

live in a
different light

gradient ambient

the call: Rotterdam, 2030. The urgent demand for small dwellings for young professionals is crippling the Rotterdam housing market, but with this project I believe darkness will shine brighter than light. Why? Because this design is committed to a brighter future, a future where actions speak louder than words by maximizing living quality through minimizing environmental impact. Inside of an existing parking garage a whole new internal world is created, completely disconnected from the dense city and its chaos. I intend to create a place specifically for the environmentally aware young professionals who have a sustainable and self-sufficient dwelling ambition. This ambition is to be met within the strict parameters of a parking garage, keeping its existing characteristics and using the darkness within the structure as its basis.

parameters: These young professionals are highly connected digitally, and like to be connected physically by living in the city center: a recipe for disaster. No wonder this generation suffers from lack of concentration and stress. Though having these problems, this generation is also the most environmentally conscious generation and because of their individual lifestyle a smaller apartment is wished upon for many within this generation.

If it ain't broke, don't fix it: by using an existing structure the whole building becomes part of a new circular economy. The emitted kilograms of carbon dioxide by pouring concrete or the logistics necessary for the construction is simply avoided. The original design is completely turned upside down, from being based off of logistics as a parking garage, the need for transport is completely removed. The young dwellers are aware the planet needs help and that

actually, not only the planet, but every creature on earth does. Together they agreed on living smaller, they decided to save space by living, cooking and dining collectively. For a sustainable lifestyle it's key to be self-sufficient. Of course, the usual heat pump or solar panels are great! But they aim for a higher cause: to collect their own rainwater, raise their own goats for cheese production, keep bees and collect the honey, grow their own grapes and make a local Rotterdam wine, harvest their own crop and what remains from their production will be sold, downstairs, in their own local supermarket – taking away logistics for themselves and their neighbors!

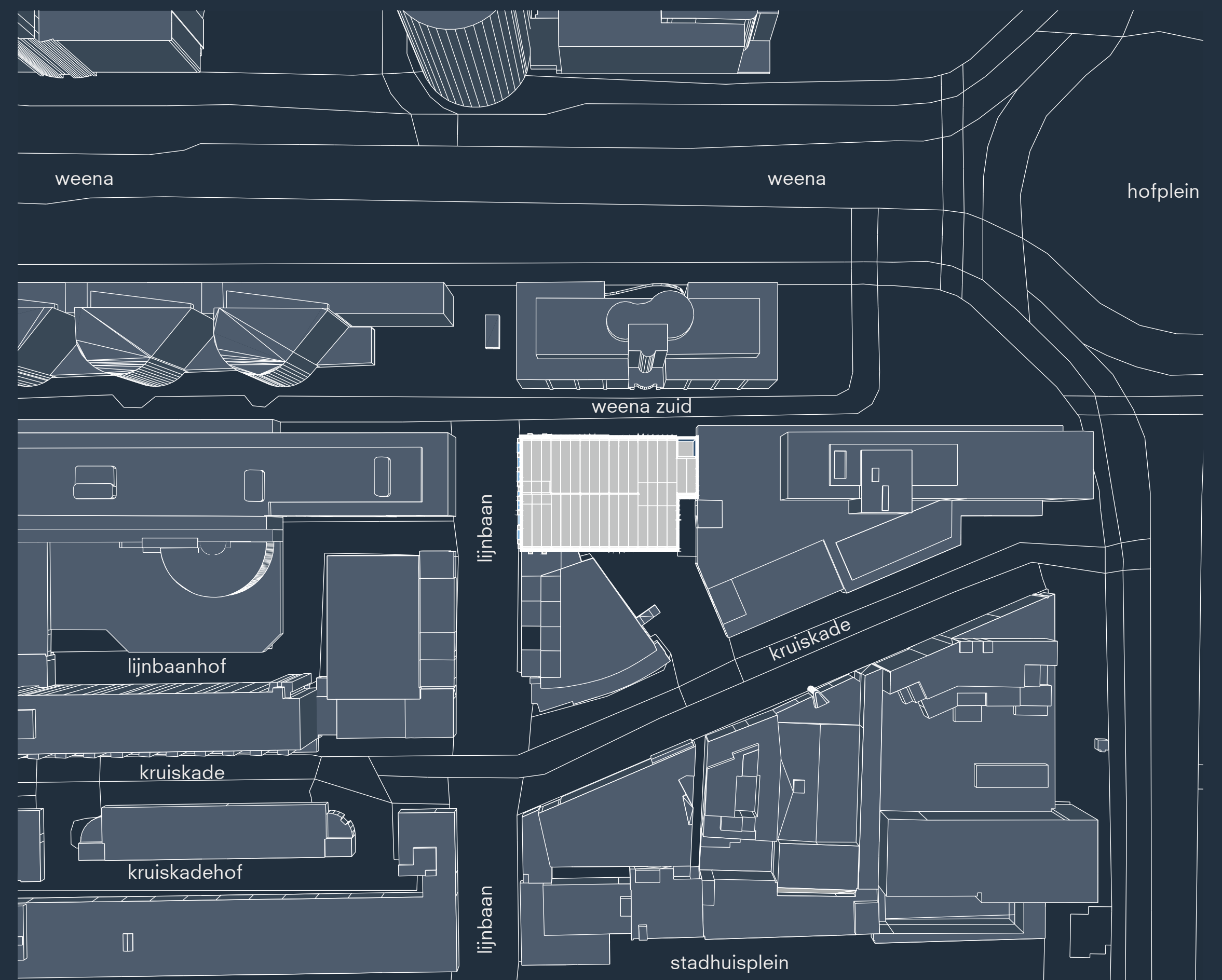
living in darkness: Because the original building will remain largely untouched, the new housing units will be built, in situ, from FSC wood and hemp insulation without glass. Because no daylight will enter the units there is no loss in heating in winter, or cooling in summertime. What makes these units special, except from being dark, is that the living units also contain the indoor 'vertical farms.' The units are built as compact as possible and four typologies are created. Each with their own remarkable character of living whilst simultaneously ensuring the inhabitants are always surrounded by lush green. All dwelling types are based on the qualities of the parking garage, using the ramp for creating height difference for a 'terraced ricefield' dwelling, an extra-long unit for a 'rowed vineyard', a higher dwelling for a 'tall orchard' and a more flat and wider based plan for a 'consolidated farm'.

