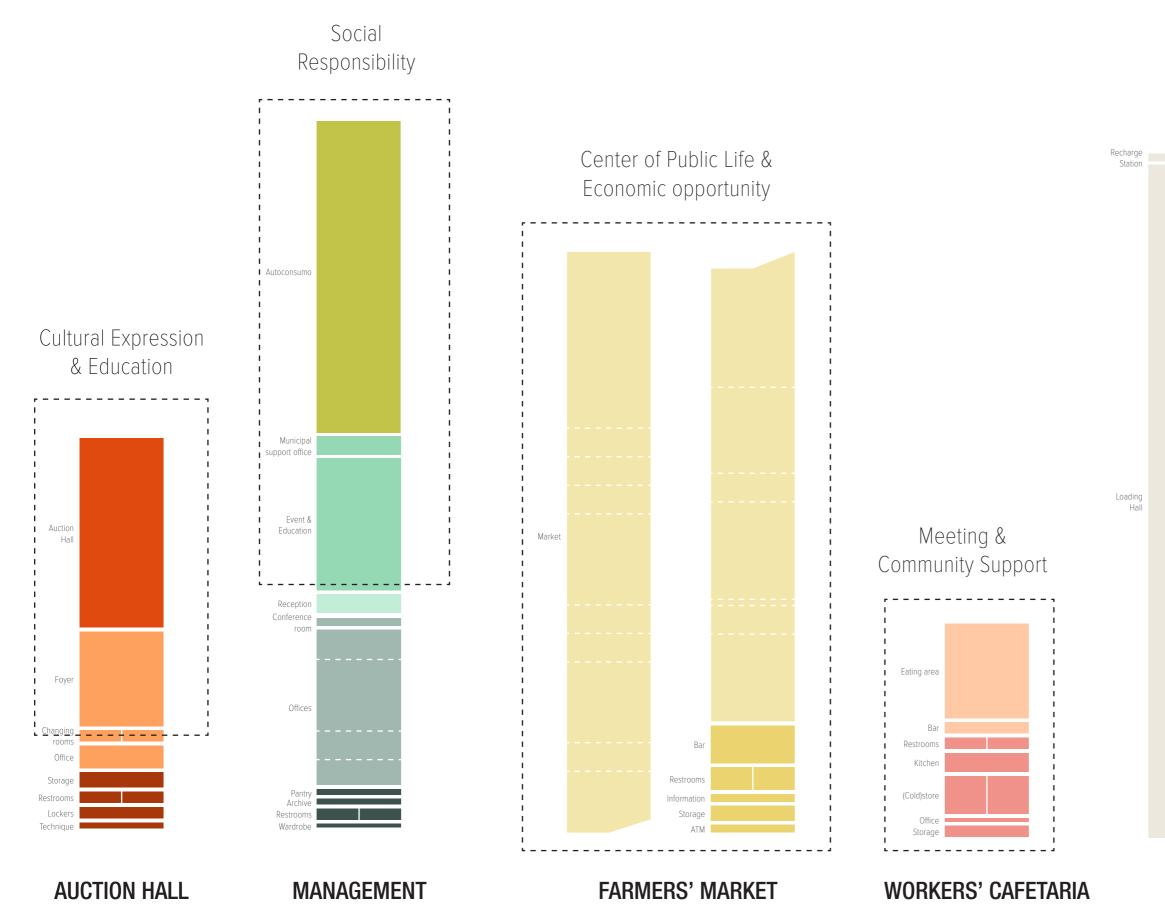




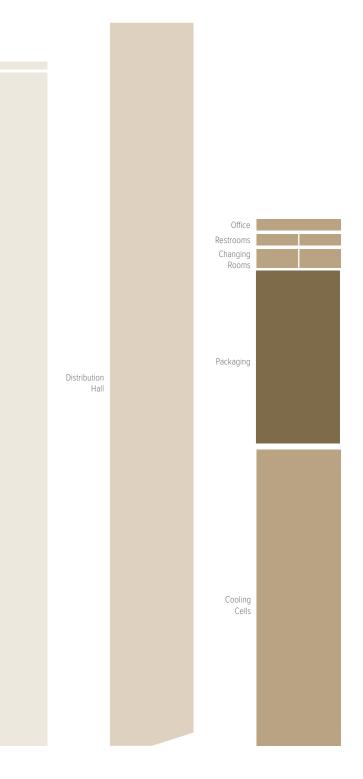


PROGRAM AUCTION ALAMAR

Combining Public & Auction Program



Densification and Vertical Layering of Program



DISTRIBUTION

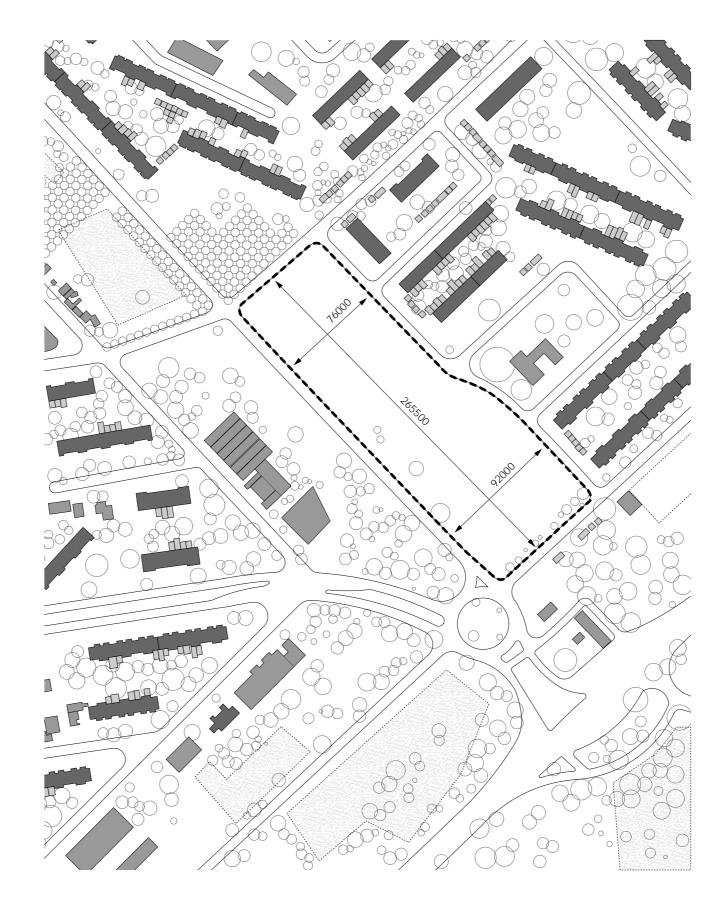


SITE



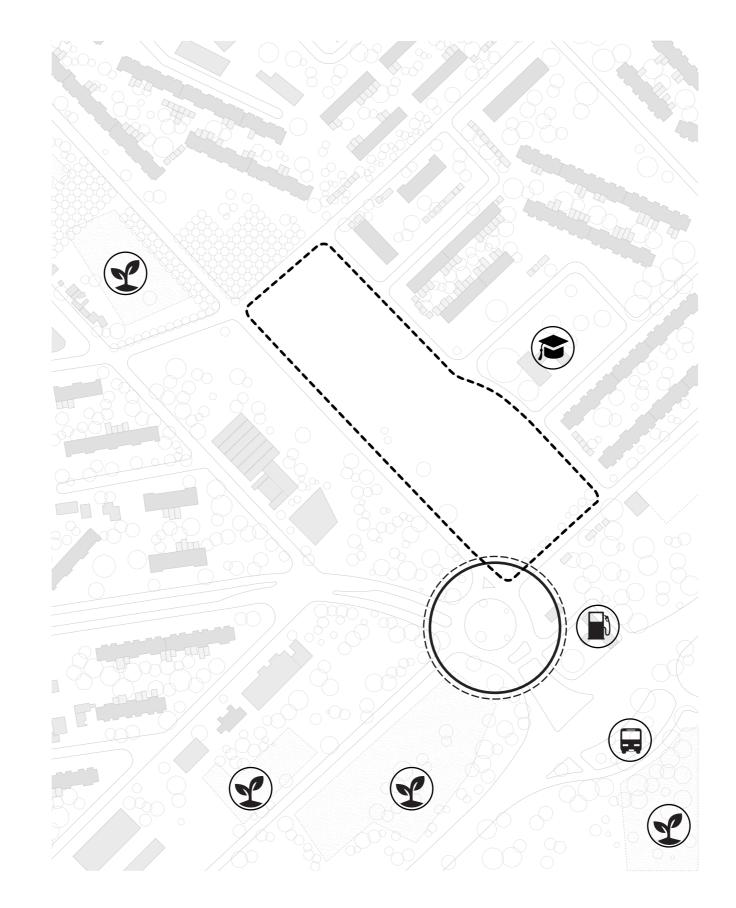
URBAN POSITION

Mapping of site



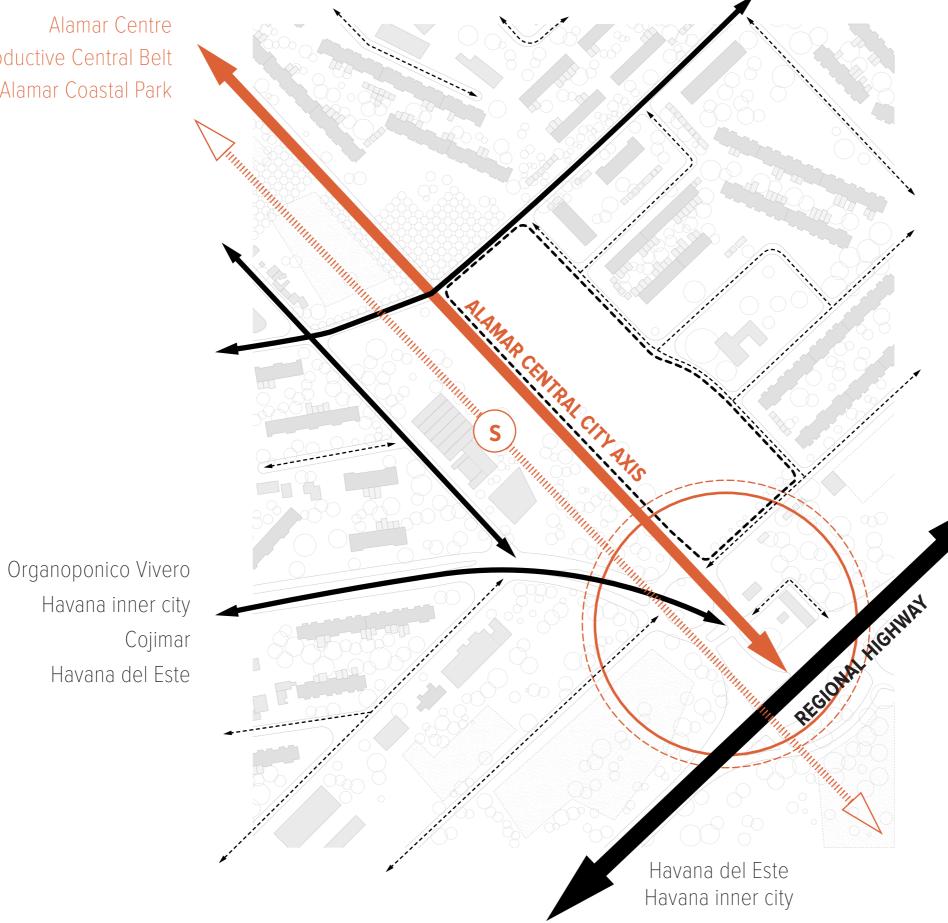
URBAN POSITION

Local facilities



URBAN POSITION

Road network



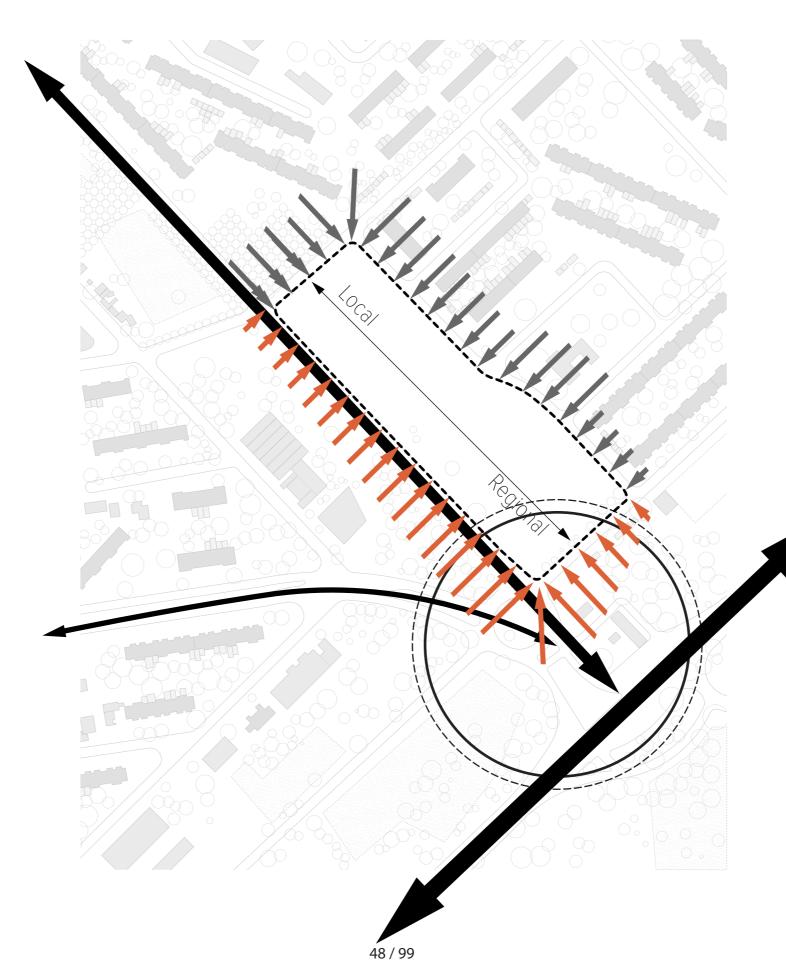
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Alamar Productive Central Belt Alamar Coastal Park

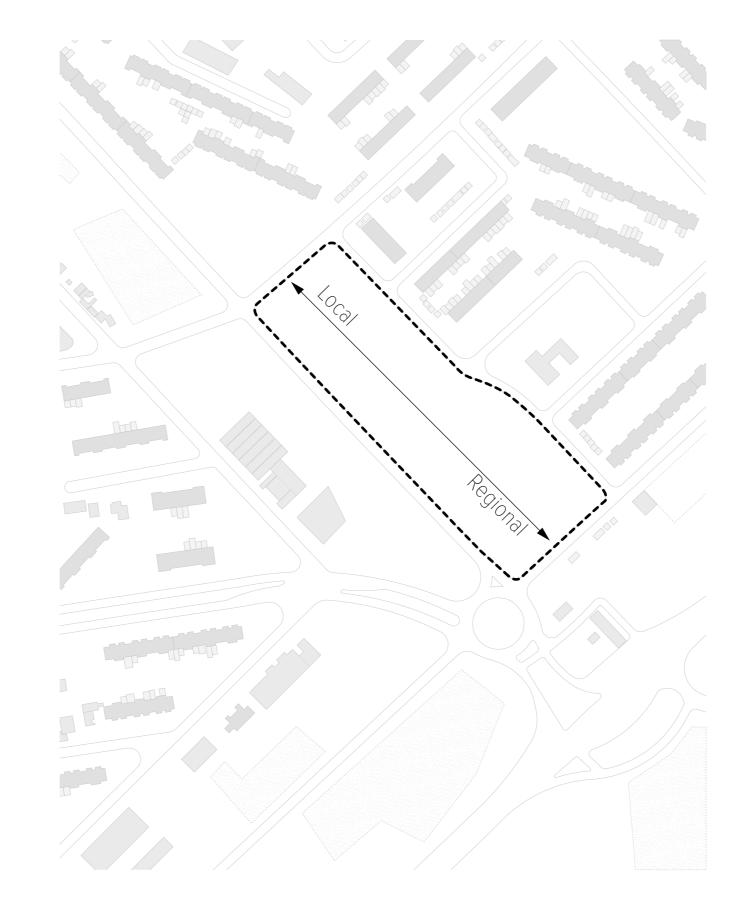
> Havana del Este producton region Santa Maria del Mar Playas

