GREEN SKILLS
FOR CITIES

GREEN SKILLS
FOR CITIES

Park It Up was developed by **Joseph Bou Saleh, Gayatri Agrawal, Flavia Vallarino, Giacomo Canale, Clara Conte, Paula Stammen, Jacob Mader and Thomas-Xavier Rousseau** with the support of the Vienna University of Economics and Business, the Institute for Advanced Architecture of Catalonia, the University of Genoa and Alda European Association for Local Democracy. These materials cannot be used or reproduced without the authorization of the interested authors/institutions.

Park It Up was developed during the Green Skills for Cities project, co-funded by the Erasmus+ Programme of the European Union under the KA220-HED - Cooperation partnerships in higher education call.

PARK IT UP

Learners :

Joseph Bou Saleh
Gayatri Agrawal
Flavia Vallarino
Giacomo Canale
Clara Conte
Paula Stammen
Jacob Mader
Thomas-Xavier Rousseau

SITE ANALYSIS

Challenges in the City of Genoa :

Heat Island Effect:

- Concentration of buildings and pavement leads to higher temperatures.
- Increased energy consumption for cooling.
- Negative impact on residents' health and comfort.

Floods:

- Geographical location and presence of rivers contribute to flooding.
- Flash floods can cause infrastructure damage and pose risks to residents.
- Need for effective flood management strategies.

Lack of Biodiversity:

- Urbanization has led to the loss of natural habitats.
- Decreased biodiversity impacts ecological balance and ecosystem services.
- Importance of preserving and enhancing biodiversity for community well-being.

SITE : A Hidden Gem

Presenting the parking site in Genoa as the focus of the site analysis.

Highlighting the desire to convert it into a vibrant community space.

SITE ANALYSIS

Lack of Space for Kids to Play:
Absence of dedicated areas for children's recreational activities.
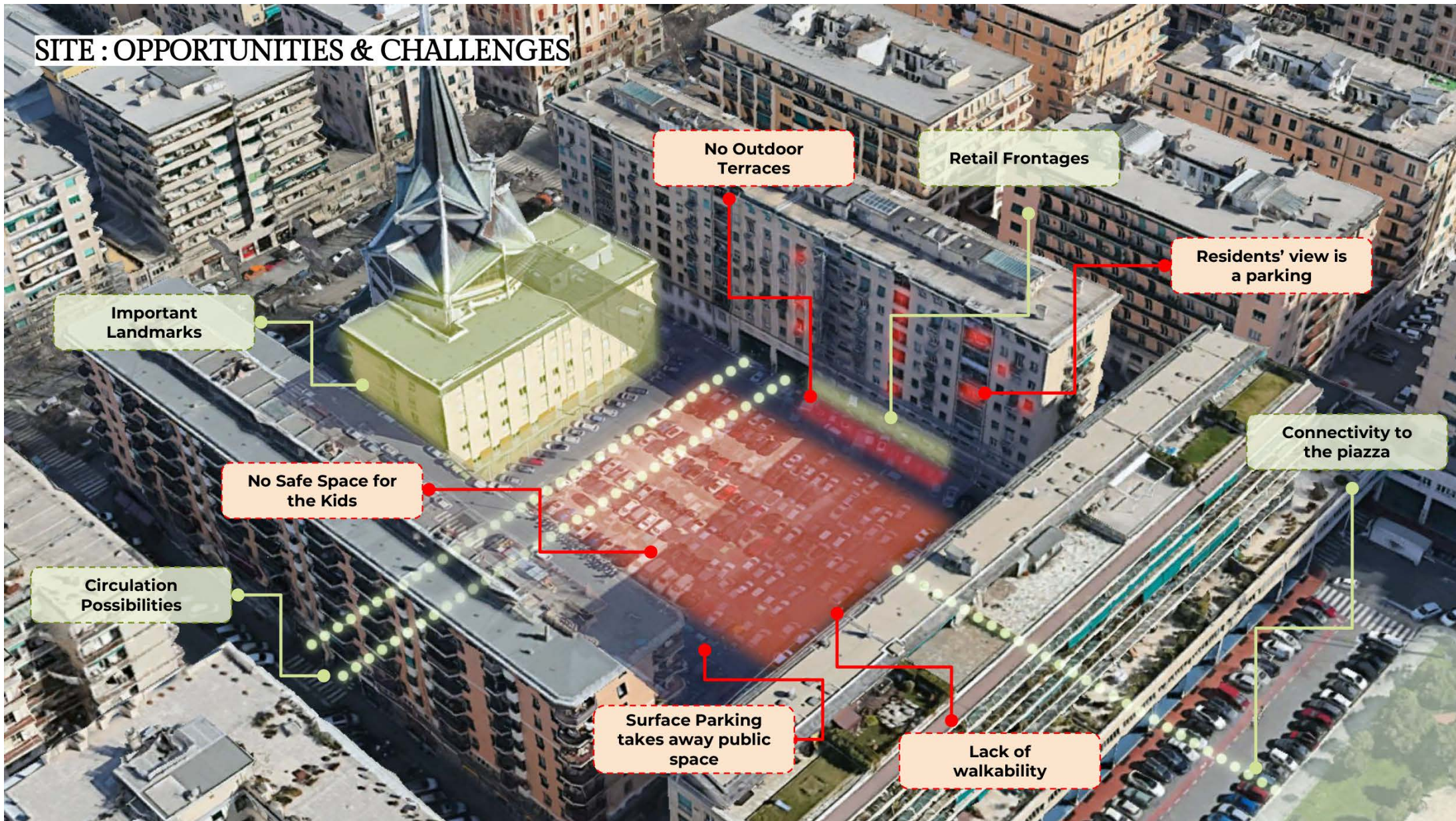Impact on the overall livability and well-being of the community.