These indoor farms separate the two zones of which the dwellings consist. The relaxation-zone and the concentration-zone, all other functions like the kitchen, dining room, toilets and bathrooms are used collectively.

The relaxation-zone makes use of red ambient lighting, the most pleasant of colors to be relaxed in. It might set a romantic mood but it also causes the inhabitants to feel more relaxed. The concentration-zone makes use of blue light, which enhances the inhabitant to be able to concentrate. It's a system used regularly in schools and offices to ensure maximum efficiency.

'The gradient' is the place where the two zones come together, gradually the red and blue LEDs mix until a bright magenta is visible. Magenta lighting is an innovative way for growing crops indoor and maximizing crop efficiency. Each dwelling type have their own characteristic gradient as mentioned before. The gradient will be placed as a stylistically morphed landscape in between the two zones that will both bridge and isolate them. A place you physically and mentally have to cross in order to achieve your total relaxation or to achieve complete concentration when going the other way around. To really achieve these states of mind, a complete lack of daylight is a necessity.

to conclude: In a circular hull, within the parameters of the darkness a place is created to be self-sufficient, a place to teach agriculture and sustainability. A place for Rotterdam where the call for innovations for the Rotterdam Food District and the productive city is met and answered. A place for young professionals to thrive professionally. A place to relax privately, enjoy collectively and live happily.



descriptive text

concept of living

dimmed red light for total relaxation



efficient harvesting in the gradient harvesting



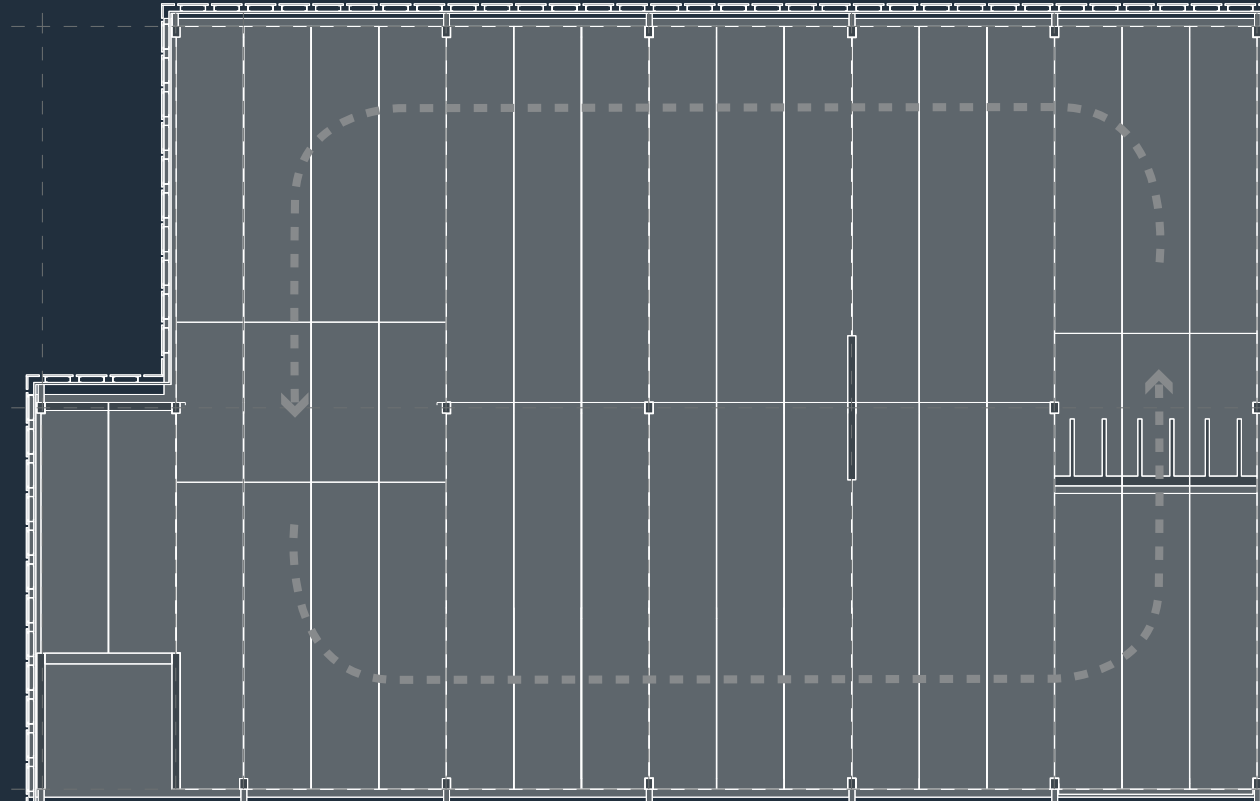
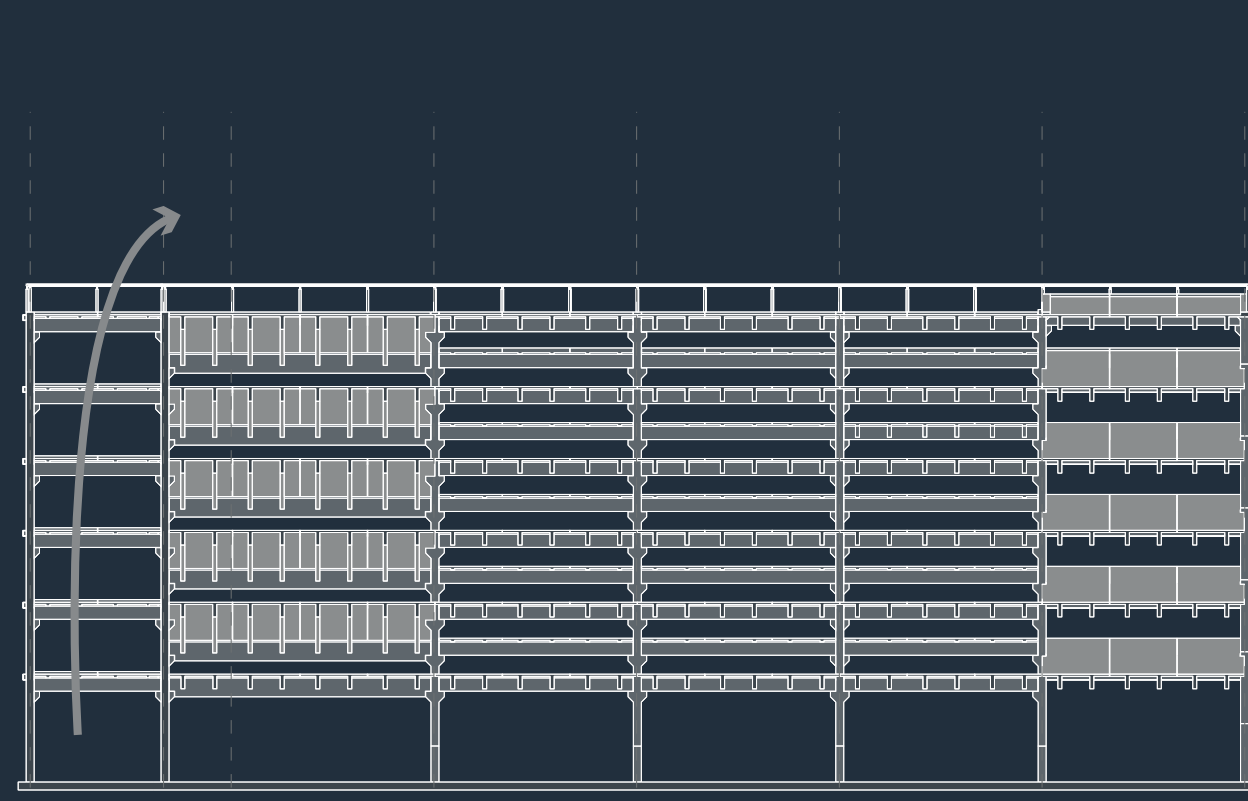
soft blue light as activator of concentration