URBAN CONDITIONS

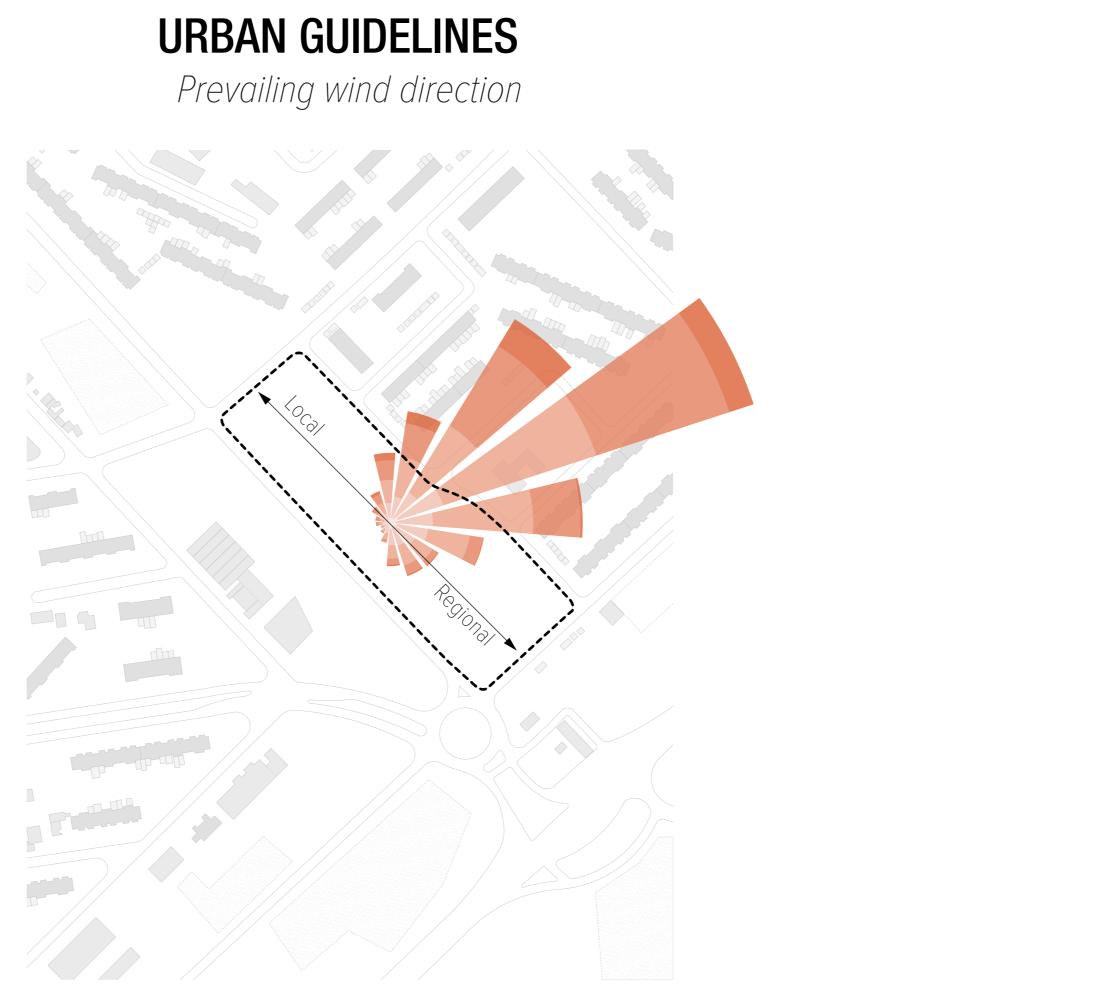
Regional v.s. local pressure



Regional v.s. local pressure



Building as a transistion zone, connecting and creating borders between the "local" and "regional".



Building orientation perpendicular to prevailing wind direction, to ensure natural ventilation

Characteristics public space



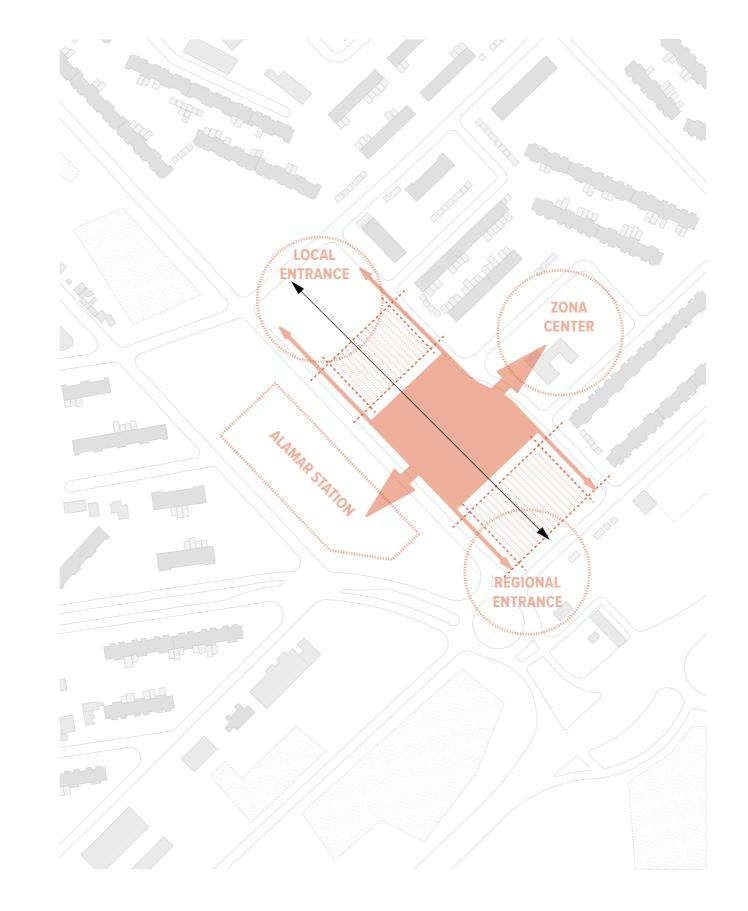
Building incorporates and facilitates the characteristics of the surrounding public areas

Mass design



Main building elements follow building guidelines for unobstructed lines of sight and circulation

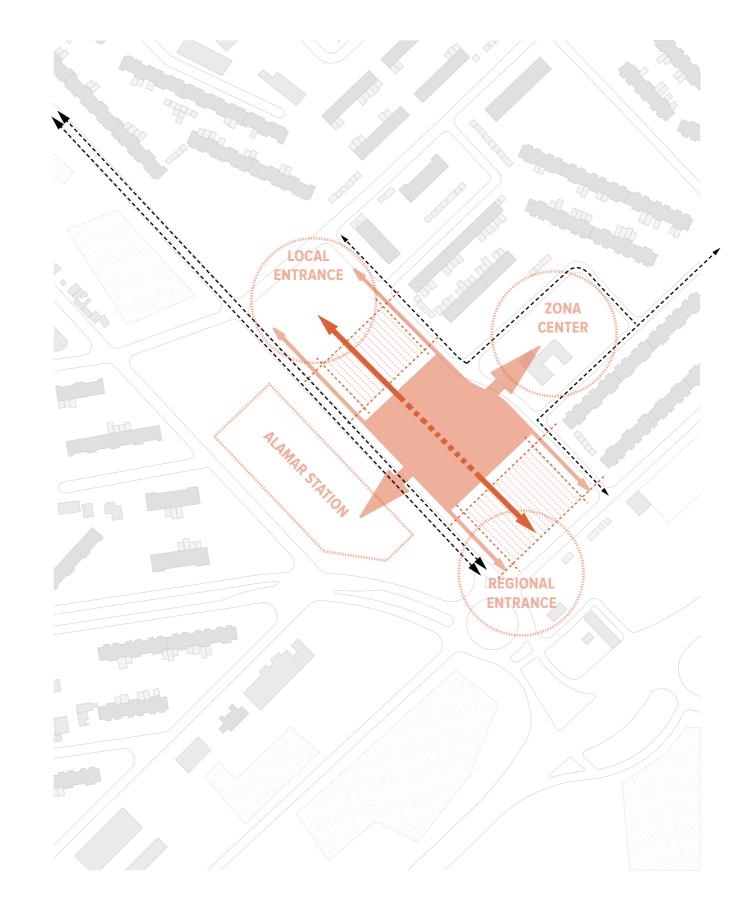
Central Public Market



The Central Public Market physically and symbolically connects the surrounding public areas

Ankers the building in its urban context

Circulation

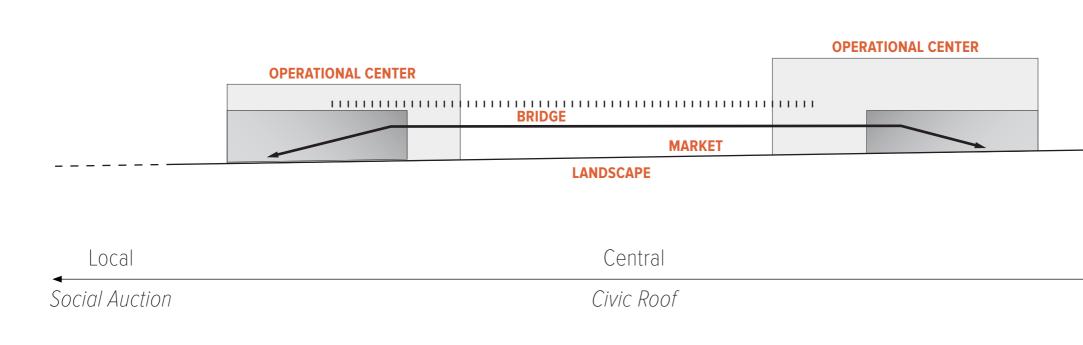


- Main city axis becomes boulevard
- Redirection local roads
- Local v.s. Regional orientation is translated into central circulation axis of the building

DESIGN BUILDING SCALE

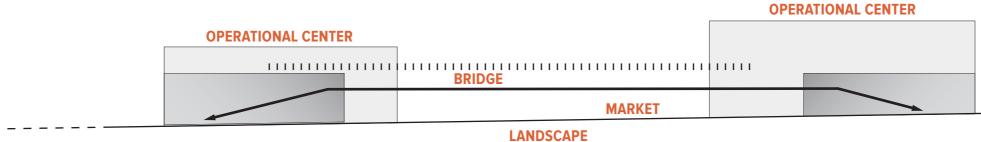
DESIGN ELEMENTS

Program Distribution



Regional Logistic Auction





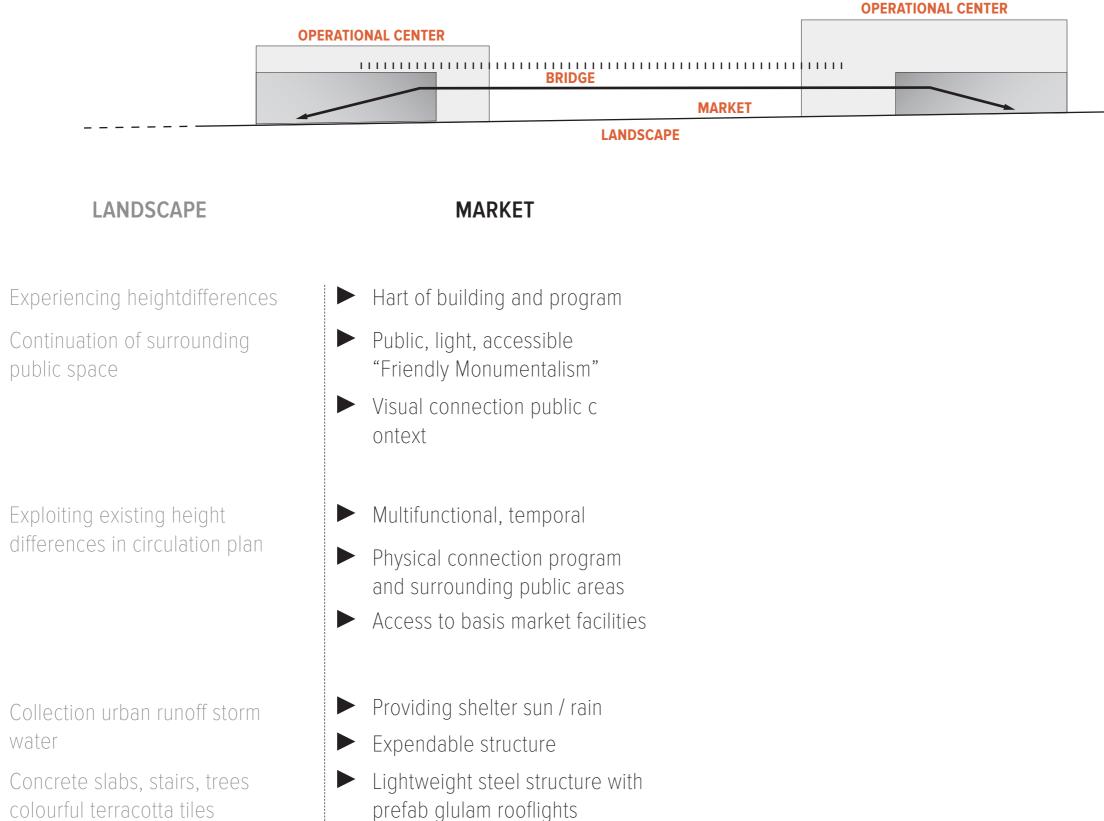
LANDSCAPE

- EXPRESSION
- Experiencing heightdifferences
- Continuation of surrounding public space

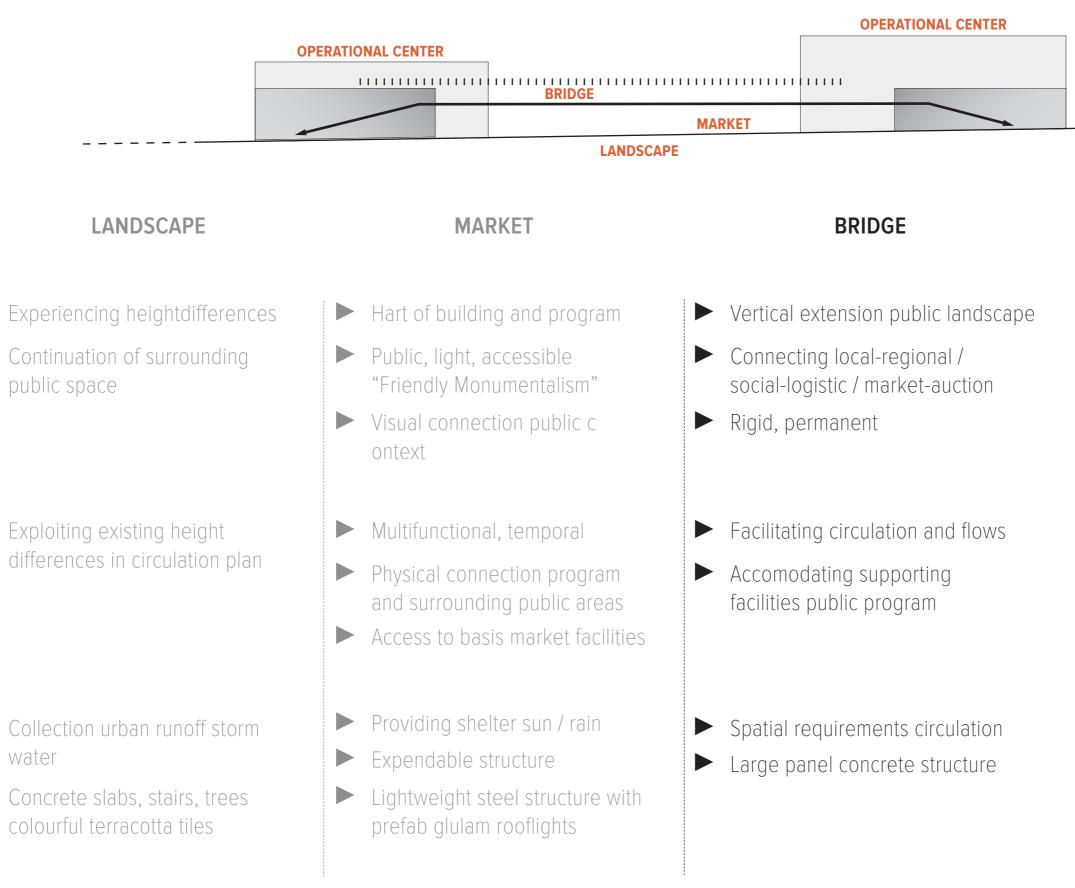
Exploiting existing height differences in circulation plan