Residents' View is a Parking:
Surrounding residential buildings have a view of the parking area.
Negatively affects the visual aesthetics and sense of place.
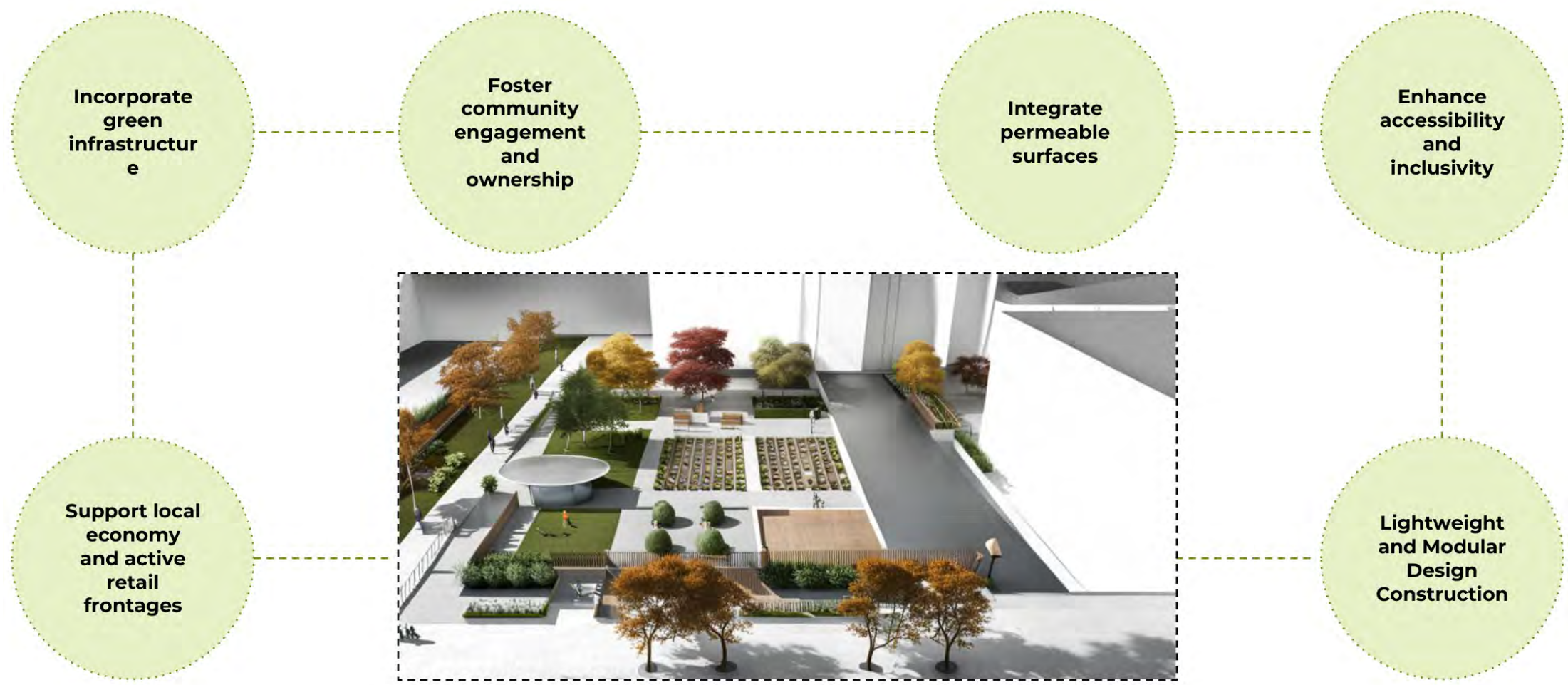
Surface Parking Takes Away Public Space:
The dominance of surface parking limits the availability of public space.
Reducing the potential for community engagement and activities.

SITE : OPPORTUNITIES & CHALLENGES

No Outdoor Terraces

Retail Frontages

Important Landmarks

Residents' view is a parking

No Safe Space for the Kids

Connectivity to the piazza

Circulation Possibilities

Surface Parking takes away public space

Lack of walkability

DESIGN OBJECTIVES

Incorporate green infrastructure

Foster community engagement and ownership

Integrate permeable surfaces

Enhance accessibility and inclusivity

Support local economy and active retail frontages

Lightweight and Modular Design Construction

Transform the parking site into a vibrant community space:

The primary objective is to convert the existing parking site into a dynamic and engaging community space that promotes social interaction, health, and well-being.