location 1 : 1000

existing situation

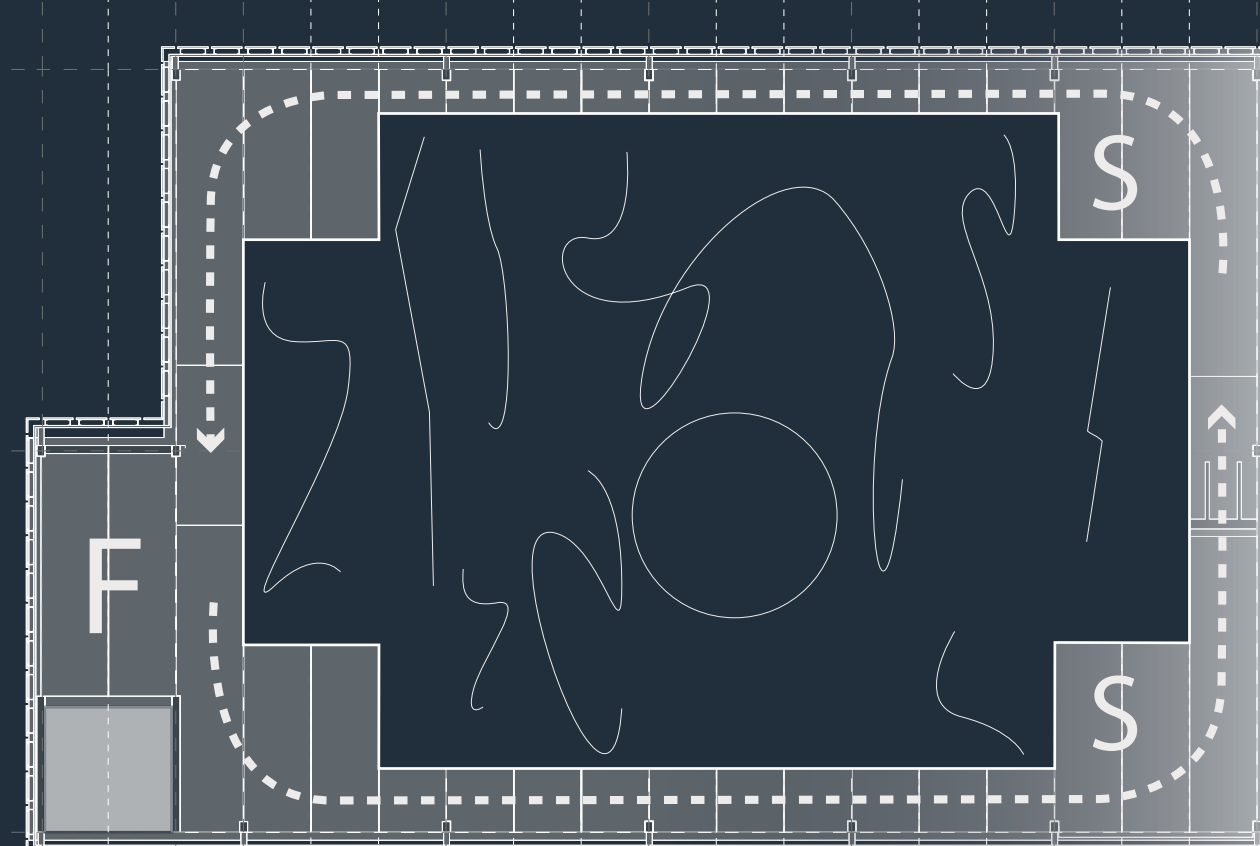
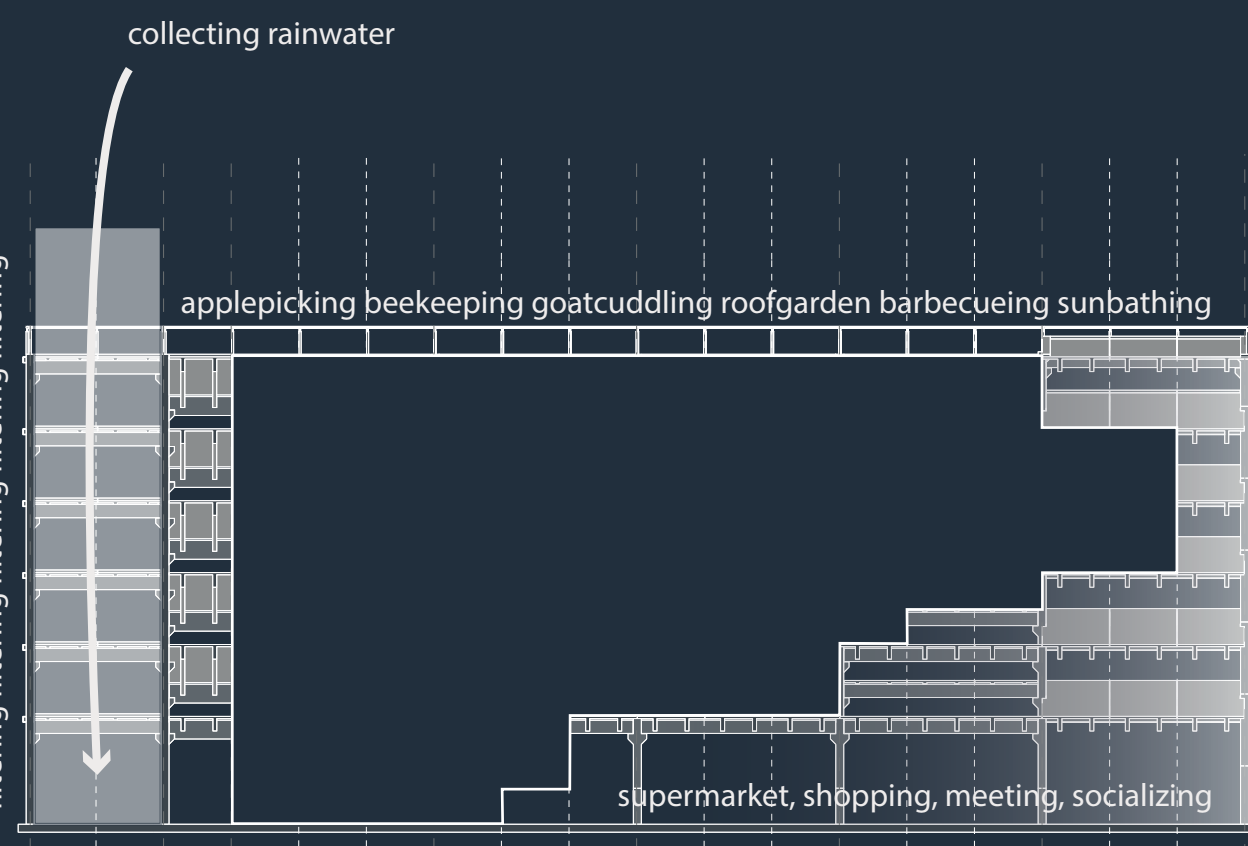
existing structure



1. within the existing split-level structure, a human would ascend the building by stairs or a lift through the main circulation shaft

2. a car would helixically ascend the split-levels through the barely lit rigorous structure of the building