- Collection urban runoff storm water
- Concrete slabs, stairs, trees colourful terracotta tiles







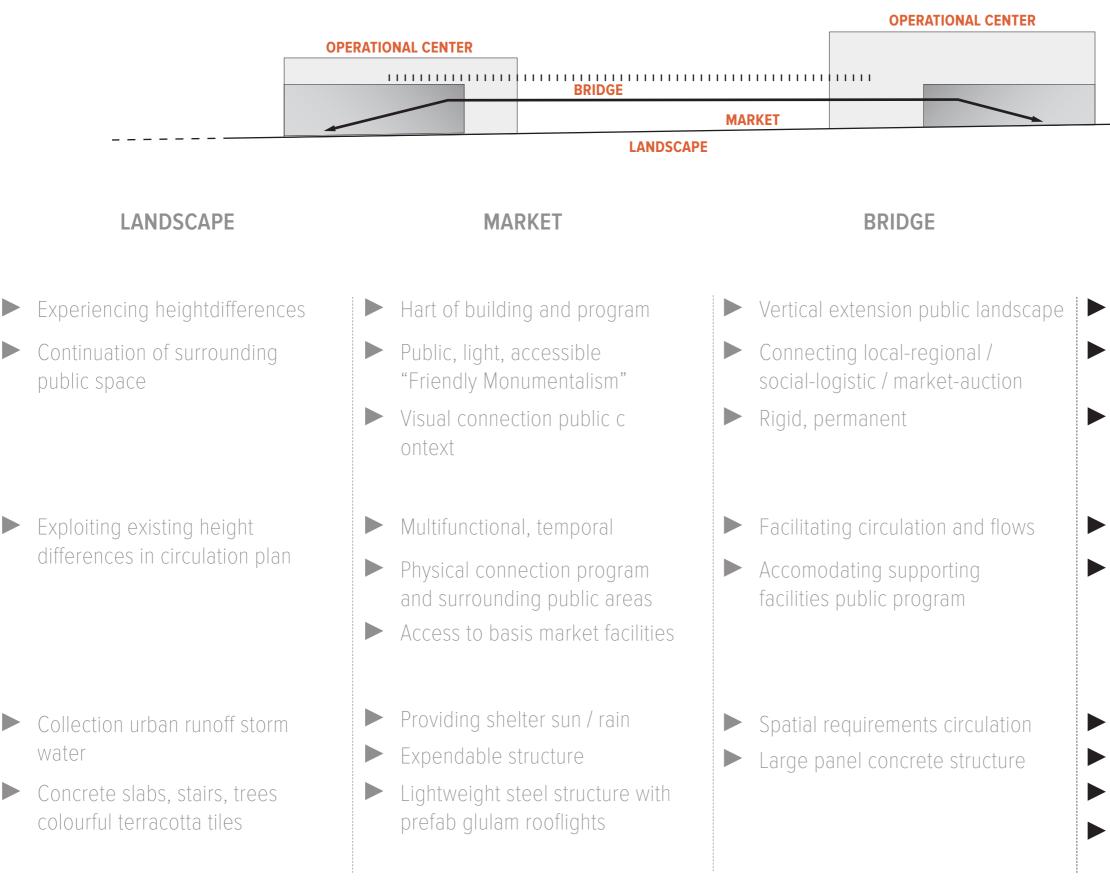


EXPRESSION

USE

TECHNICAL





AUCTION

- Privat
- Connecting local-regional / social-logistic / market-auction
- Rigid, permanent
- Logistic-management program
- Facilitating flows of fresh produce

- Spatial requirements circulation
- Conditioned climate
- Flexibility
- Prefab leightweigt concrete panels with terracotta bris soleil

MARKET Layout Principles Temporary Market

THEATRE SQUARE, ANTWERP

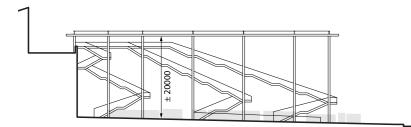


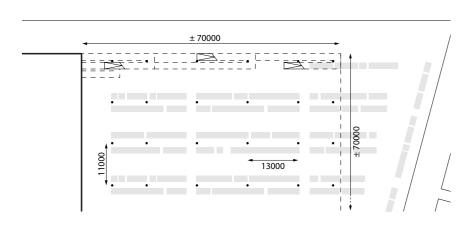
COLBERTA FOTOVOLTICA, FIGUERES

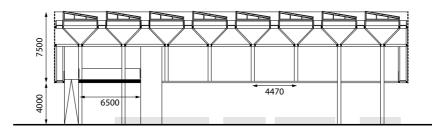


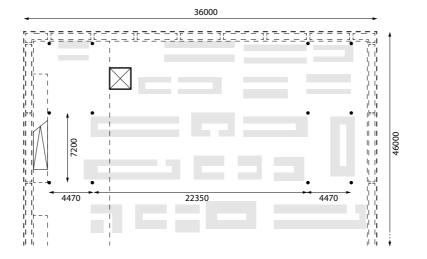
CAAC, CÓRDOBA



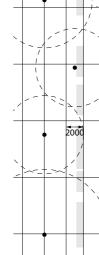




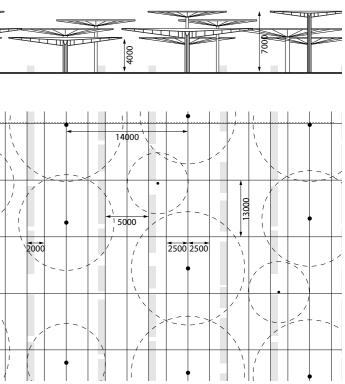






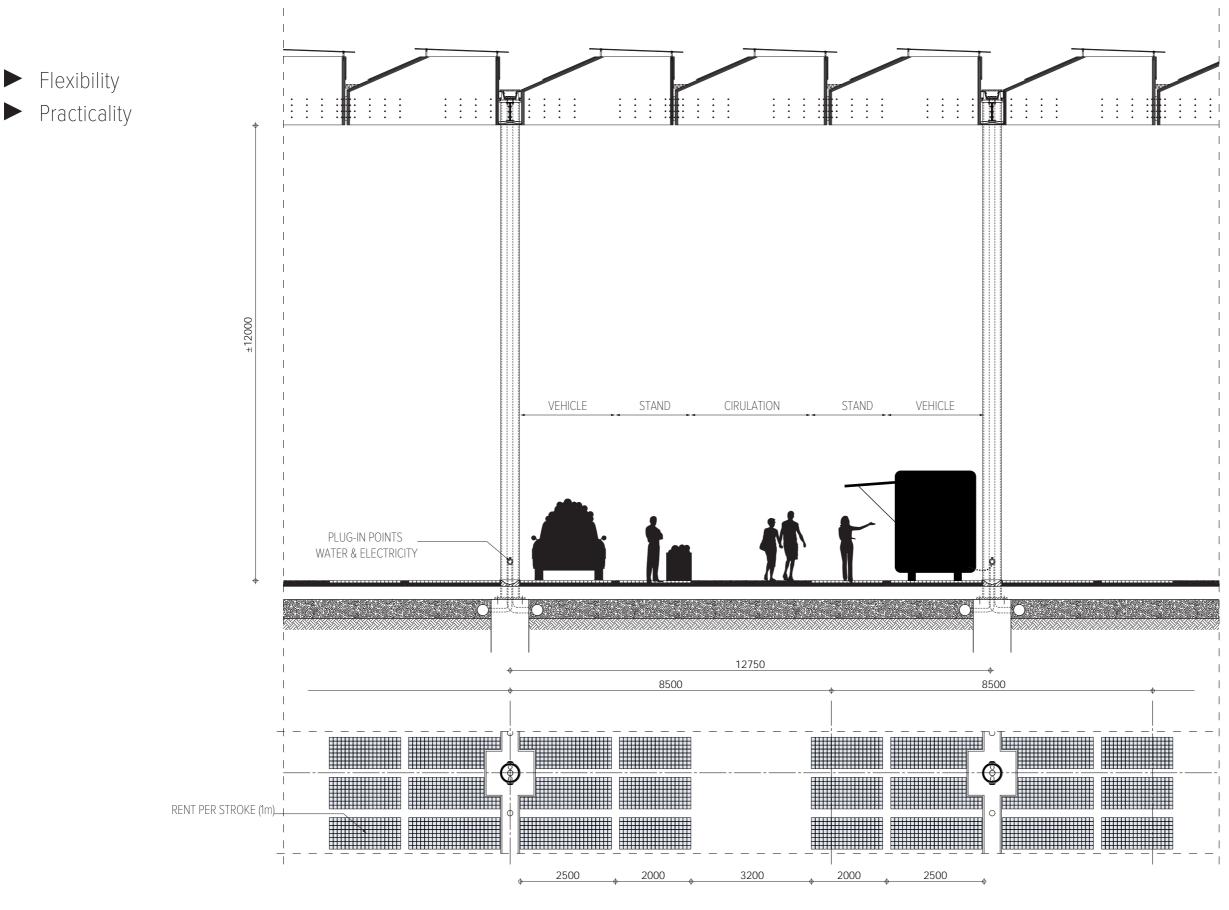








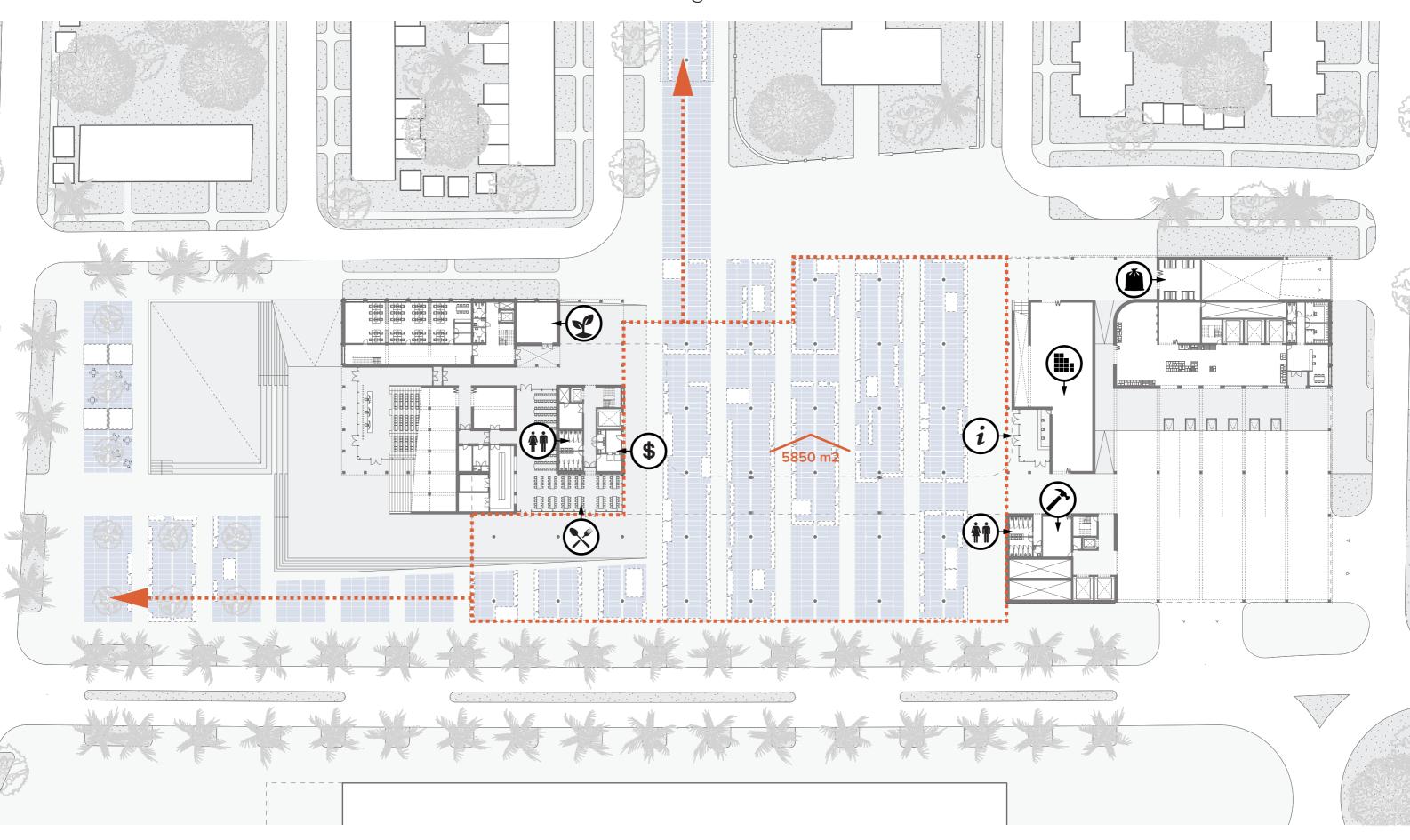




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MARKET

Program



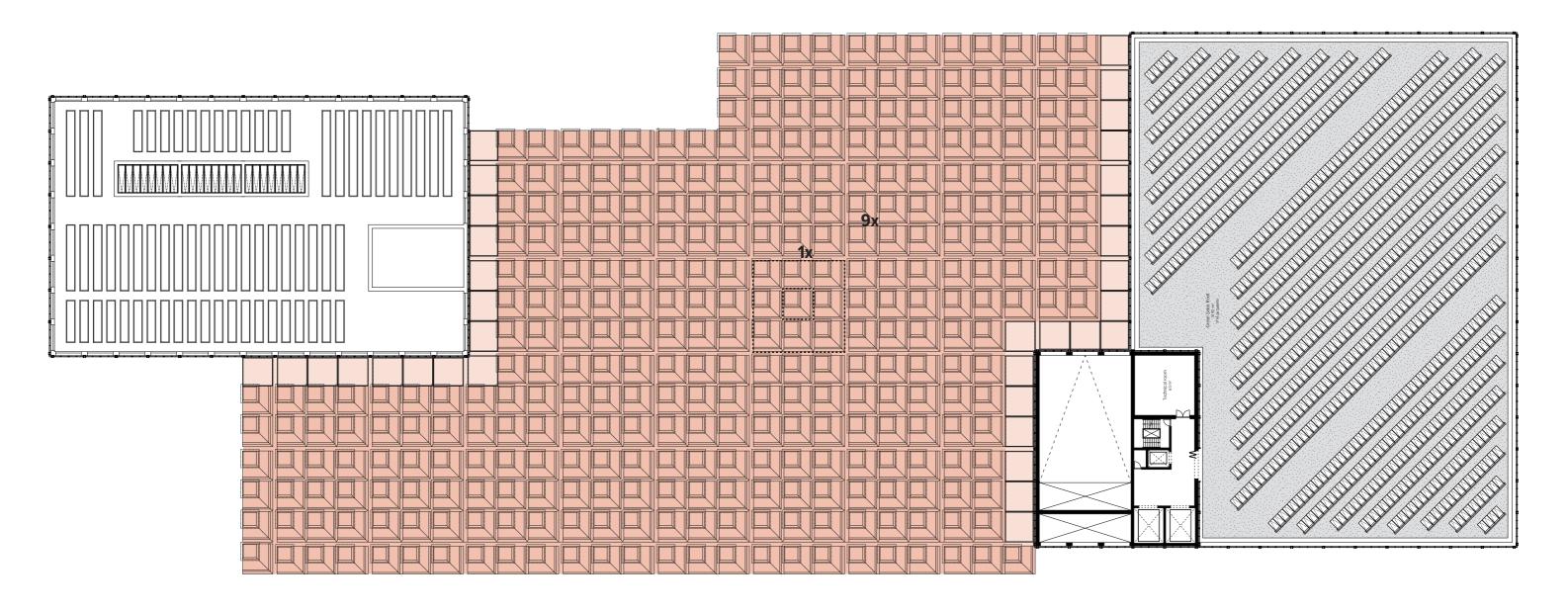


CHARACTER

- Public and accessible
- Light and non-oppressive
- "Friendly Monumentalism"