DESIGN STRATEGIES
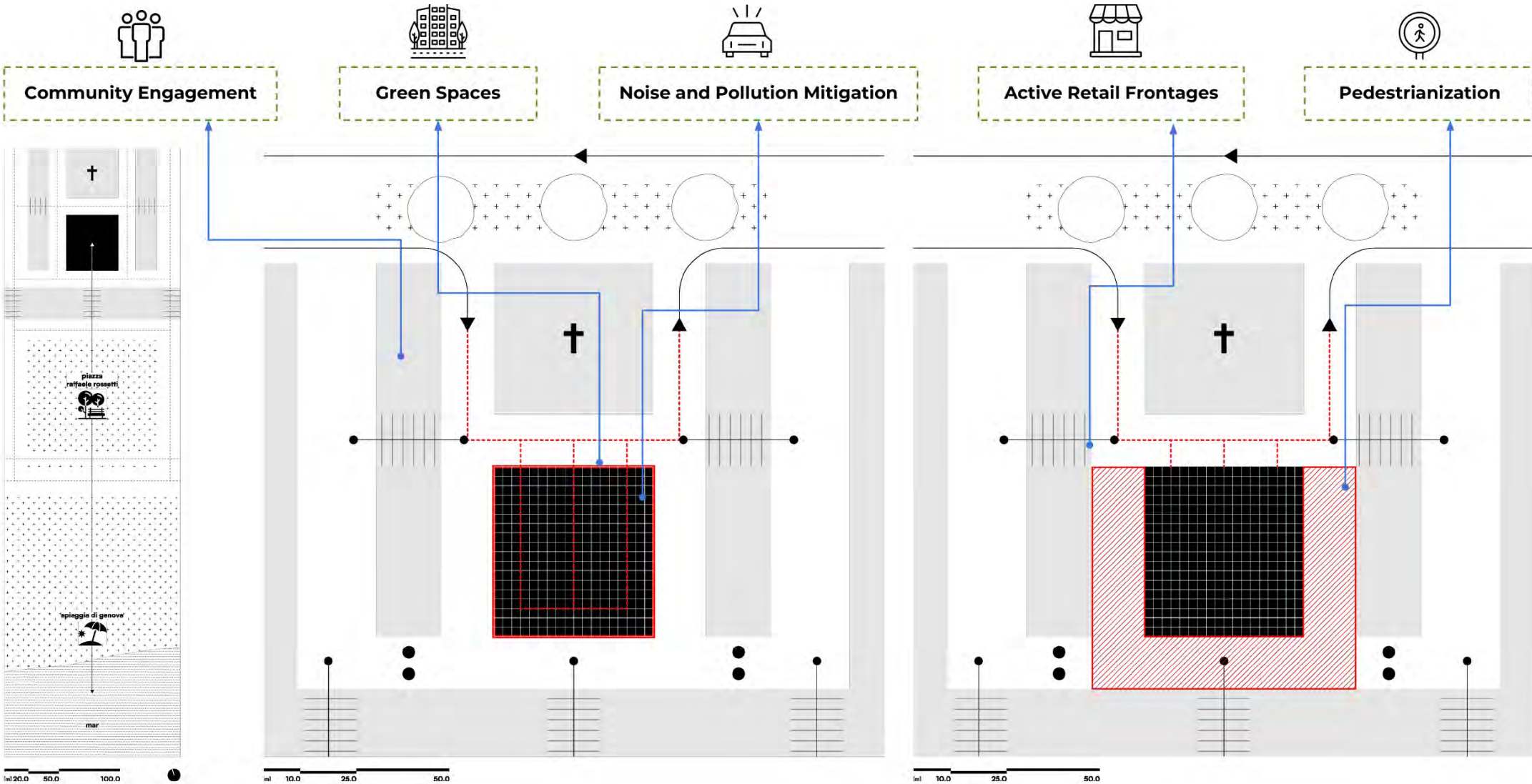
Pedestrianization:
Reduce or eliminate vehicular access within the parking site to create a safe and welcoming pedestrian-friendly environment.
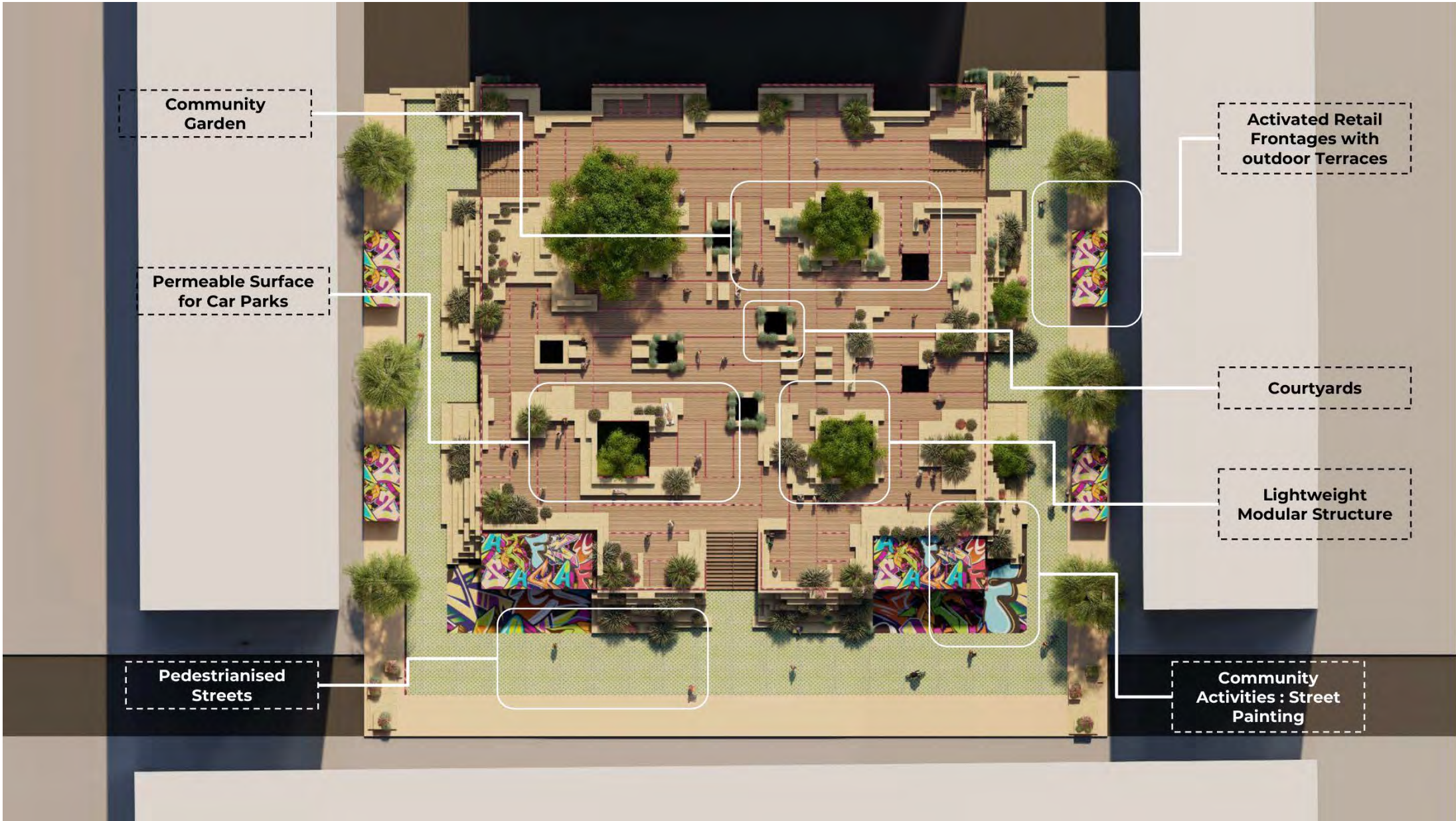
Active Retail Frontages:
Integrate commercial spaces or shops along the edges of the site to activate the street frontages and enhance the vibrancy of the community space.