use of the building



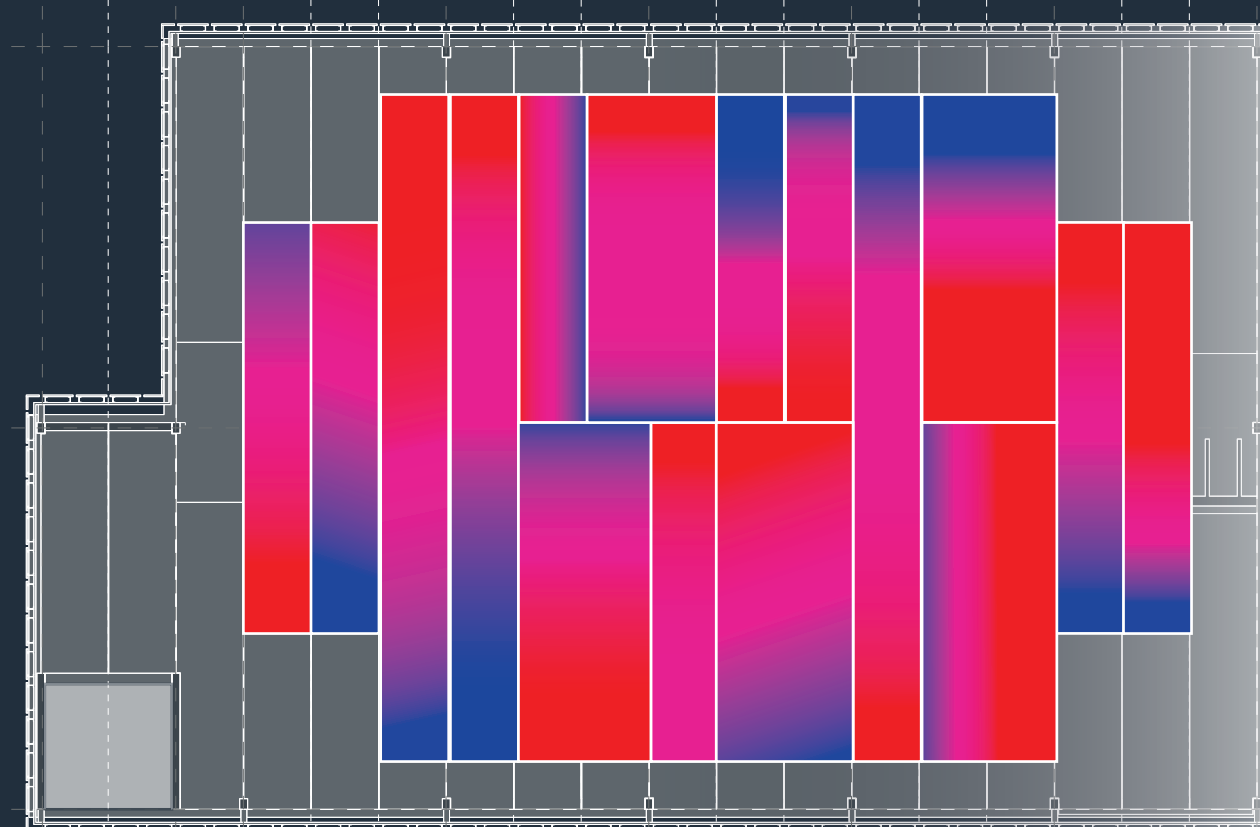
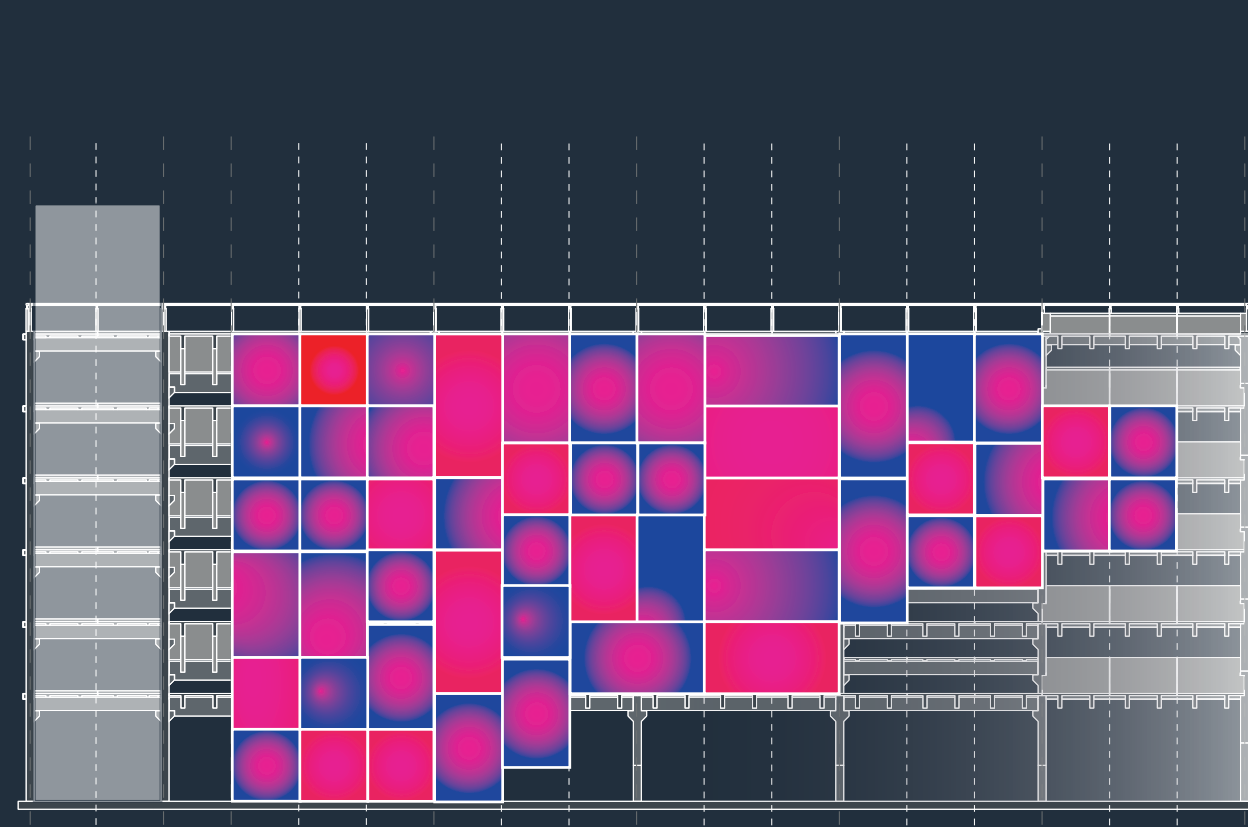
3. with collecting rainwater, and distributing communal spaces according to a descending hierarchy, based on cleanliness a maximum efficiency on water use is guaranteed.

5. the helixical ascension is kept, but only for inhabitants, radiating around a void of darkness, a constant journey from functionally dark spots to socially lit havens for interactions and encounters and back again

4. apartments are placed according to an existing subgrid based on the floorlevels