CLIMATE

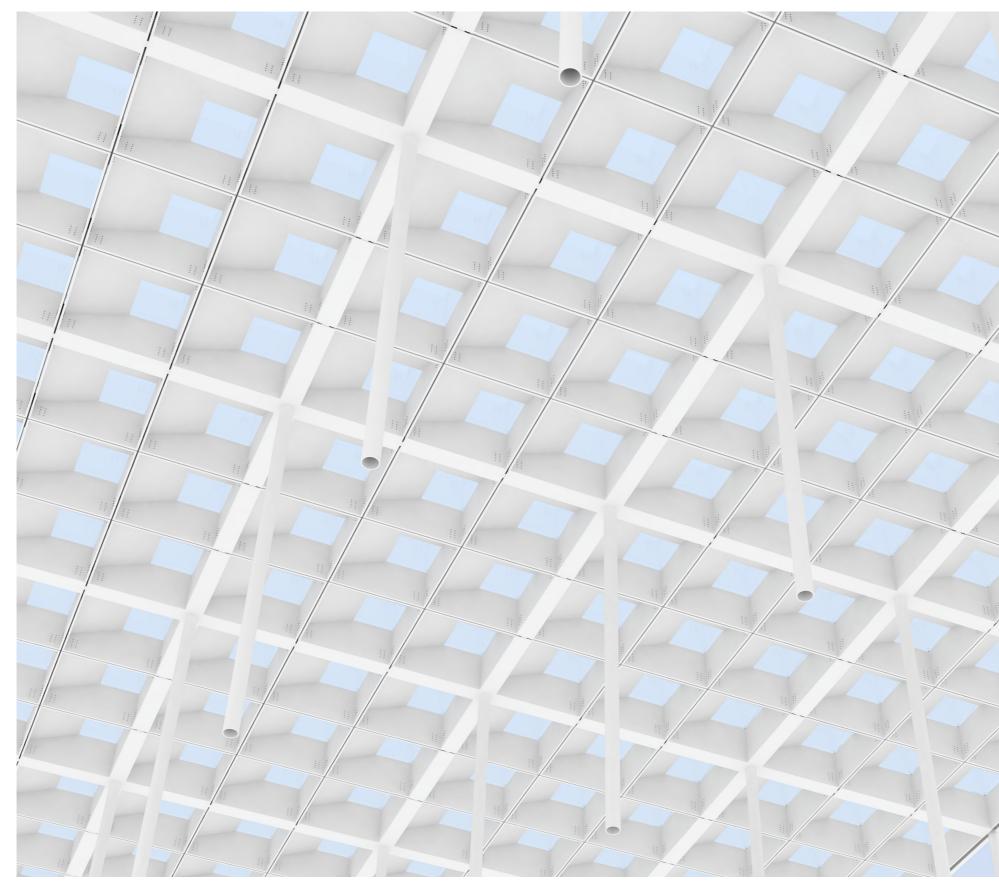
- Providing shelter from sun and rain
- Daylight
- Natural ventilation
- Collecting rainwater



STRUCTURE

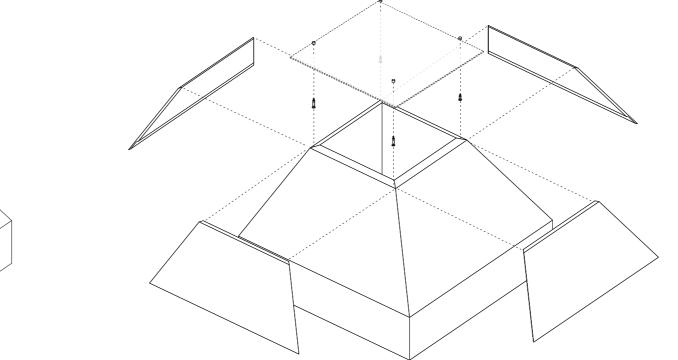
- Autonomous structure
- Expandable building system
- One repetative prefab element
- Light-weight
- Easy to transport