Community Engagement:
Involve local residents, businesses, and community organizations in the design process to ensure the community's needs and aspirations are considered.
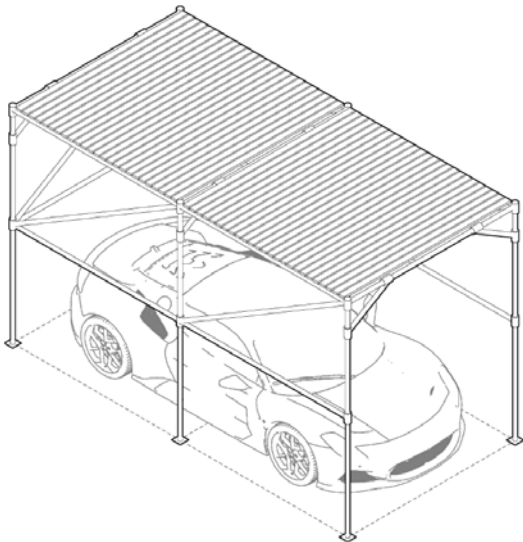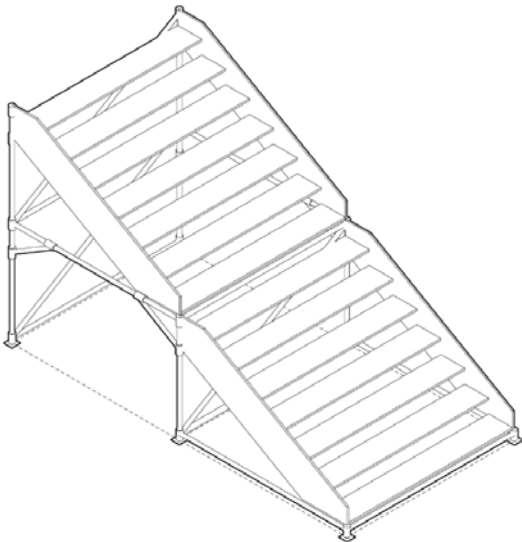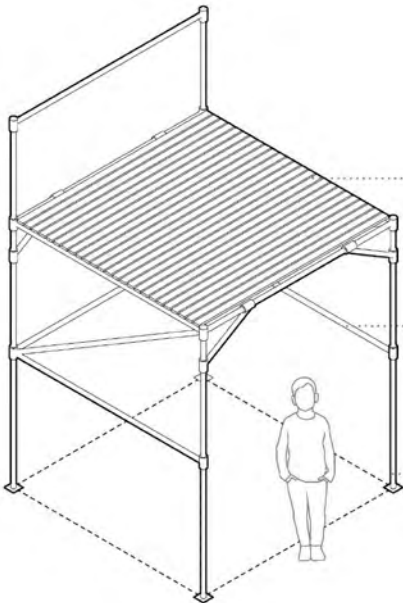
DESIGN

Community Garden

Permeable Surface for Car Parks

Activated Retail Frontages with outdoor Terraces

Courtyards

Lightweight Modular Structure

Pedestrianised Streets

Community Activities : Street Painting
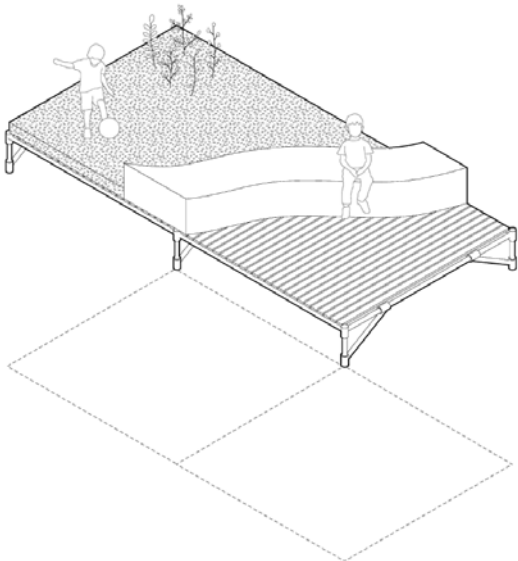
DESIGN MODULE