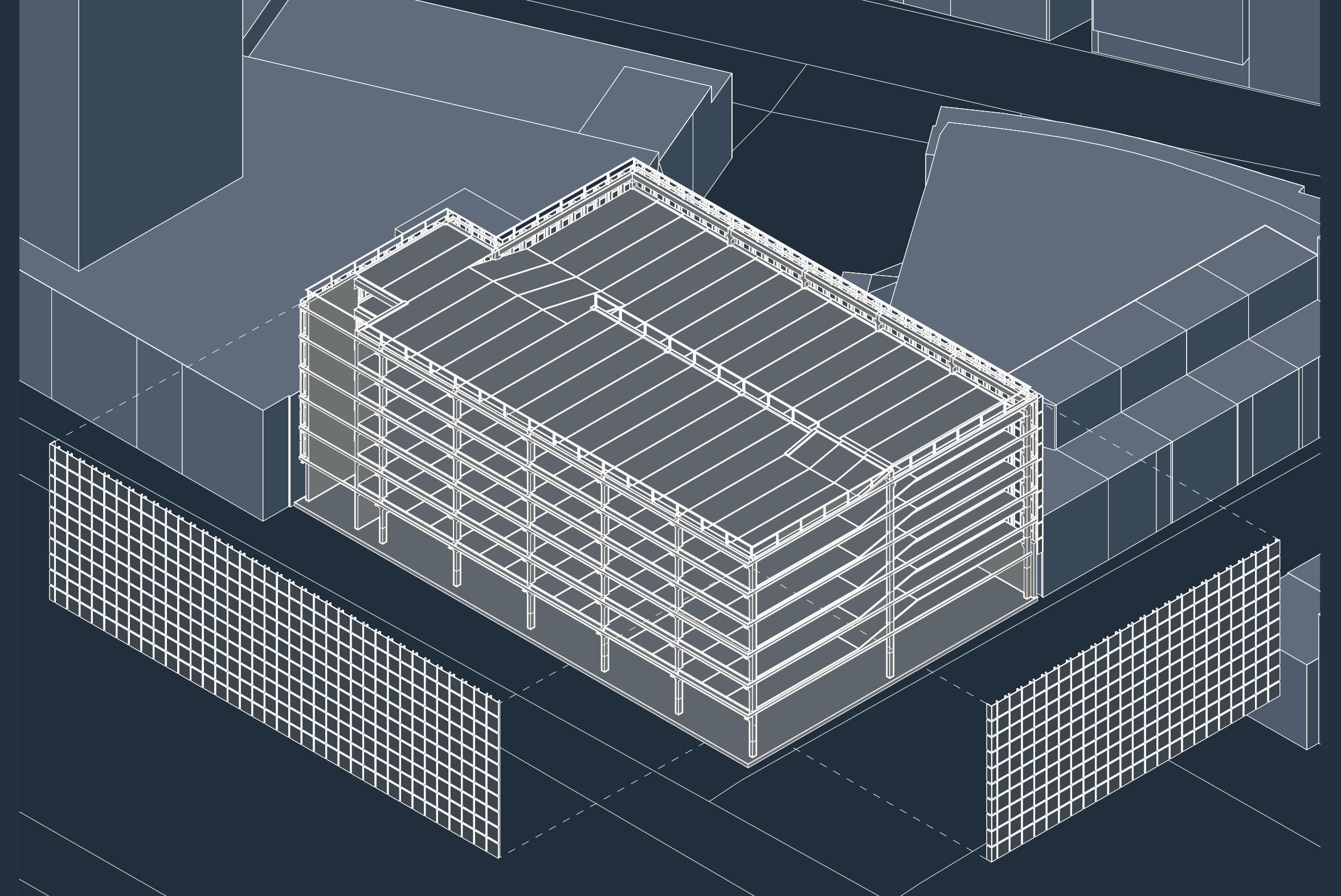
6. upon entering their apartment they will be fully able to improvise their way of living within the rigor of the grid

use of the building



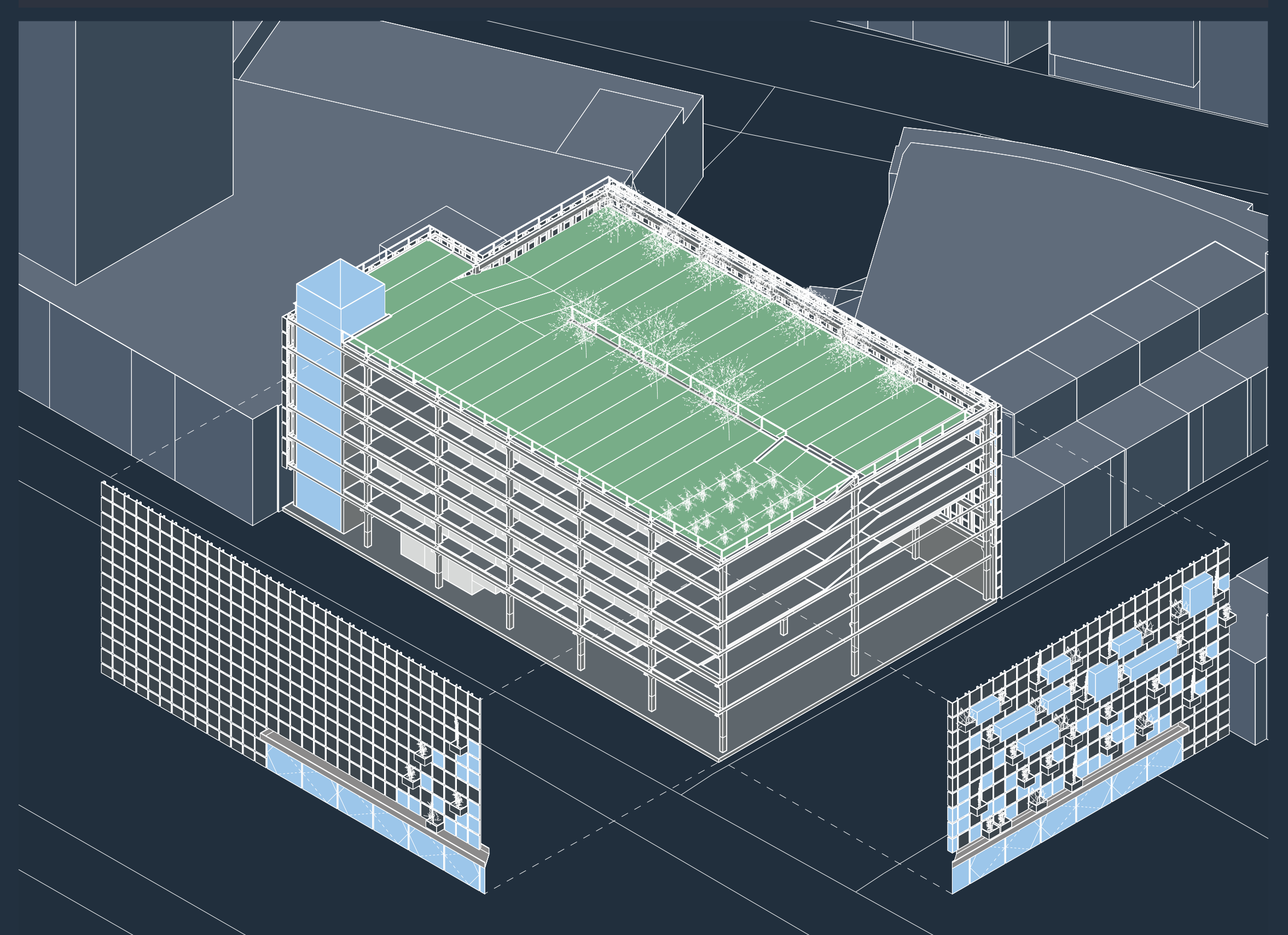
7. an innovative way of establishing a productive city, a place for relaxation, efficient workflow, growing your own food in Rotterdam's own core citycenter - diminishing logistics of supermarkets, growing sustainably while living healthy and happily