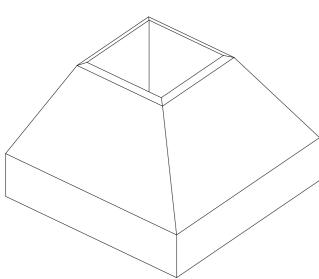
Study Impression





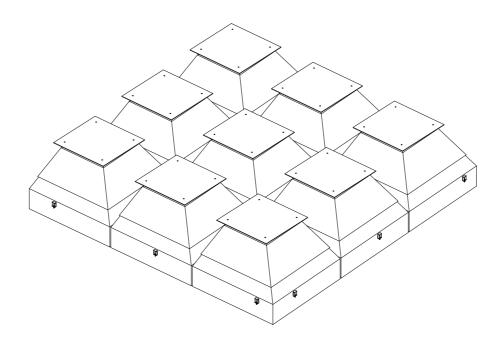
Critical Element



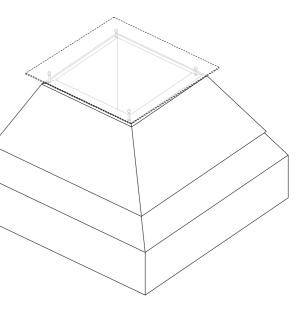


ARCHITECTURE - STRUCTURE - LIGHT

WATER DRAINAGE - NATURAL VENTILATION

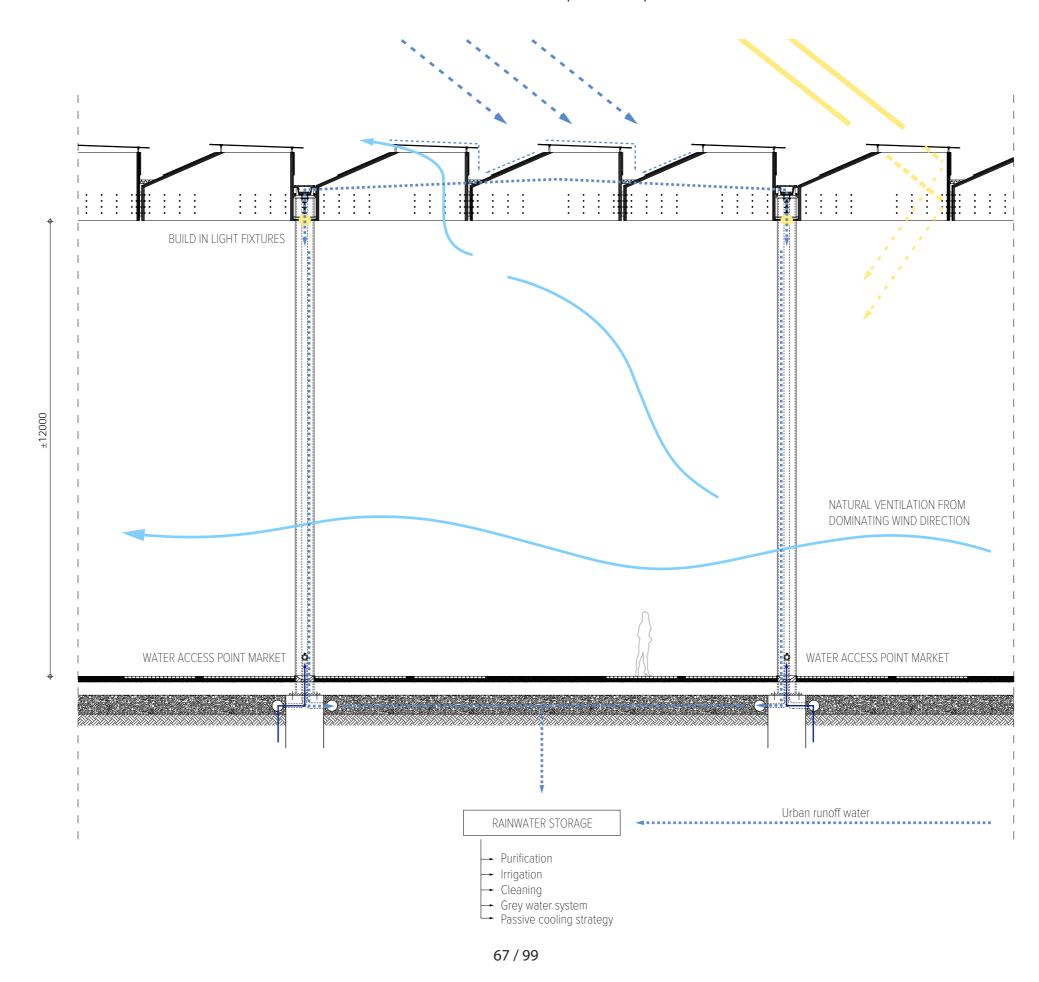


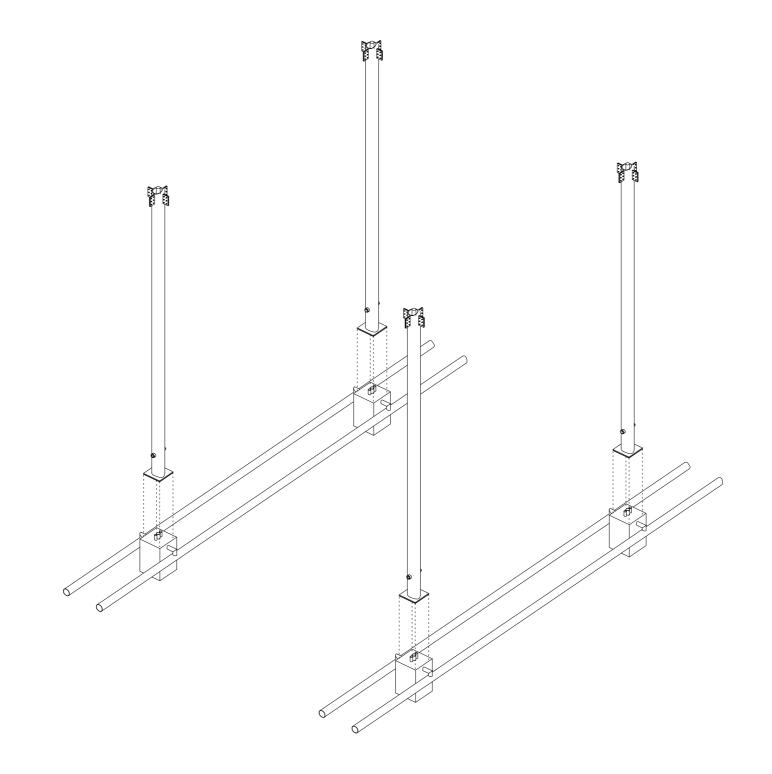
ASSEMBLED STRUCTURAL ELEMENT

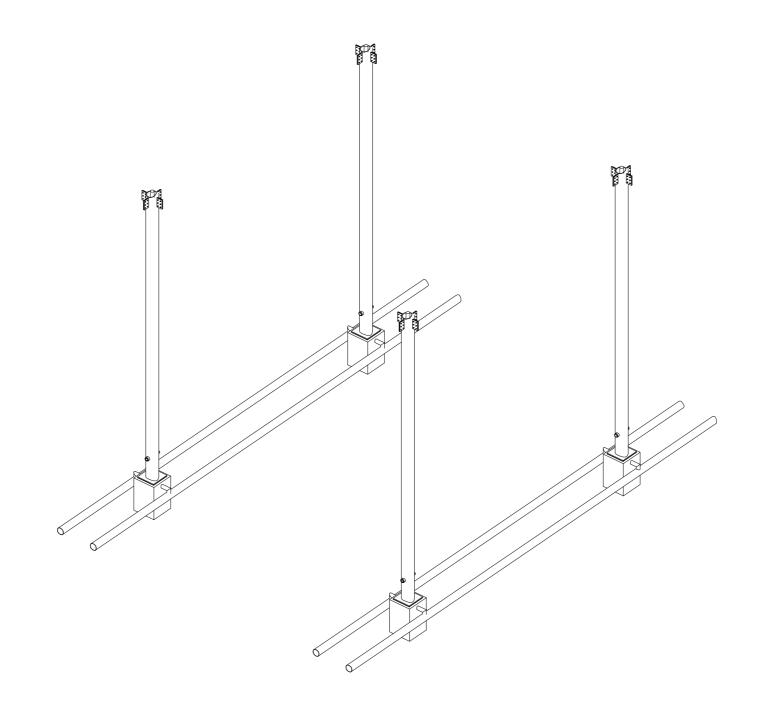


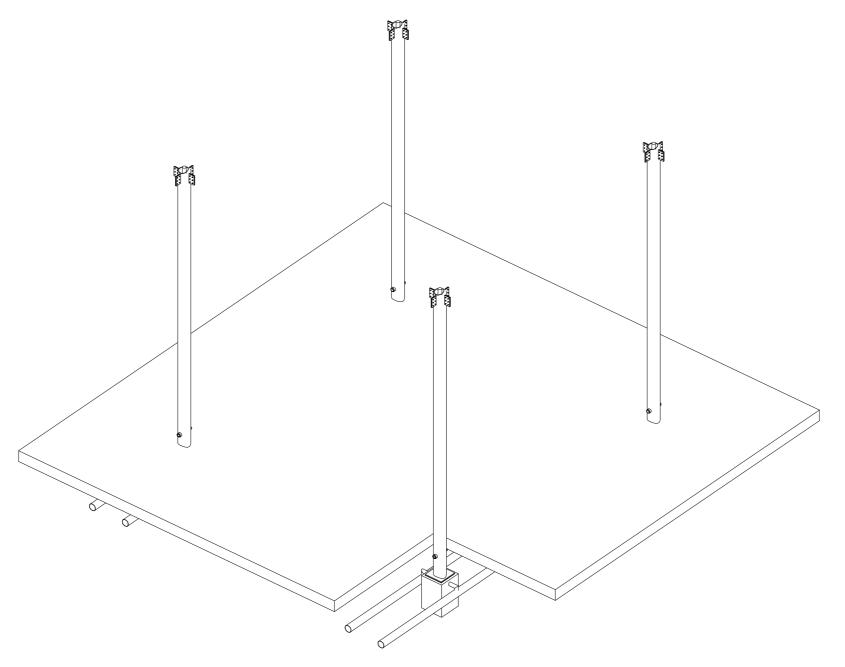
FINAL ROOFLIGHT ELEMENT

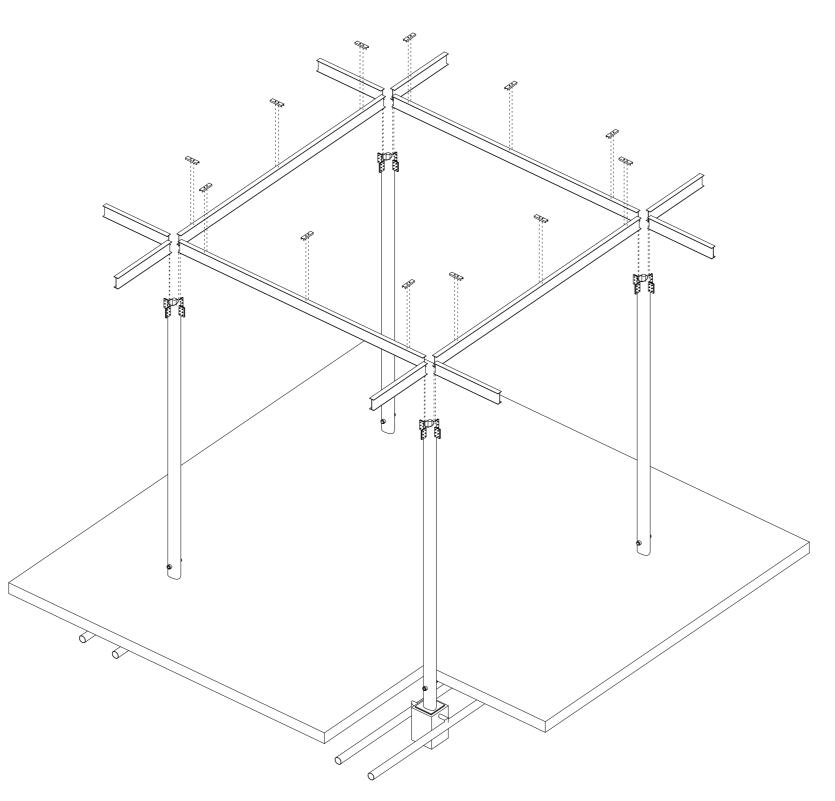
Passive climate principle



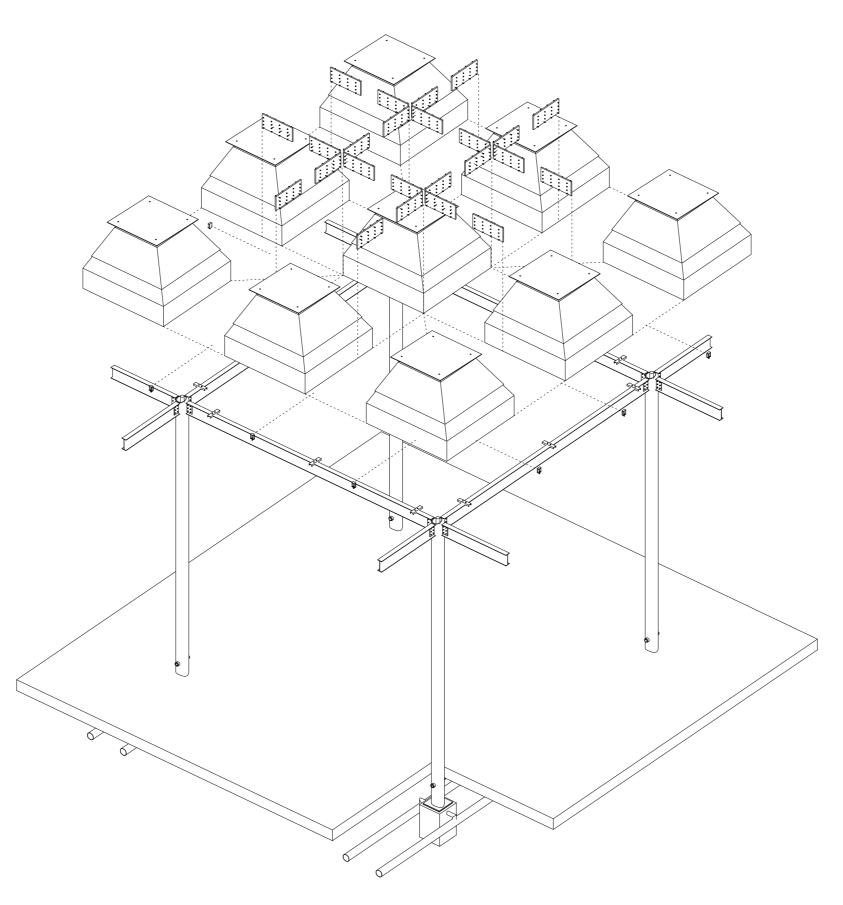






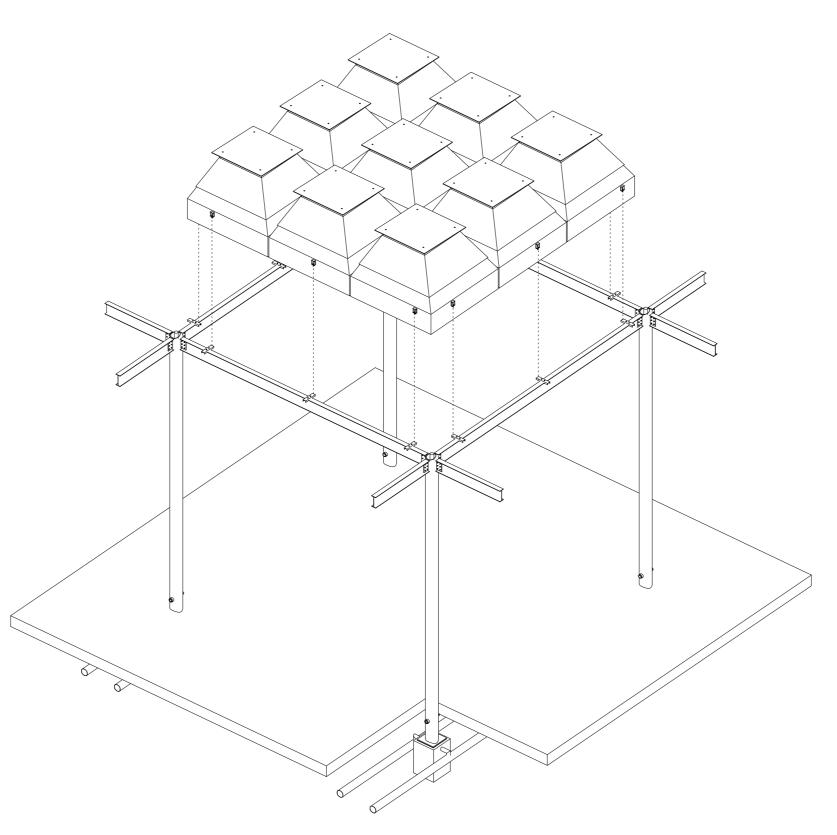


Atonomy

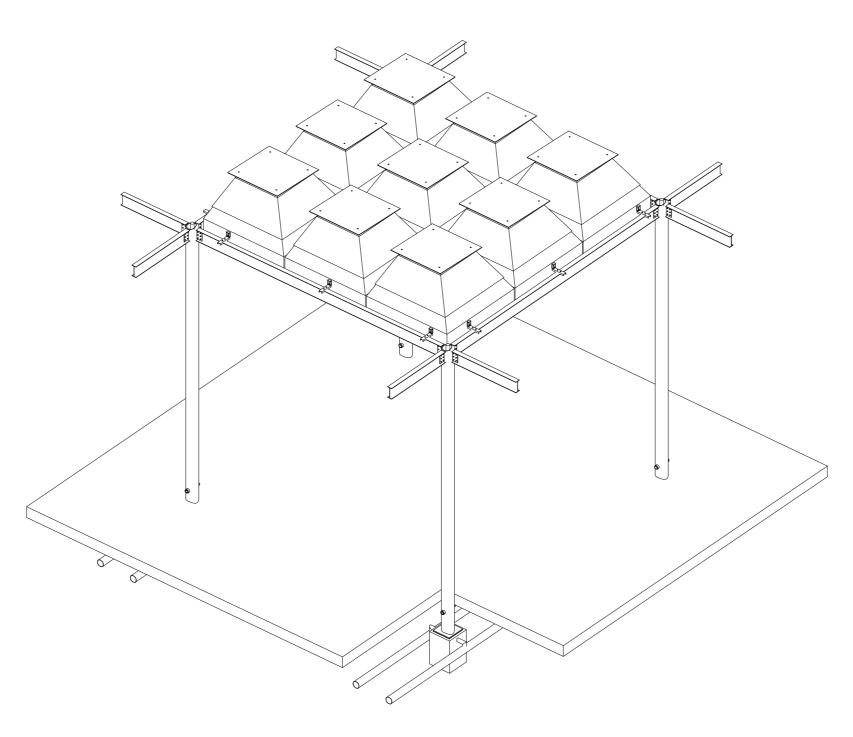