PARKING

STAIR

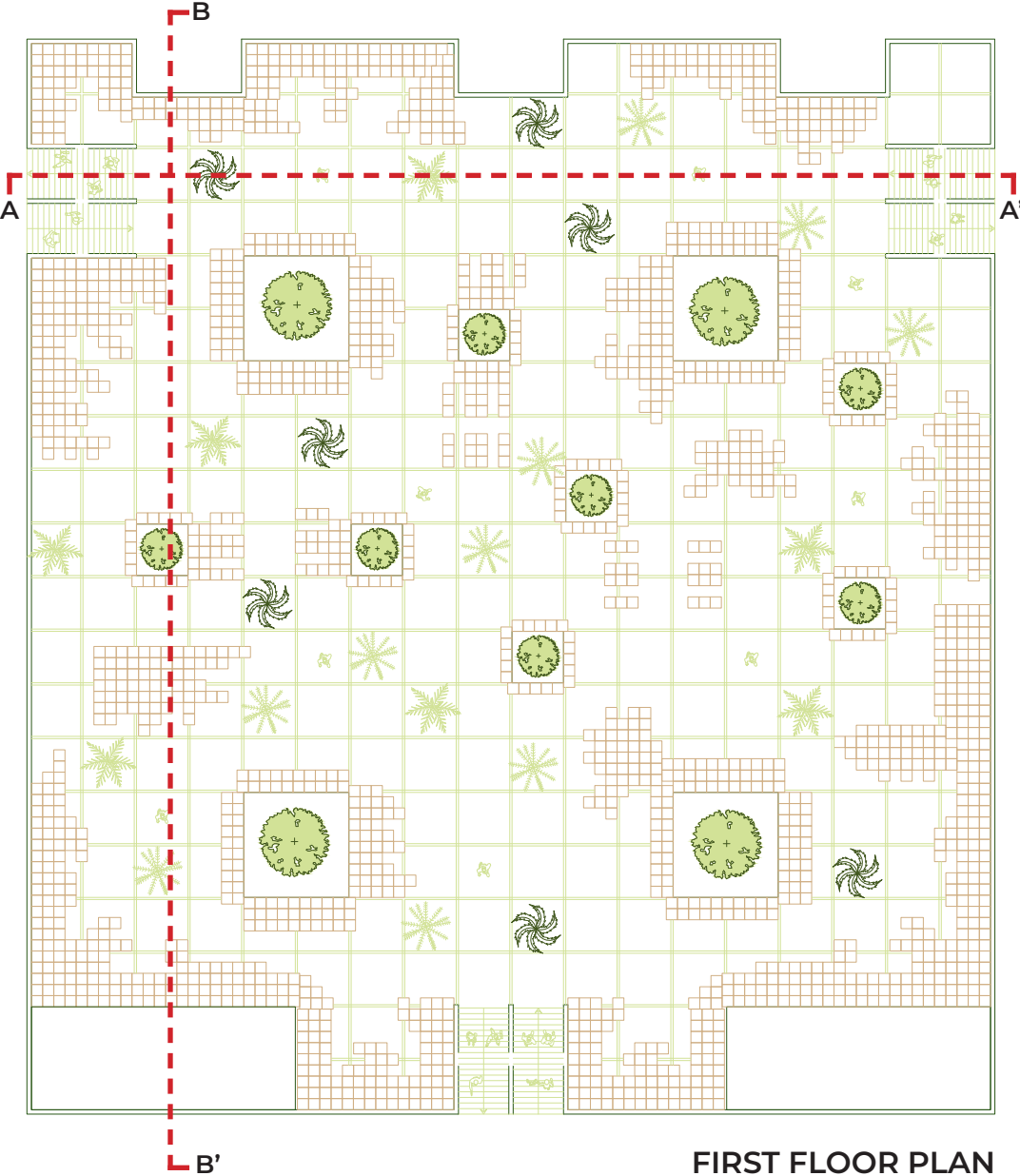**ADDITIONS**

REGULAR MODULE OF 2.4 m x 2.4 m x 3.0 m

PLATFORM (WOOD)

MODULAR SCAFFOLDING (METAL)

AJUSTABLE LEG

PROPOSAL DRAWINGS

PLANS

GROUND FLOOR PLAN
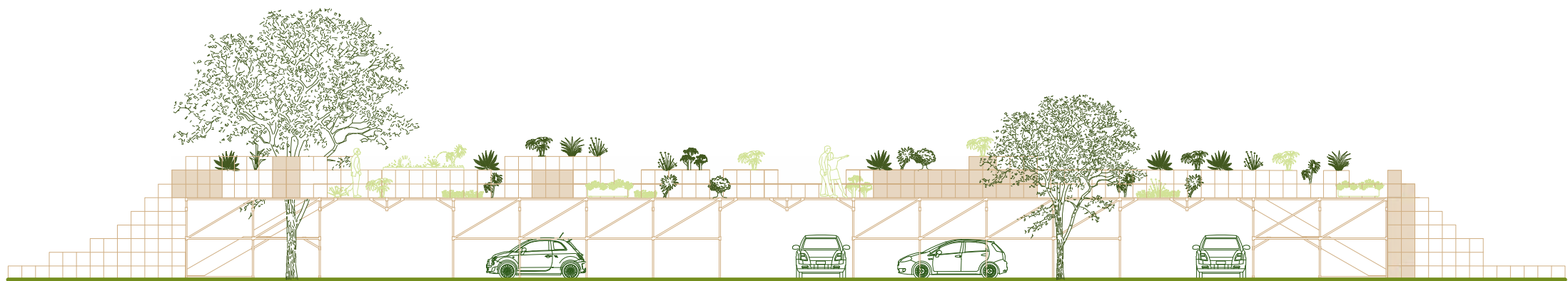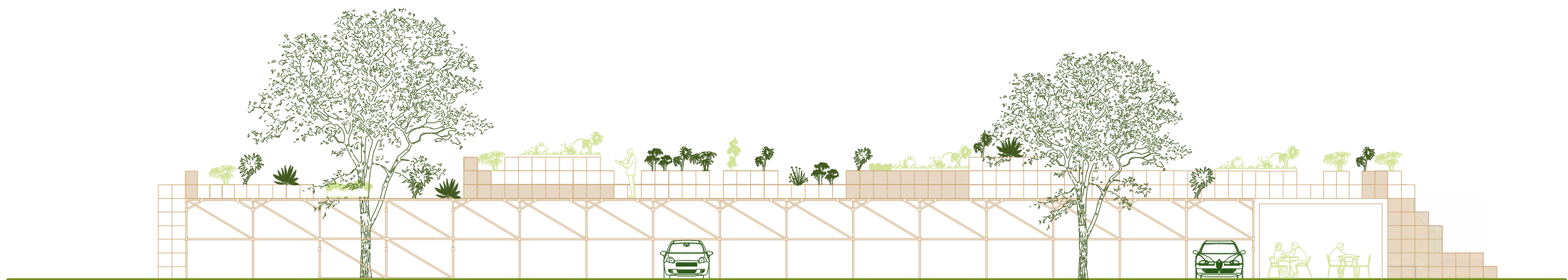