8. living among your own crops, flourishing in the magenta gradient alongside your office in the blue concentrationzone and while relaxing in your hammock in the relaxationzone.



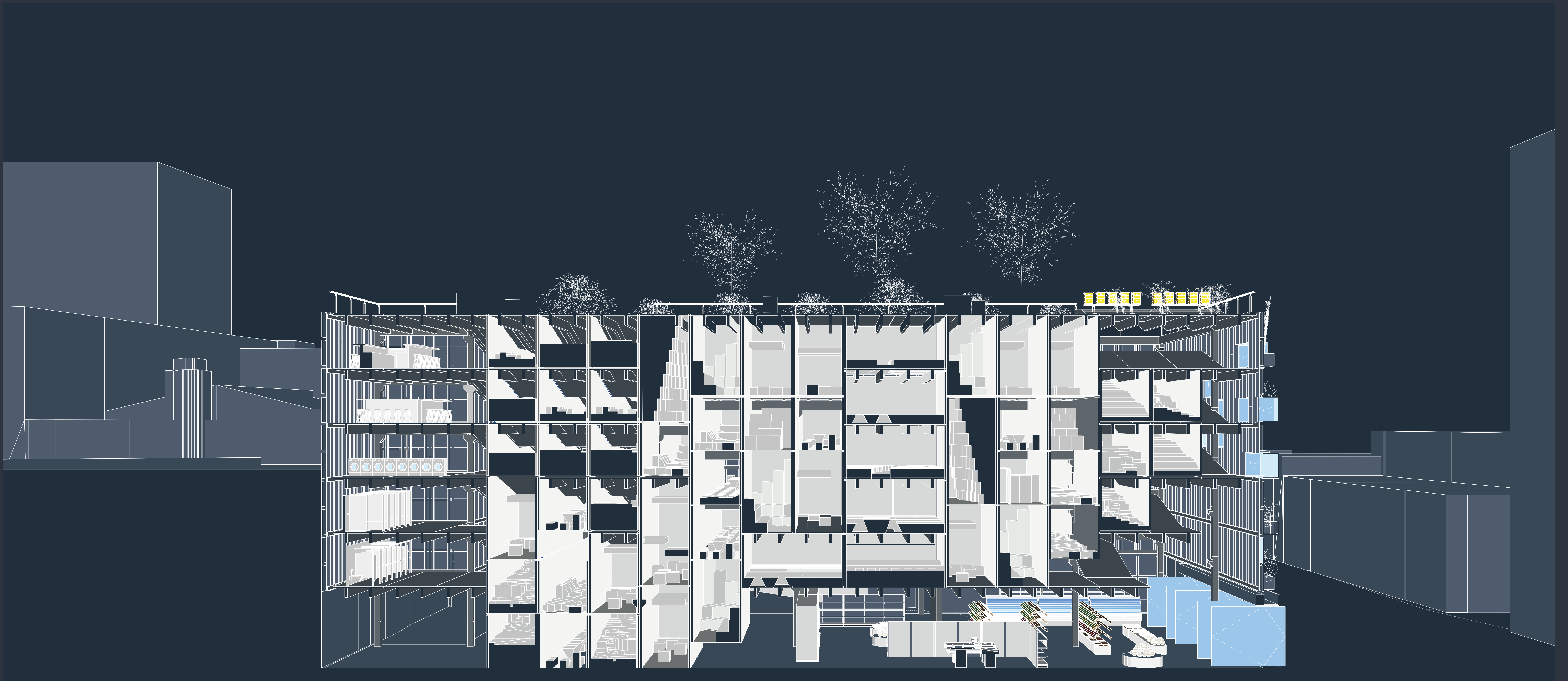
axonometric exploded view, looking inside the existing structure clearly visible the efficiency in building and use for car only

axonometric exploded view of the proposal, visible on the left, the waterfilter to distribute functions according to level of cleanliness, added daylight openings at the Lijnbaanside for social encounters and an open plinth for a heightened interaction on groundfloor level. The roof garden is fully grown with grass for the goats, with walnut trees and apple trees perfect for foraging and a grape orchard for a new Rotterdam winery