CIVIC ROOF

Atonomy

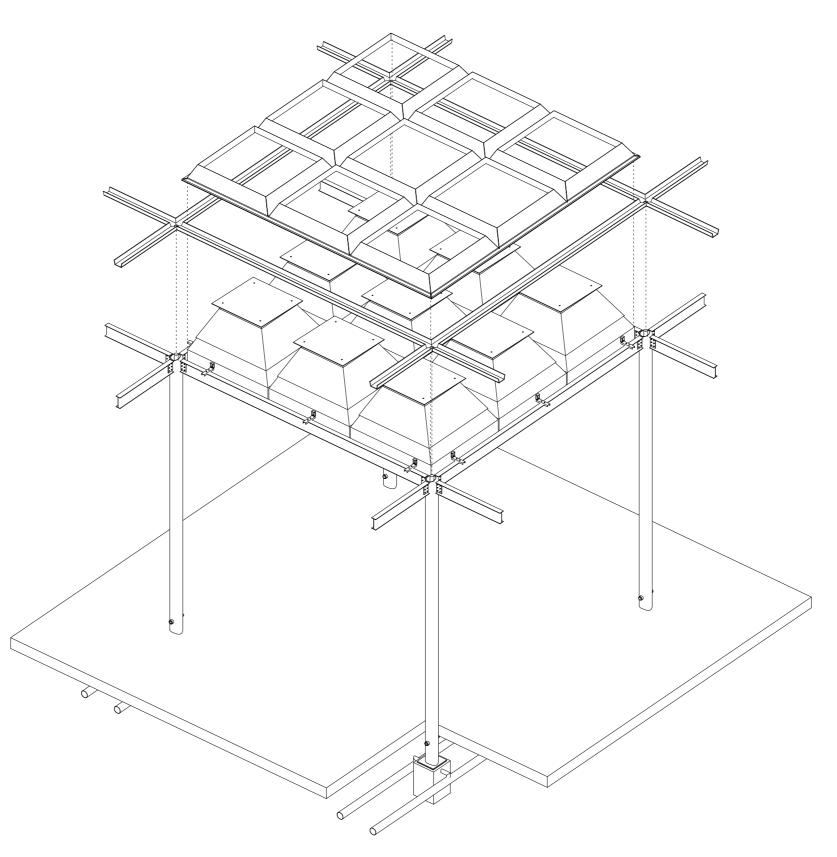


CIVIC ROOF Atonomy

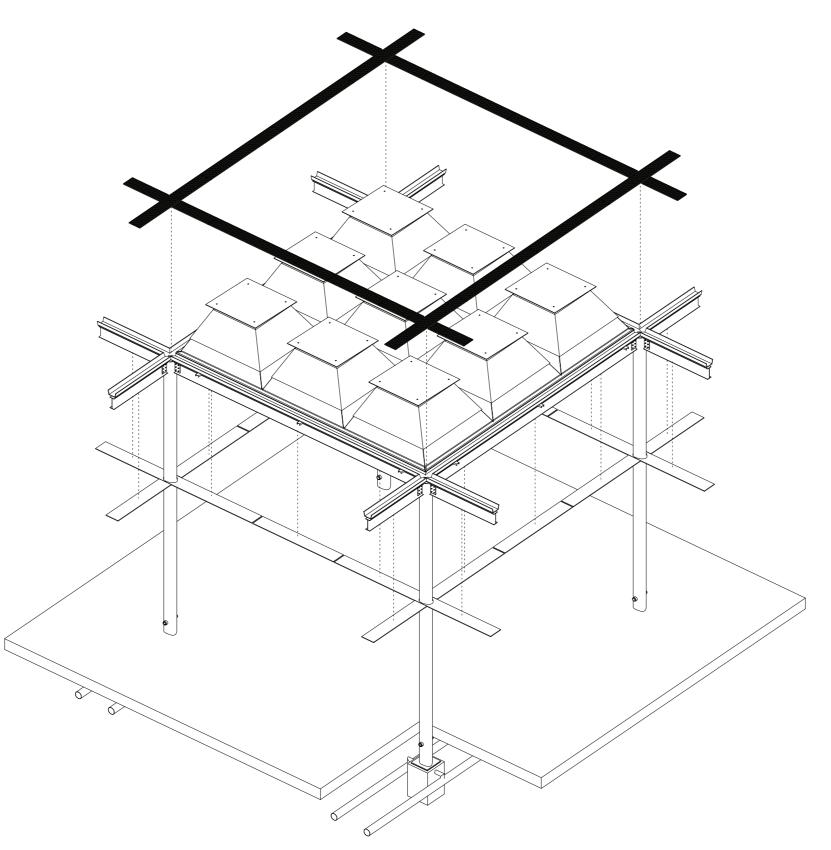


CIVIC ROOF

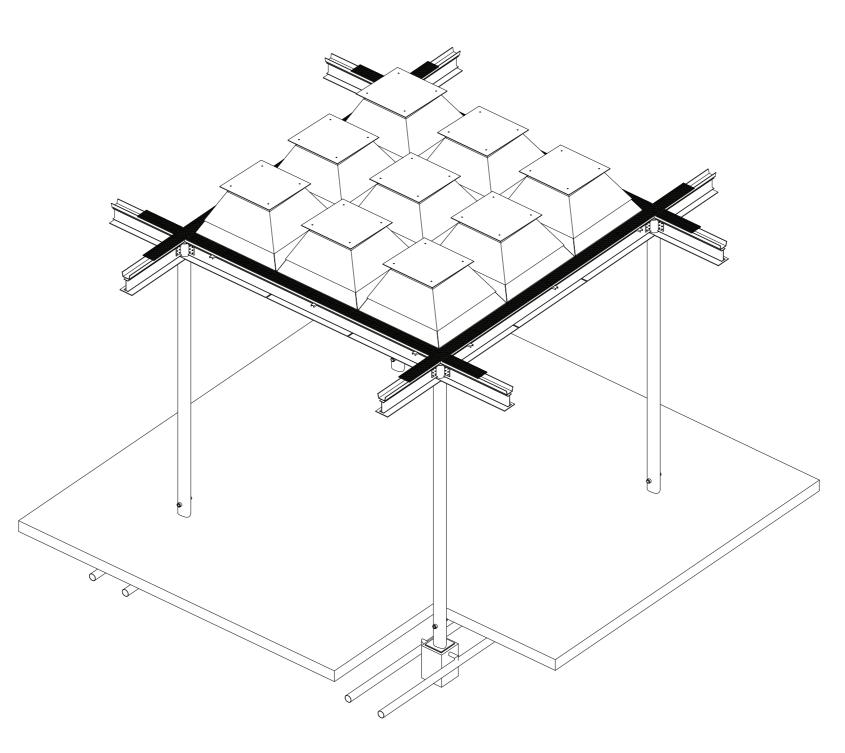
Atonomy



CIVIC ROOF Atonomy

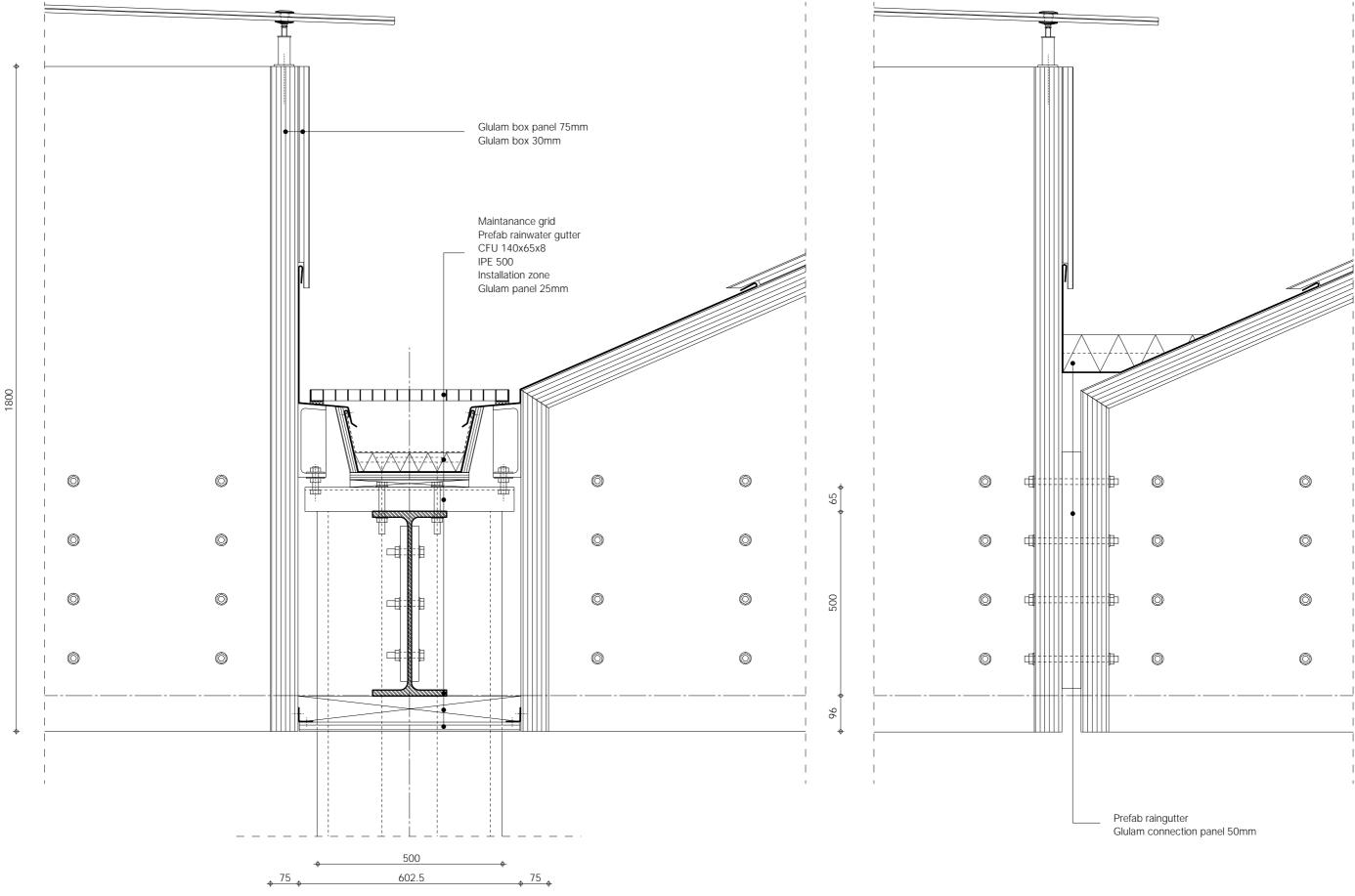


CIVIC ROOF Atonomy



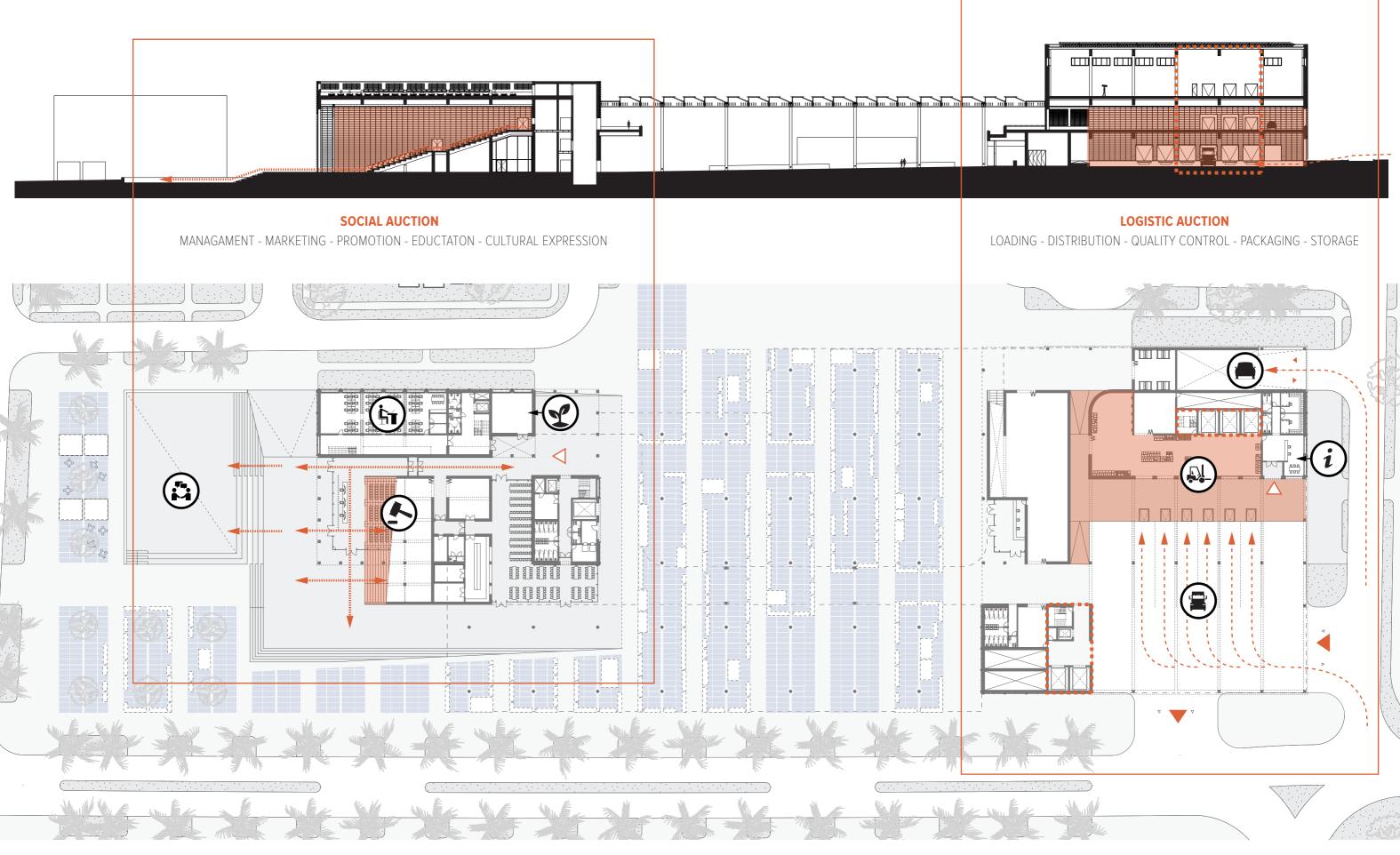
CIVIC ROOF

Detais Rooflights



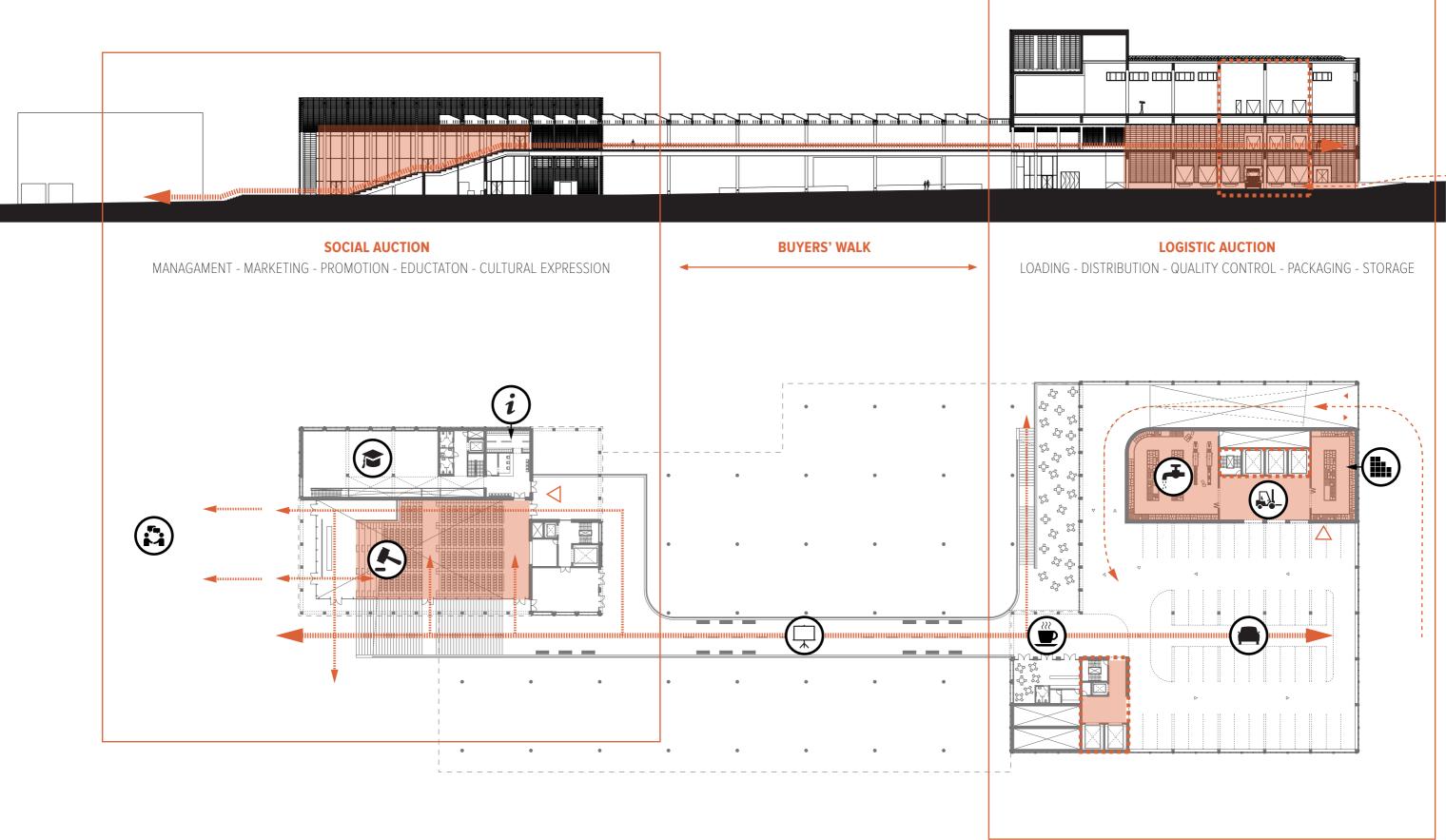
AUCTION

Program



AUCTION

Program

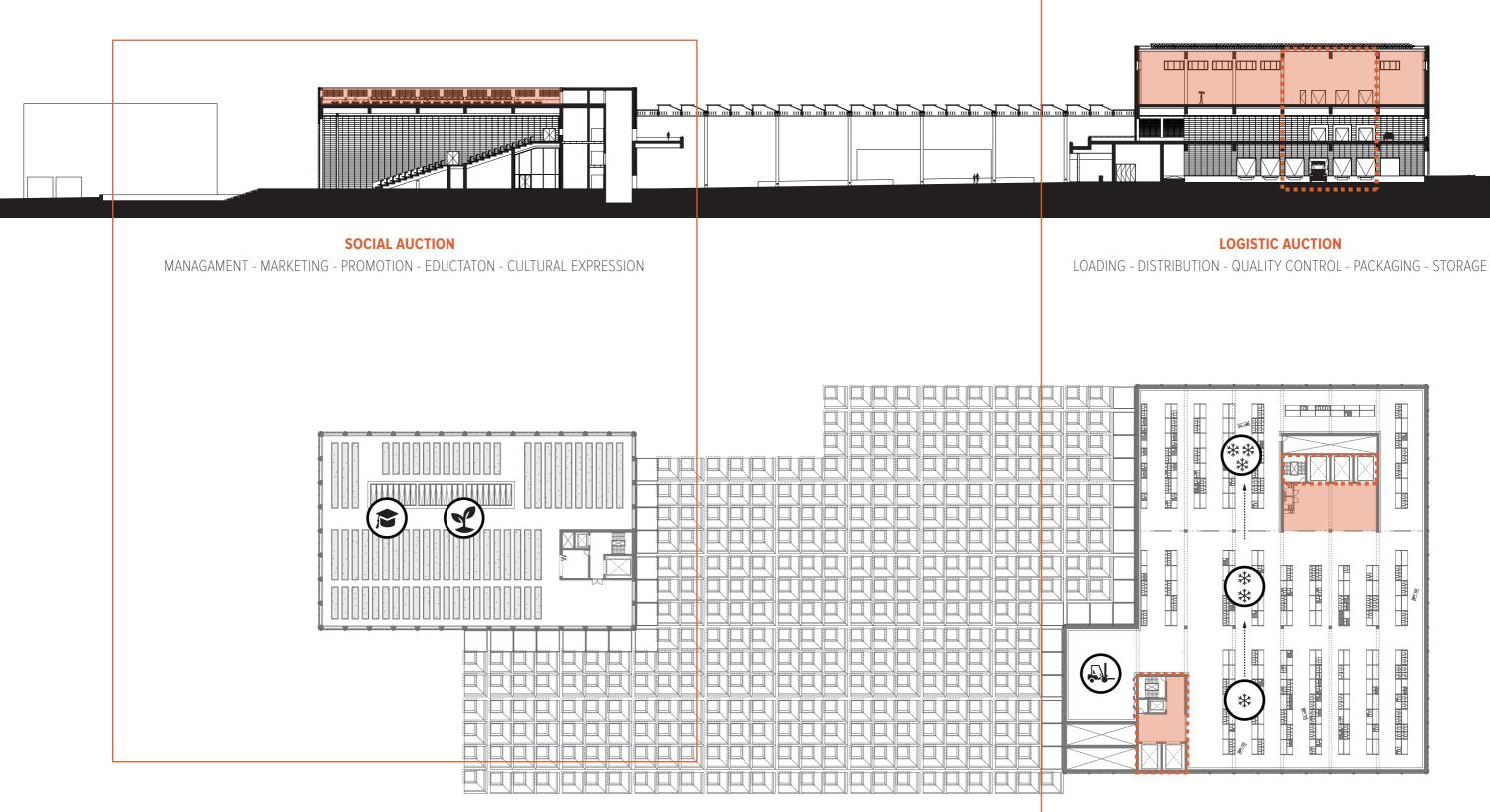


AUCTION *Impression*



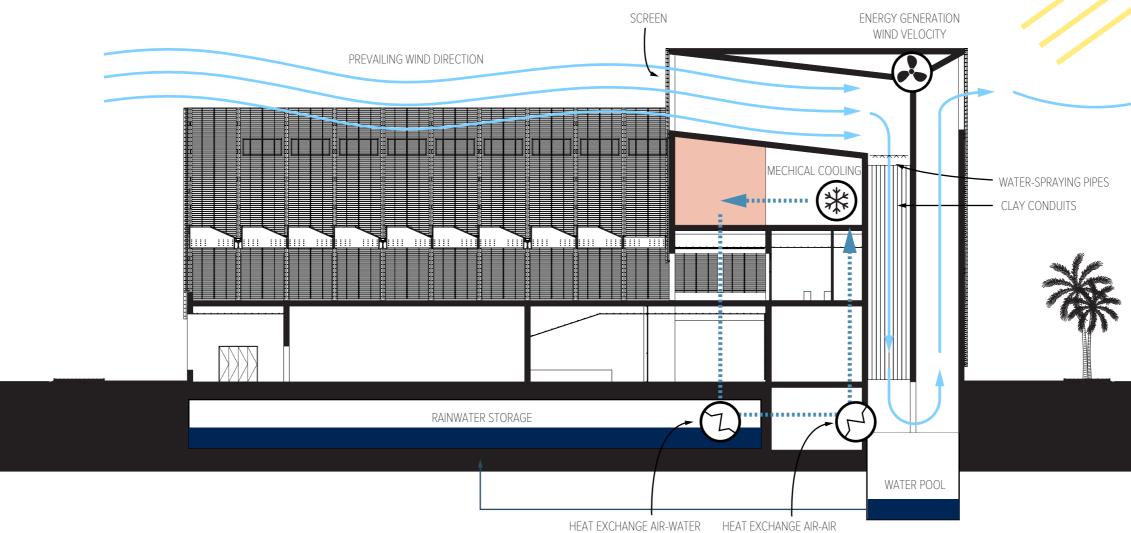
AUCTION

Program



AUCTION Climate Design

- Conditioned indoor climate, closed cycle
- Passively cooled as far as possible
- Windtower