FIRST FLOOR PLAN
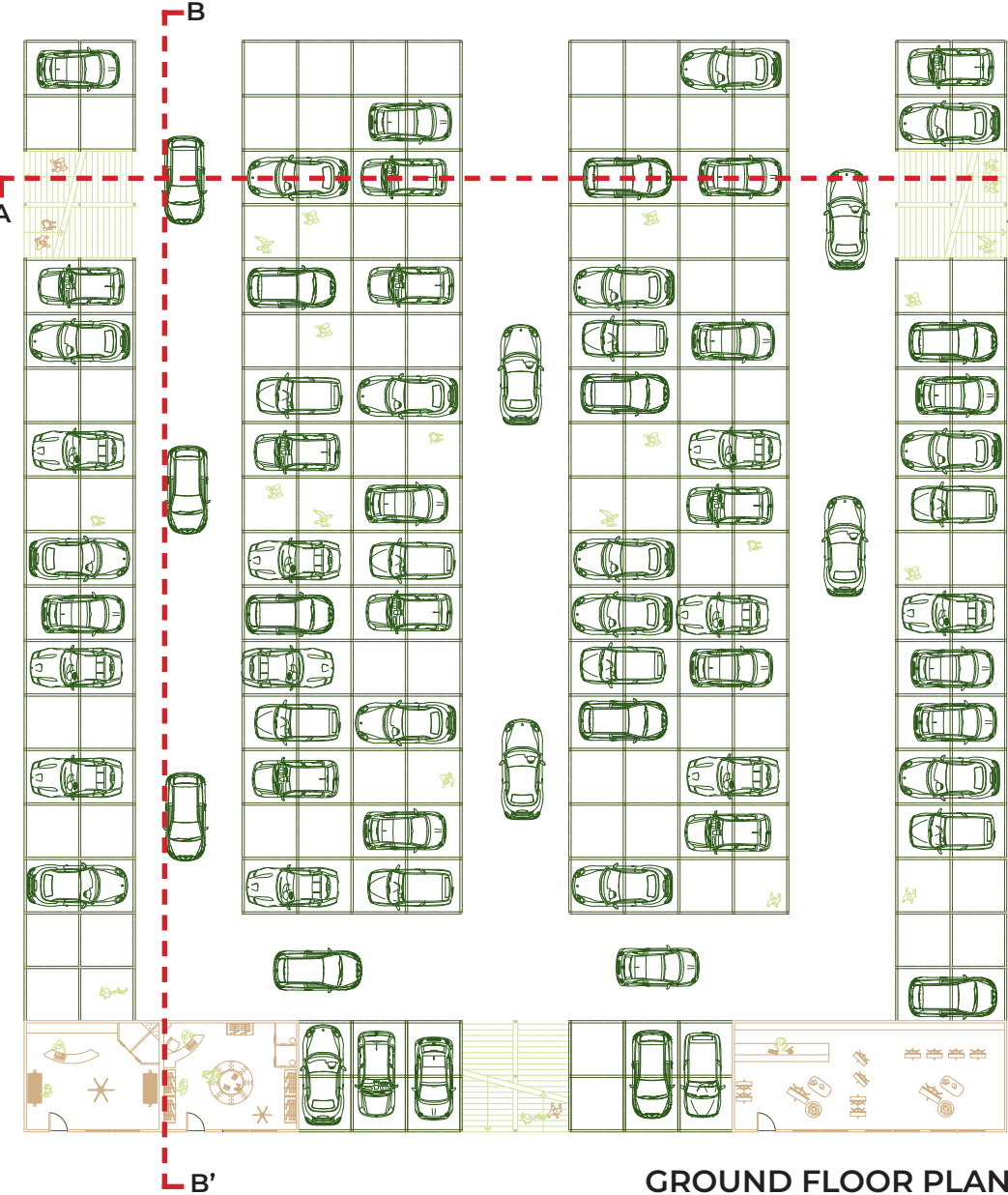
PROPOSAL DRAWINGS
SECTIONS

SECTION AA'

SECTION BB'

CATALOG

TREES

Quercus ilex L. subsp. ilex
- mediterranean species,
- Albaro native species,
- height: 20-24 m
- roots grow deep (drought-resistant)
- dense foliage (generates shade)
- able to mitigate atmospheric and acoustic pollution

Celtis australis L.
- height: 20–25 m
- wide foliage (generates shade)
- able to mitigate atmospheric and acoustic pollution
- produces fruits that are commonly eaten by birds and insects

Olea europaea L. subsp. Europaea
- mediterranean species,
- Albaro native species,
- height: 15-20m
- rustic species, suitable for thermophilic and heliophilic conditions;
- increase animal biodiversity (e.g. seeds for birds)

Arbutus unedo L.
- mediterranean species,
- species suitable for arid areas, exposed to direct sunlight and with little soil
- height: up to 10m
- protects soils from erosion
- produces pollen and nectar for Apoidea (e.g. bees) and fruit for birds.

Laurus nobilis L.
- mediterranean species,
- Albaro native species,
- height: up to 10m
- arboreal and shrubby state
- refuge from fauna,
- able to mitigate atmospheric and acoustic pollution

CATALOG
SHRUBS

Erica arborea L.
- able to mitigate atmospheric and acoustic pollution
- species suitable for arid areas, exposed to direct sunlight and with little soil
- protects soils from erosion,
- produces pollen and nectar for Apoidea (e.g. bees).

Hypericum perforatum L. subsp. Perforatum
- Albaro native species,
- nectar and pollen for pollinating insects
- species suitable for arid areas, exposed to direct sunlight and with little soil

Salvia rosmarinus Spenn
- mediterranean species,
- species suitable for arid areas, exposed to direct sunlight and with little soil
- produces pollen and nectar for Apoidea (e.g.bees) and Lepidoptera (e.g. butterflies)

Lavandula angustifolia Mill.
- mediterranean species,
- species suitable for arid areas, exposed to direct sunlight and with little soil
- produces pollen and nectar for Apoidea (e.g.bees) and Lepidoptera (e.g. butterflies)

Pistacia lentiscus L.
- height: 3-4m
- mediterranean species,
- species suitable for arid areas, exposed to direct sunlight and with little soil

CATALOG

HERBACEOUS

Malva sylvestris L.
- Albaro native species,
- Production of nectar/pollen for Apoidea (e.g bees), Lepidoptera (e.g butterflies) feeding plant

Echium vulgare L.
- mediterranean species,
- nectar for Apoidea (e.g bees),
- species suitable for arid areas, exposed to direct sunlight

Antirrhinum latifolium Mill.
- mediterranean species,
- species suitable for arid areas, exposed to direct sunlight
- produces pollen for insects

Silene alba (Mill.) Greuter & Burdet
- mediterranean species,
- produces pollen for insects
- species suitable for arid areas, exposed to direct sunlight

Scabiosa columbaria L.
- species suitable for arid areas, exposed to direct sunlight
- production of nectar/pollen for Apoidea
- production of nectar/pollen for Lepidoptera

The Nature-Based Solutions Business Model Canvas

Key Activities:

Design and Planning

Implementation of NBS

Community Engagement

Partnerships and Collaborations for economic activities

Marketing and Promotion

Monitoring (using Data to analyze)

Key Resources

Funding Resources

Human Resources

Marketing and Communication Resources

Monitoring and Evaluation Systems

Value proposition

Quality of Live

Physical and mental well-being

Community Gathering Space/ Community Engagement

Tourism Attraction

Education

Economic benefits through the market on the weekend

Multi-functionality

Improved air quality

Property value

Key Partners

Government of Genova

Architects and Urban Designers

Construction Companies

Environmental Organizations

Local community

Local Farmers and Vendors

Key Beneficiaries

- Community residents
- Children
- Environmental activists
- Urban wildlife
- Microorganisms in the soil
- Schools and Students
- Tourism industry
- Municipality

Governance

The most suitable Governance System for "Park it Up" is "Network Governance" (Connecting Nature, 2020). It focuses on the engagement of multiple stakeholders. This governance approach is based on a collective approach. As we have previously established, the project is very collaborative with many parties involved. For that, we need an adaptable governance plan, which the network governance offers.