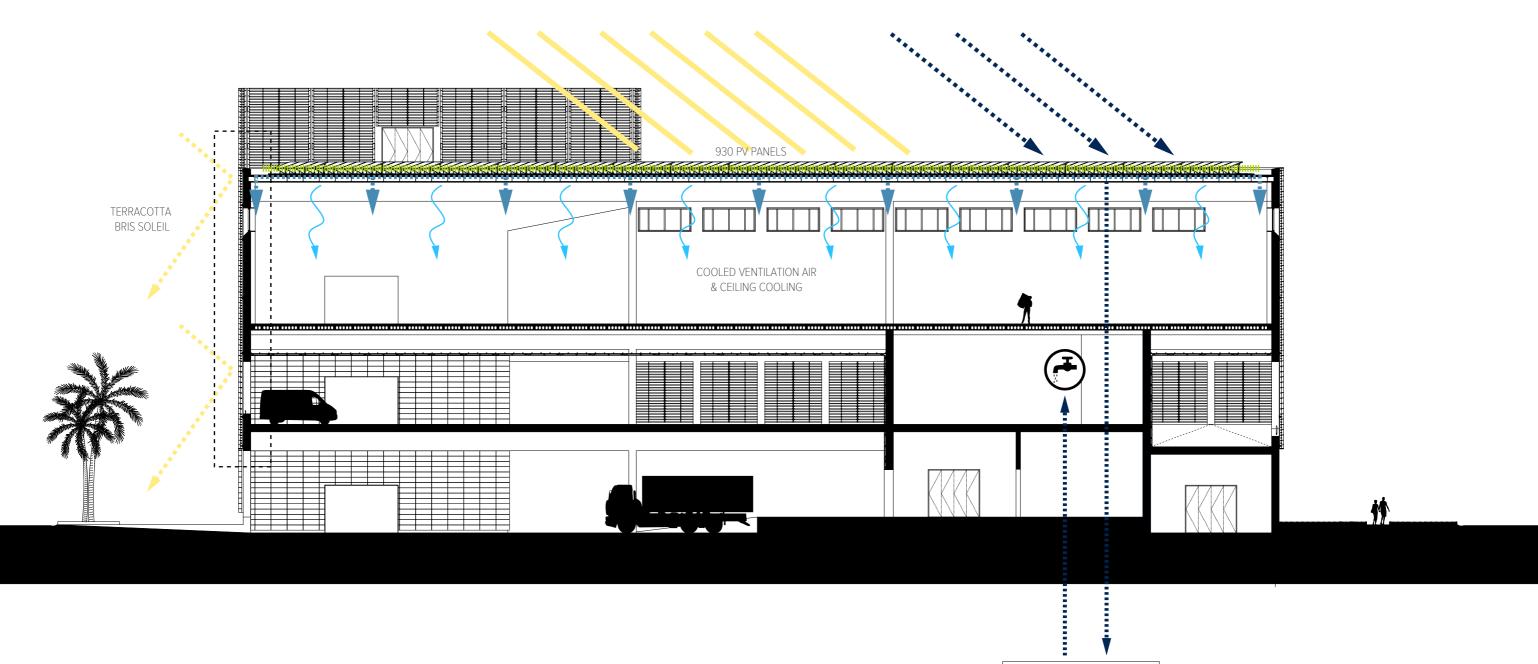






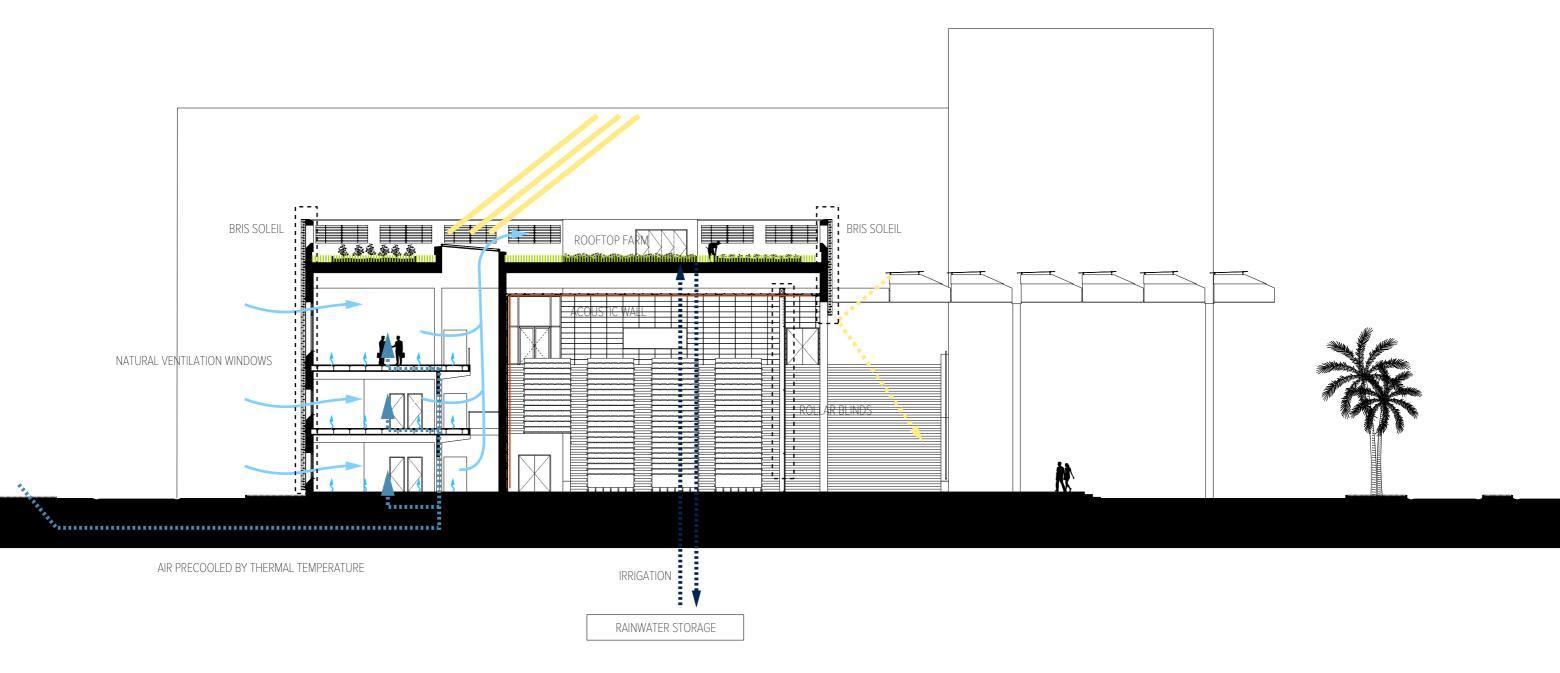
AUCTION *Climate Design*

- Cooling through cooled ventilation air and ceiling cooling
- Mass activation of prefab leightweight concrete facade
- Solar green roof generates energy and provides aditional insulation (930 pv panels)
- Terracotta bris soleil protects concrete facade and interior from direct sunlight

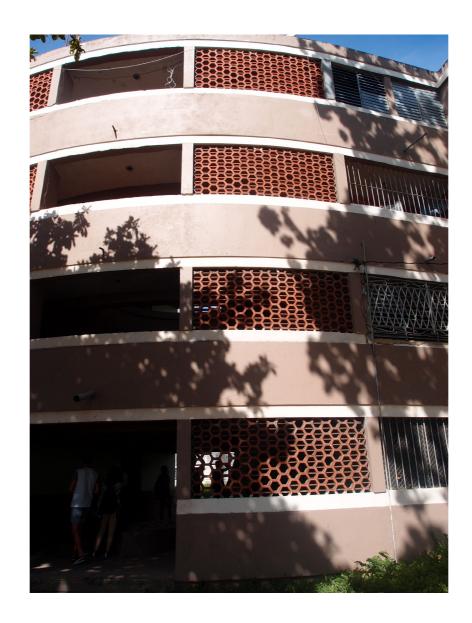


AUCTION *Climate Design*

- Precooled ventilation air by mass earth
- Mass activation of prefab leightweight concrete facade
- Rooftop farm
- Terra cotta use: bris soleil and acoustic wall



AUCTION TERRACOTTA BRIS SOLEIL



- Reference to local building tradition of breeze-blocks
- Protecting concrete facade elements and interior spaces from direct sunlight
- Local, cheap, durable material, representing the soil in which the produce is cultivated
- Privacy screen
- Breaking up blind walls

AUCTION *TERRACOTTA BRIS SOLEIL*

COLLECTION FROM STUDIES

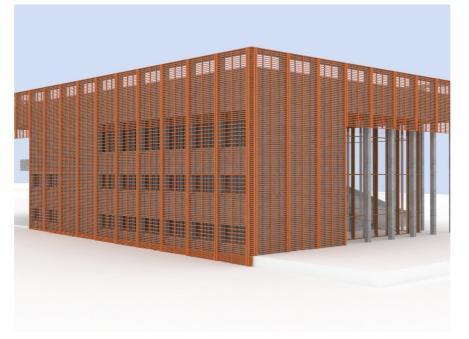








Meeting elements







Interior

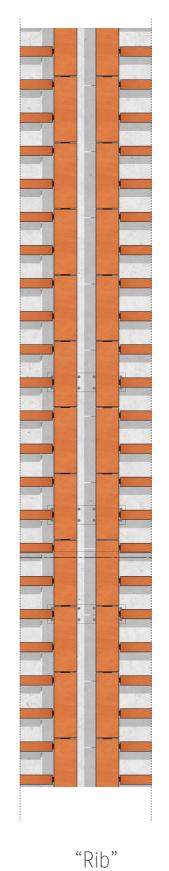
Connection civic roof



Differentation seams



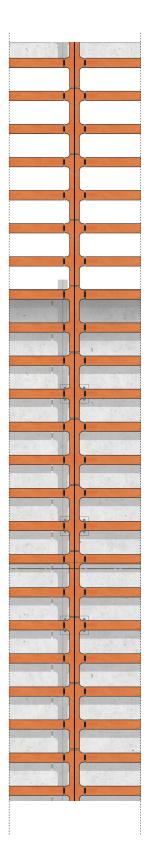




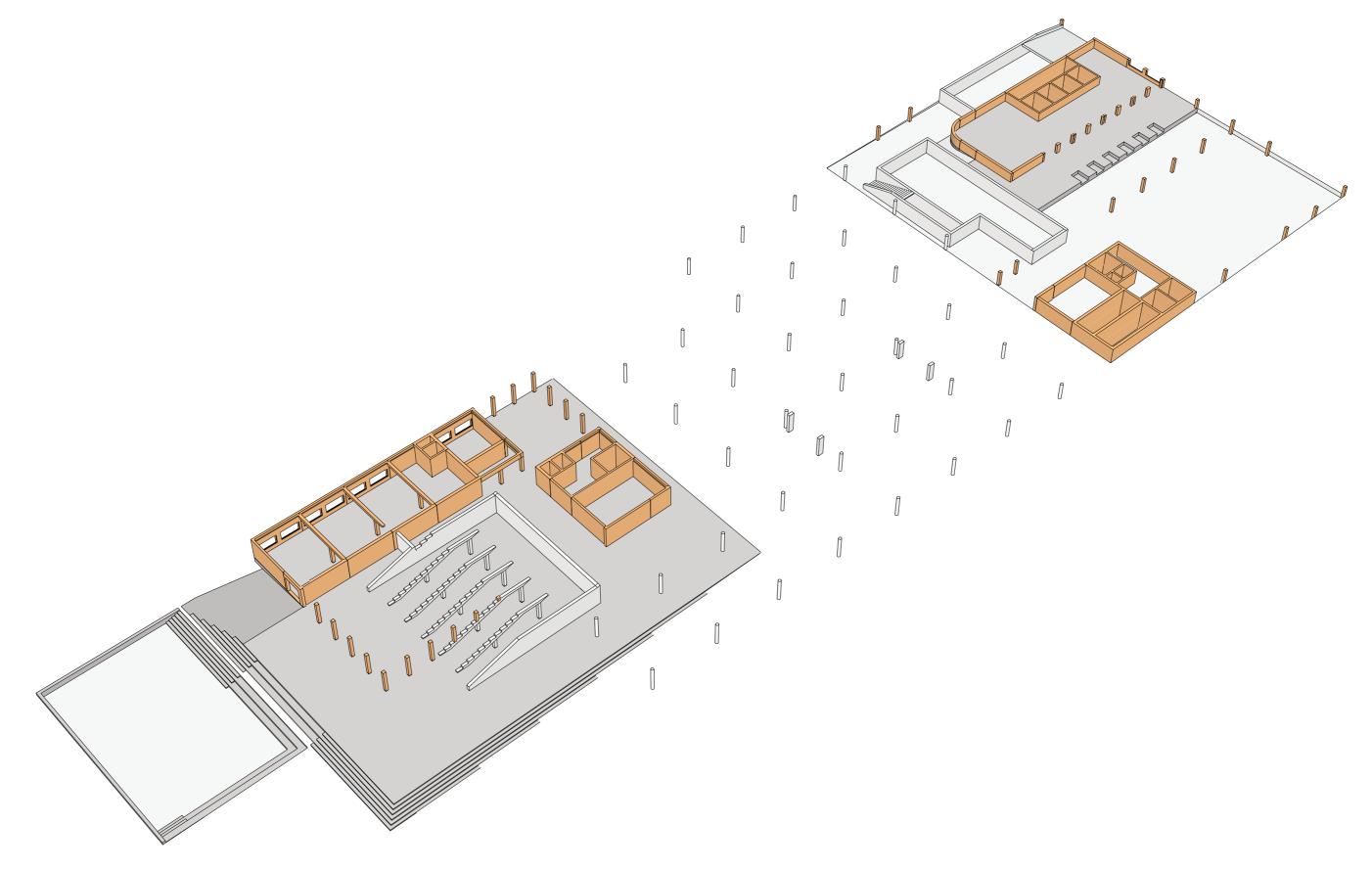
"Seam"



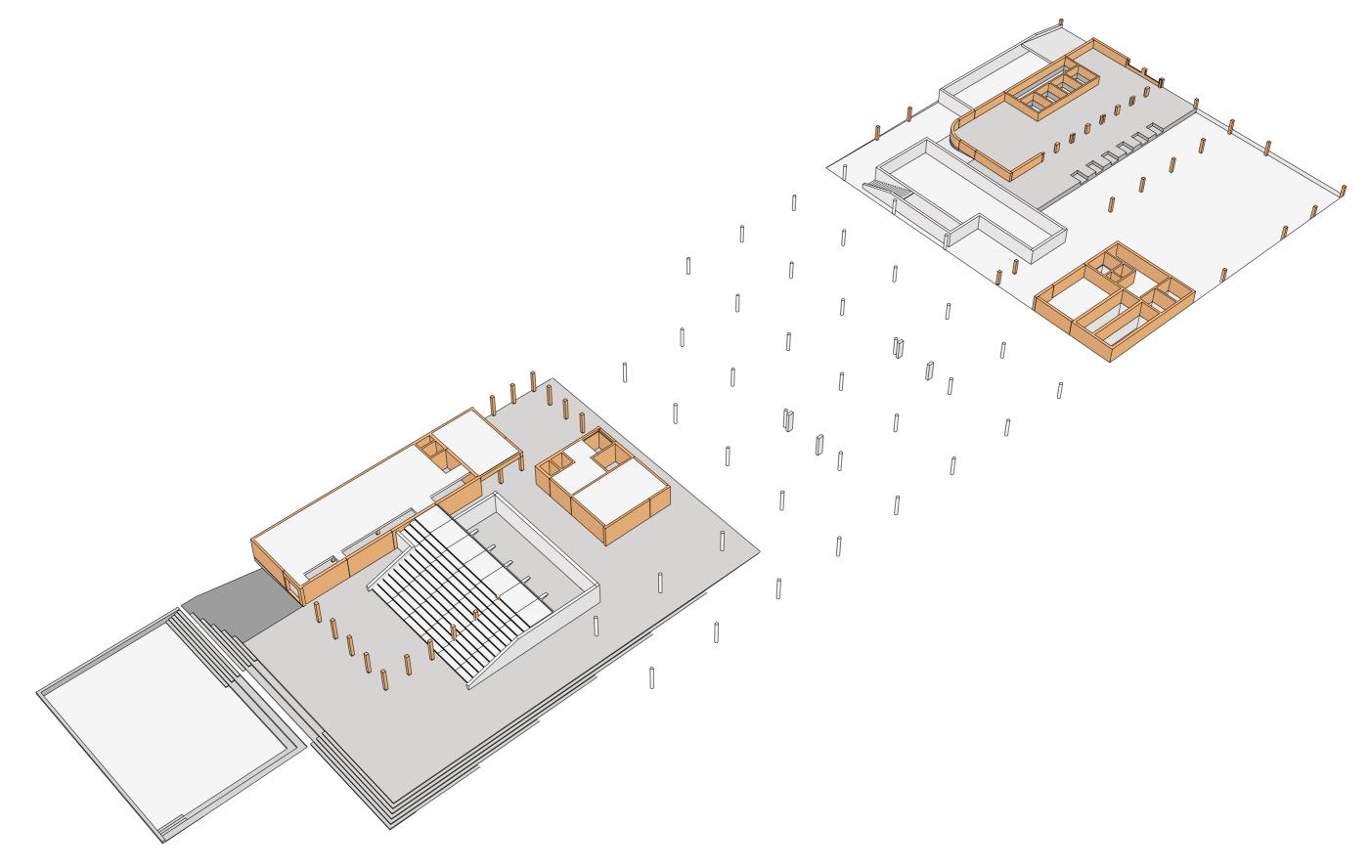




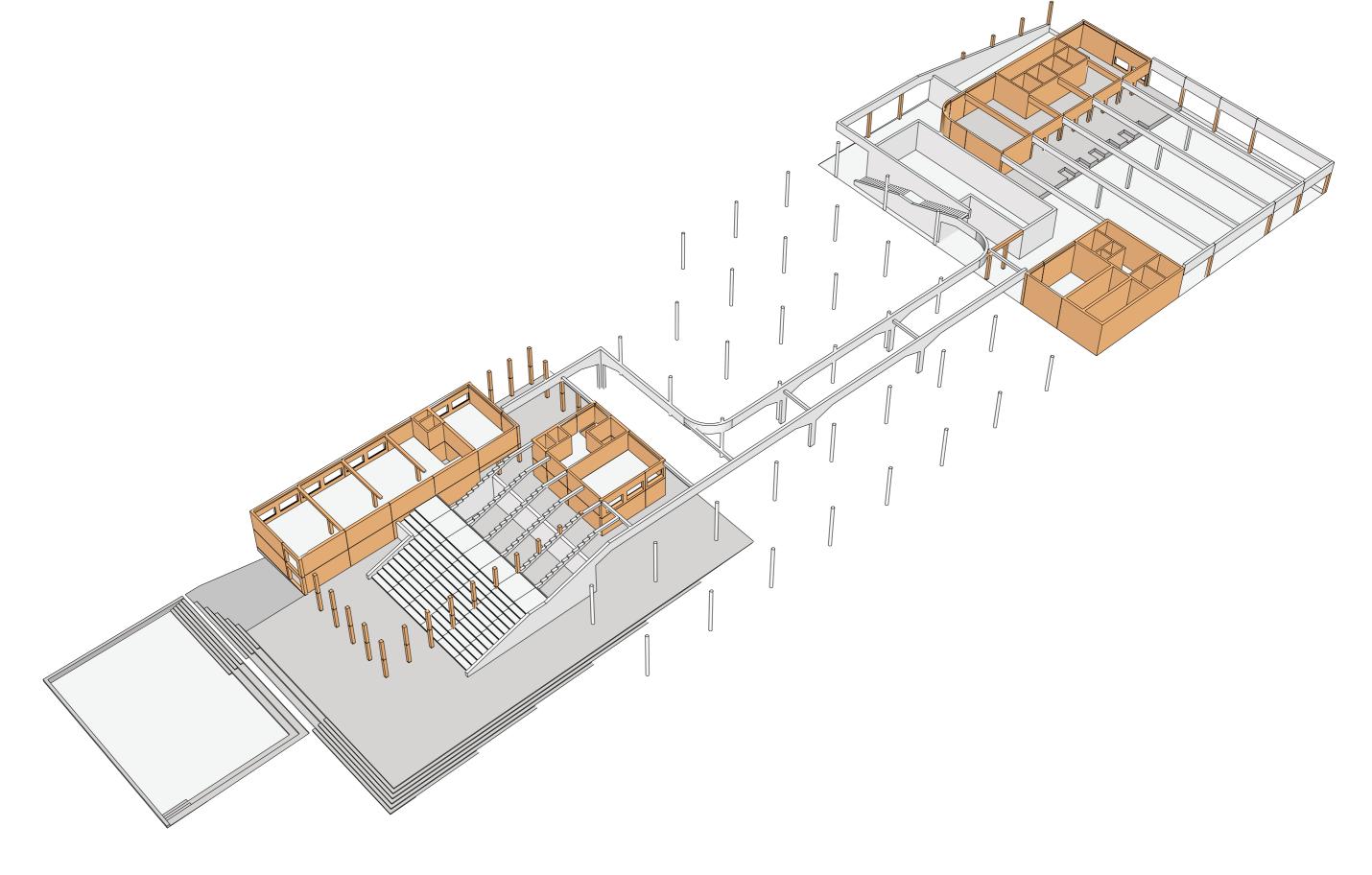
First floor



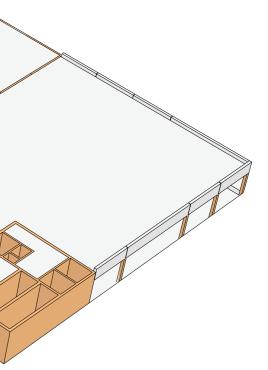
First floor

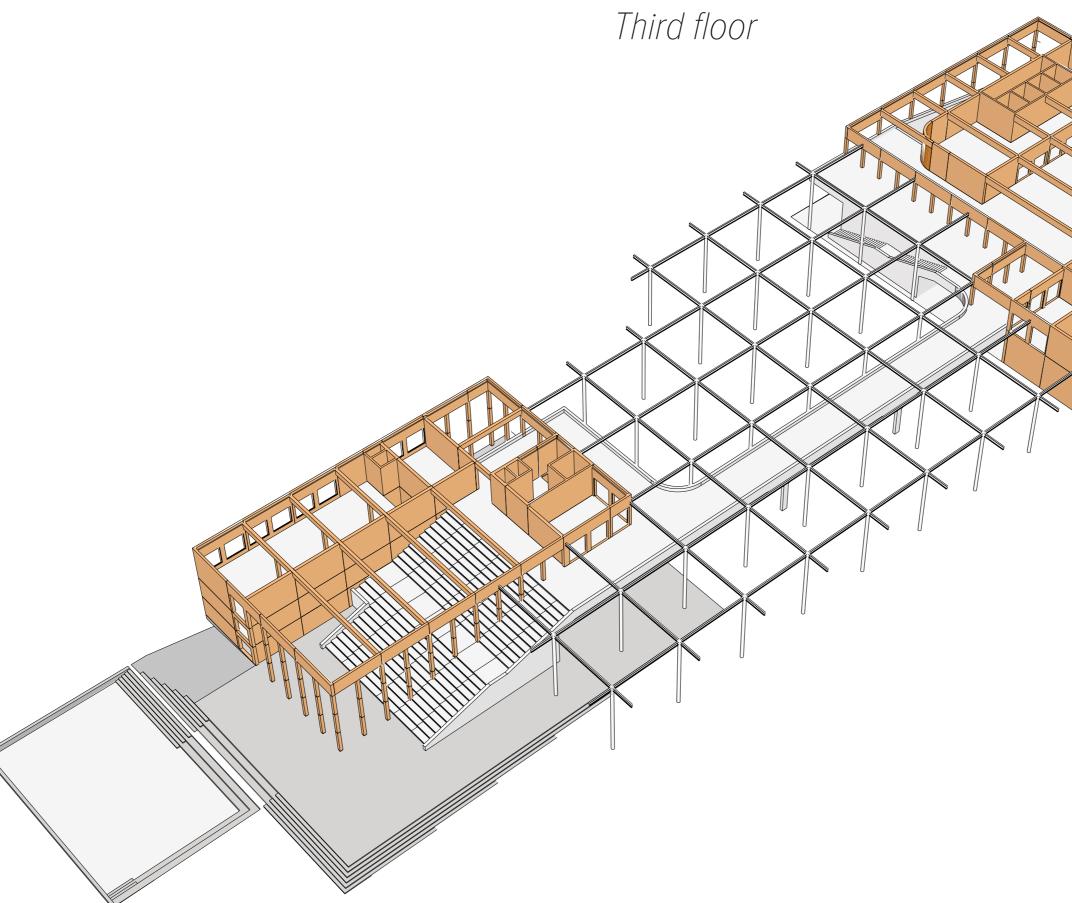


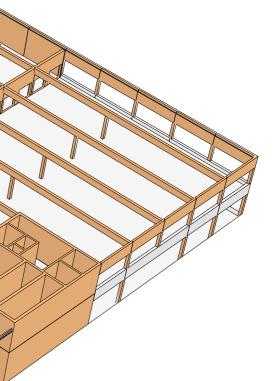
Second floor

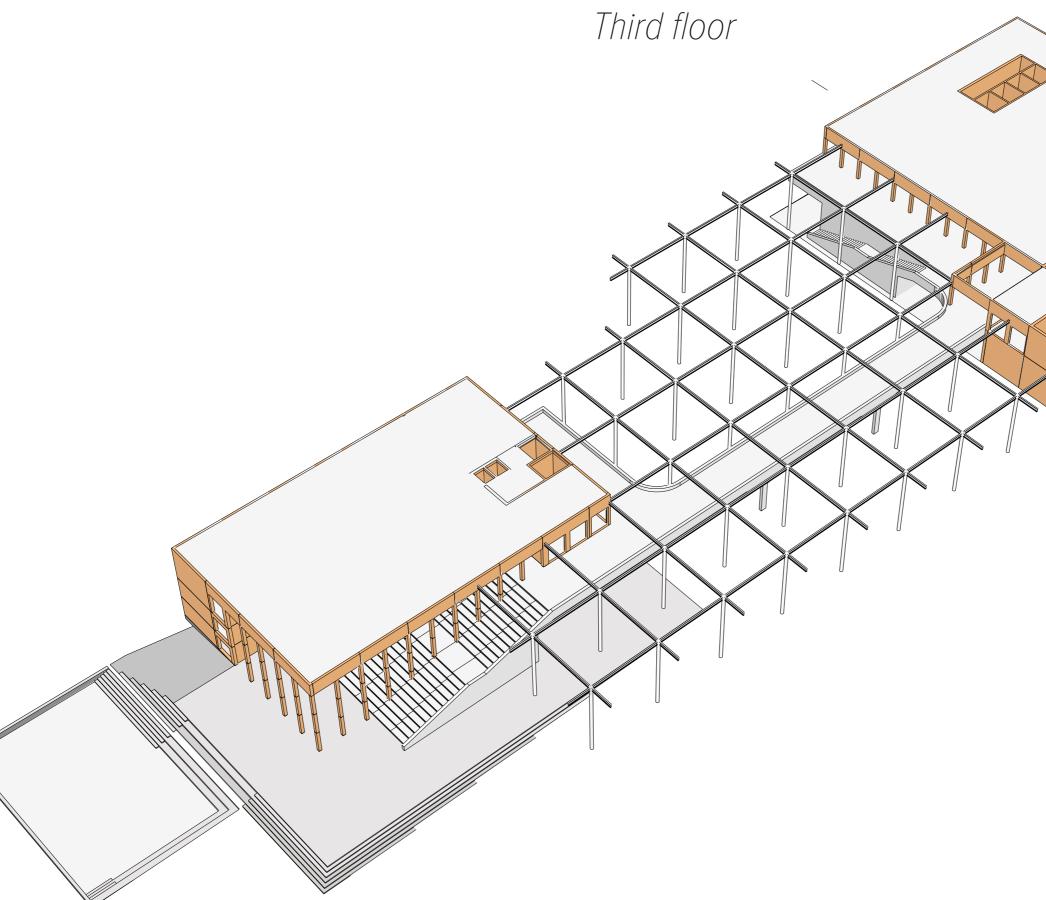


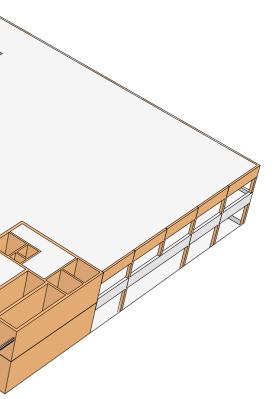
Second floor

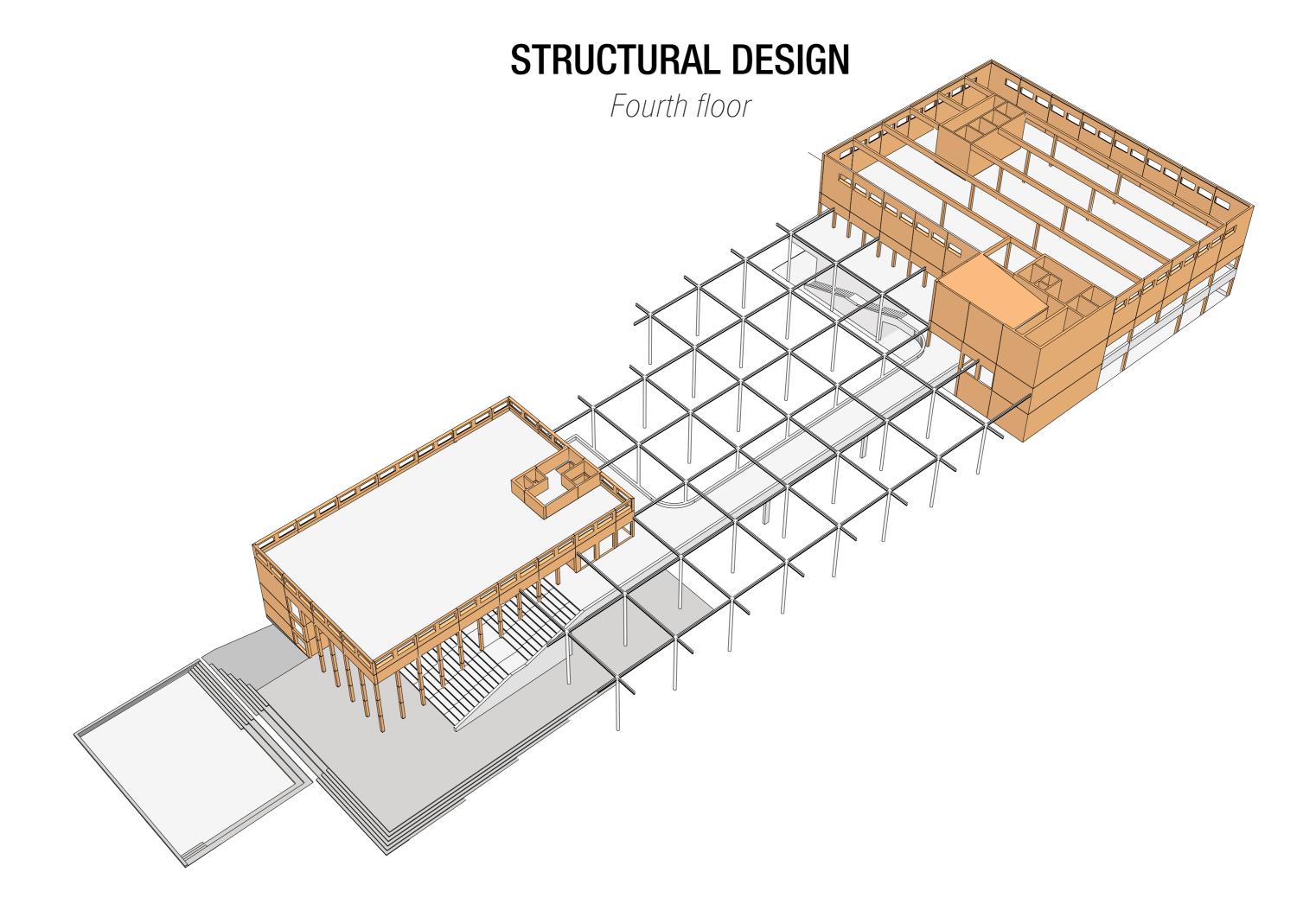




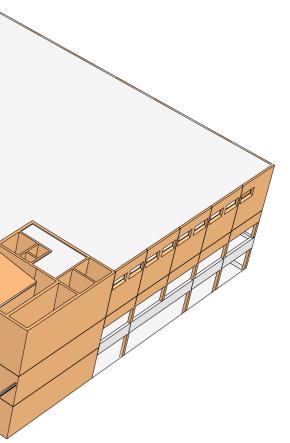




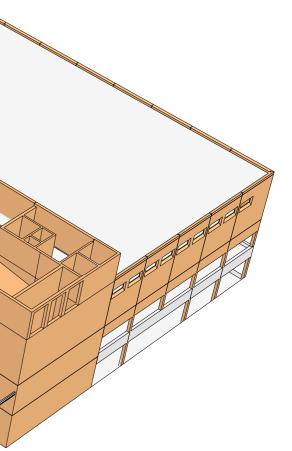




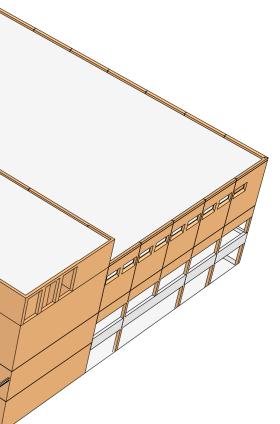
Fourth floor



Fifth floor



STRUCTURAL DESIGN Fifth floor



CONCLUSION

SUMMARY

- Manifesto: Transforming Alamar into a Resilient Community
- Urban Agriculture as main potential and catalyst for the further development of a local community-driven sustainable economy in Alamar, and for Alamar as a vital component in a larger regional network of Havana
- Development of **Urban Agriculture in danger**, mainly as a result of the single-sided support approach by the state and a failing centralized distribution system that offers little food security, material incentives and marketing opportunities
- Facilitating the decentralization and re-urbanization of the Cuban food economy by introducing a new economic platform for distribution and marketing of urban agricultural products
- **Project**: Cooperative Urban Agricultural Auction Alamar
- Ambition: Creating a resilient, sustainable, community-based local food economy