Cost Structure

Construction Costs , Design Costs , Nature-Based Solutions Costs, Maintenance Costs , Marketing Costs , Monitoring and Evaluation Costs , Administrative Costs

Cost Reduction

Water Management

Urban heat island effect

Health (physical, mental)

Capturing Value

Increased Property Values
Revenue from visitors who possibly go to events that take place there. Each week there is revenue generated through the market. Renting out the stalls can cover part of the maintenance costs.
Increased economic activity: Increase in Revenue for the shops/bars at the park
Events: The Park can be utilized for event purposes

The Nature-Based Solutions Business Model Canvas

1.1. Key Beneficiaries

Community residents: The residents living close to the parking lot will benefit from the transformed area. This includes individuals, families, and groups in this area. This is through direct effects like less noise pollution, emissions, and heat but also a new engagement area for the residents to socially mingle.

Children: There will be a playground and climbing possibilities in the new park. With fewer cars, this offers safe spaces for the children to play and engage with nature. Seating areas and other amenities will create a welcoming environment for families.

Environmental activists: Citizens and groups passionate in environmental conservation in Genova will value the integration of the NBS in the city.
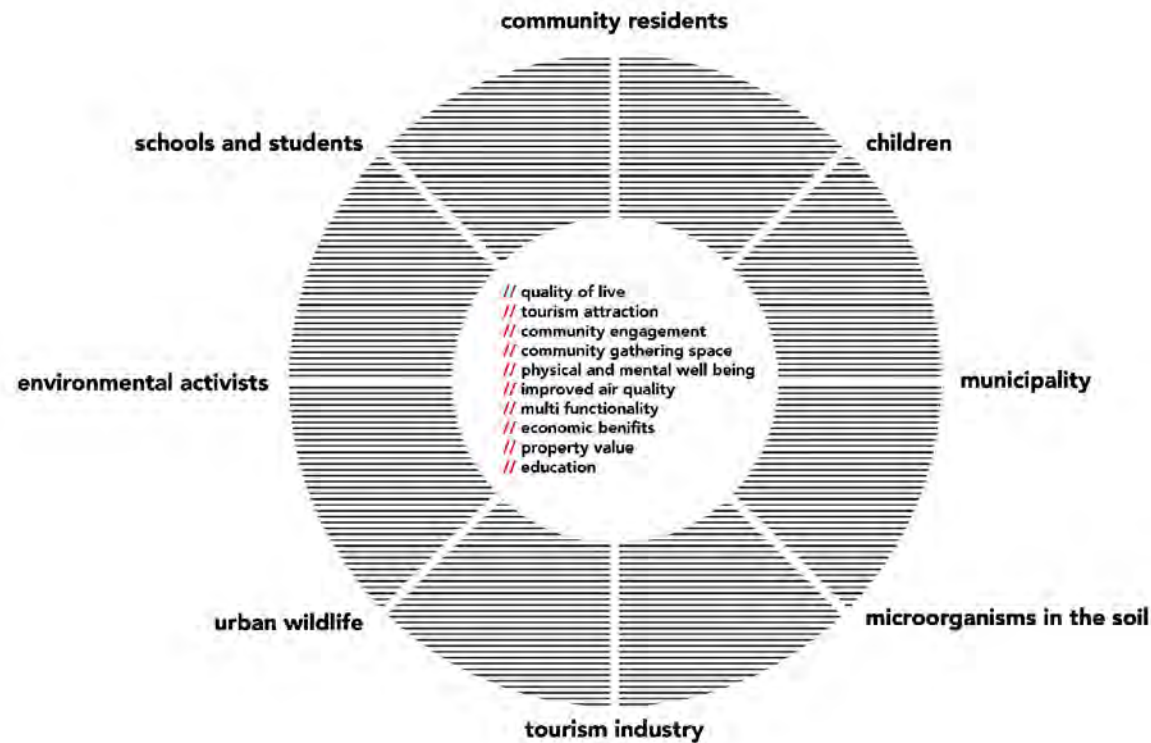
Urban wildlife: Insect hotels, shelter possibilities for squirrels, bees, ladybugs, butterflies

Microorganisms in the soil: healthy soil ecosystem in the park.

Schools and Students: The park could be an educational place for children to learn about nature, species, and different plants.

Tourism industry: With the introduction of different nature-based solutions, the city gets more attractive for visiting tourists. Especially in the summer.

Municipality: There will be a better quality of life in Genova for its residents. Generally, the introduction of this nature-based solution for the parking lot will lead to positive publicity and Genova's' reputation.

// quality of live
// tourism attraction
// community engagement
// community gathering space
// physical and mental well being
// improved air quality
// multi functionality
// economic benifits
// property value
// education

community residents · children · municipality · microorganisms in the soil · tourism industry · urban wildlife · environmental activists · schools and students

The Nature-Based Solutions Business Model Canvas

1.2.   Key Partnerships

Government of Genova: The government is the most crucial partner as the parking lot is publicly held land. It will also have to assist with permits, local regulations, and support for the project.

Architects and Urban Designers: To conduct the project architects need to be hired to carry out the new designs for the parking lot. Their expertise in integrating nature-based solutions while still maintaining the fundamental purpose of the space is crucial.

Construction Companies: Sustainable construction of the designs will also be equally important. The design consists of a modular system for which the blocks need to be built. They must be very resistant while being aesthetically pleasing.

Environmental Organizations: local organizations can help built and maintain the project with their local knowledge and expertise.

Local community: The local community should be included actively in the design process through e.g., creative designs.

Local Farmers and Vendors: As there is a local market planned every weekend, important partnerships are local vendors for the stalls. They can provide fresh local products at 0 km.

key partnerships

// government of genova

// architects and urban designers

// construction companies

// environmental organizations

// local community

// local farmers and vendors

STAKEHOLDER ANALYSIS AND POTENTIAL STAKEHOLDER ENGAGEMENT STRATEGIES

2.1. Residents of the block
Interests:

•Place for social interaction
Creation of park over the parking lot and extended walkway

•Better living conditions
Cooling off and reducing noise by planting trees next to the pavements and different plants on top of the parking lot
Reducing the risk of floods by introducing permeable pavement

•Nice atmosphere
Creating a peaceful ambience by more greenery and opportunity to go for a drink

•Having parking space
Residents are in need of parking and thus the parking lot is being maintained by building the park above.

2.2. Business and market sellers (cafés and occasional market stands)

Business and selling opportunity
by cutting of three streets, more room for cafés and bars to open.
Additionally, a market on the weekends can be implemented where local food can be bought (development of a Foodcoop possible)

Animals: birds and insects
·   space for living and resting
→trees, plants and insect hotels
·   food
→flowers and nectar
Government of Genova
→ Reaching SDGs
→ Enhancing living quality in Genova
→ Enhancing support towards government

Several small micro changes such as transforming the parking lot into a high quality place to be due to smartly implemented nature based solutions will lead to the City of Genova to be an overall more attractive city to live in and visit!
-> enhanced quality of living and economic activity
-> more support for the policy makers

Such solutions can be seen as short to long term policies which will help in coping with global warming in the next decades on an urban level.

Increasing the health and well-being of one's citizens ought to be one of the highest goals a government can have!

IMPLEMENTATION : PHASING

1 Year
- parking lots
- raised platform
- pedestrian sidewalk
- change trafic circulation
- addition E-bike station
- new permable pavement

5 Years
- parking lots
- raised platform
- pedestrian sidewalk
- full green space
- starting food coop

3 Years
- parking lots
- raised platform
- pedestrian sidewalk
- progressive increase of green space
- expansion of commercial activities

10 Years
- parking lots
- raised platform
- pedestrian sidewalk
- selling Km0 products
- introduction of playground
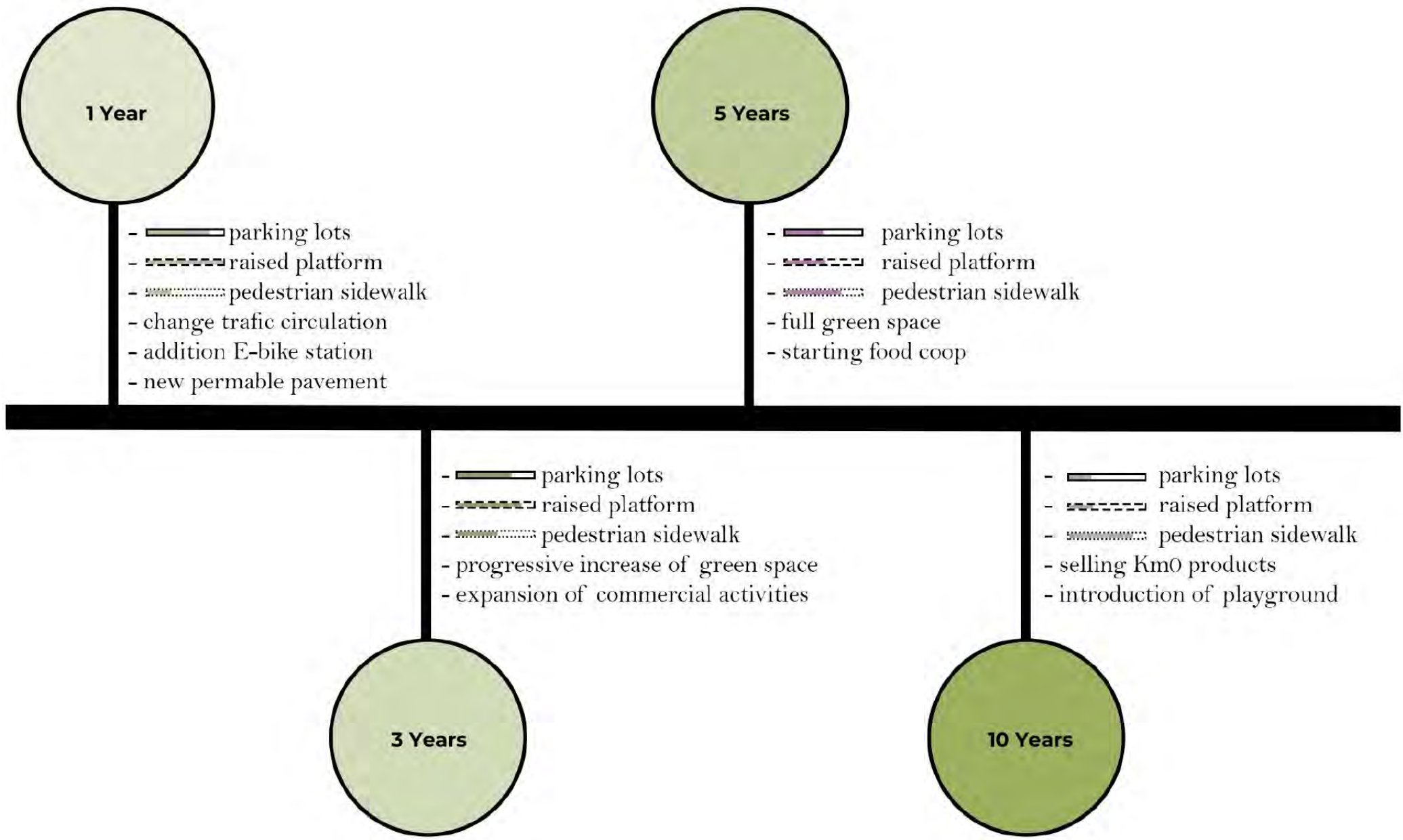
'PARK IT UP' and transform this connection to a Destination!