exploded view existing situation

exploded view new situation

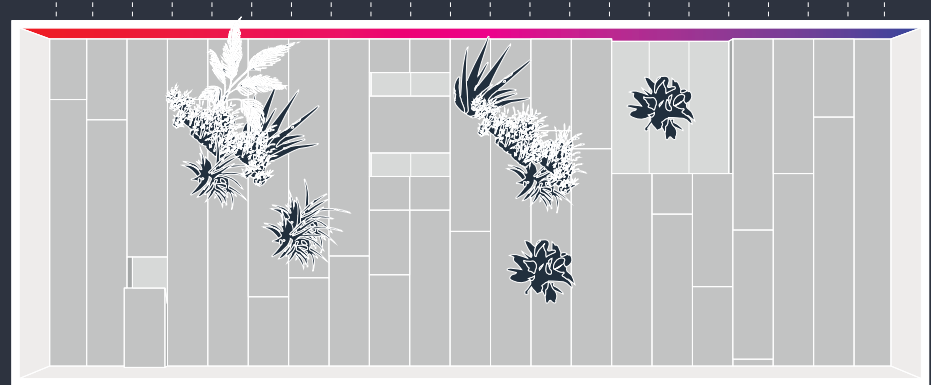


indicated in dark grey - existing structure
 indicated in light grey - newly added elements

section 1 : 100

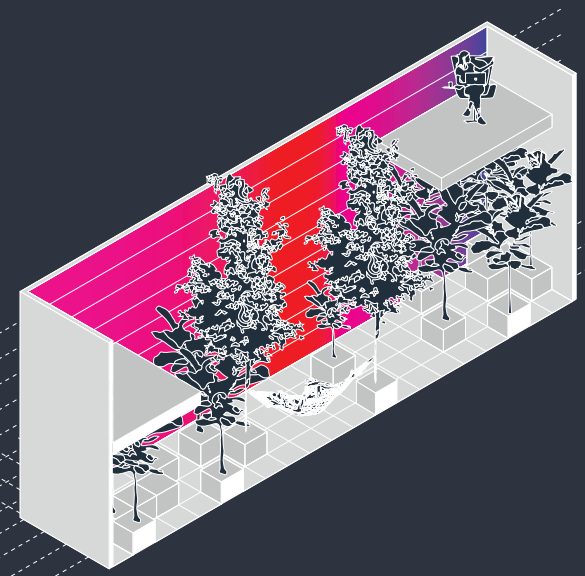
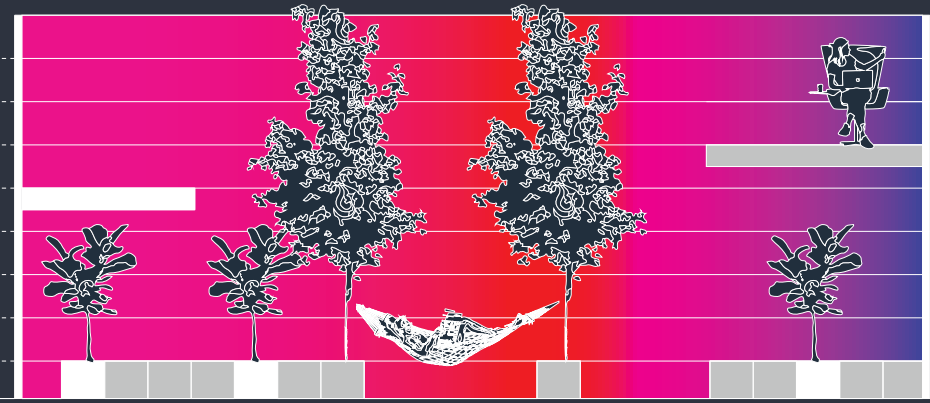
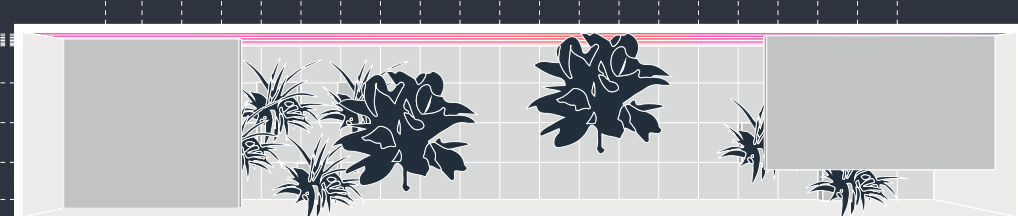
consolidated farm

dividing land fairly among farmers creating a diverse palette of landuse within a strict grid. Just 14 to 21 degrees Celcius with 40 to 70% humidity, regular windspeeds and just 50% light intensity. Due to the division a variety of crops is possible.



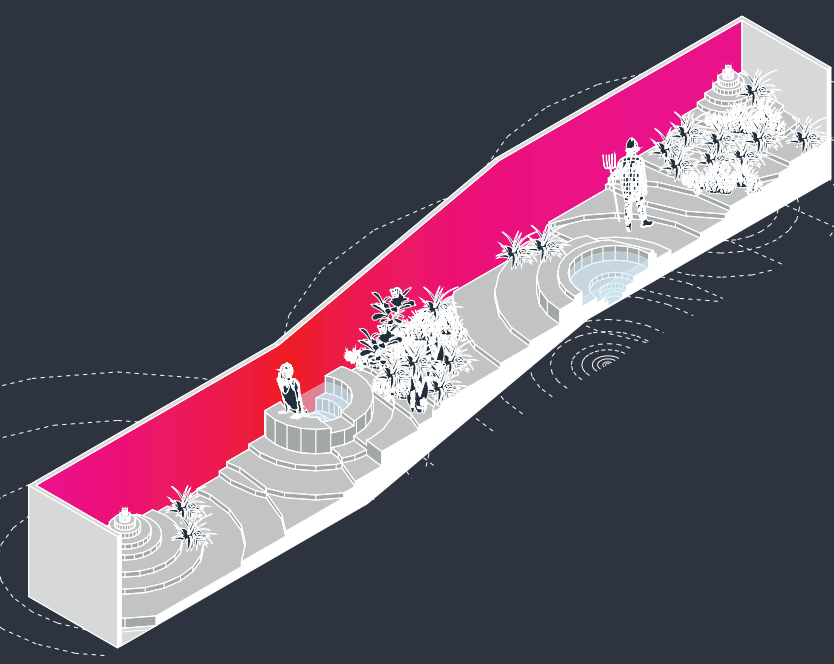
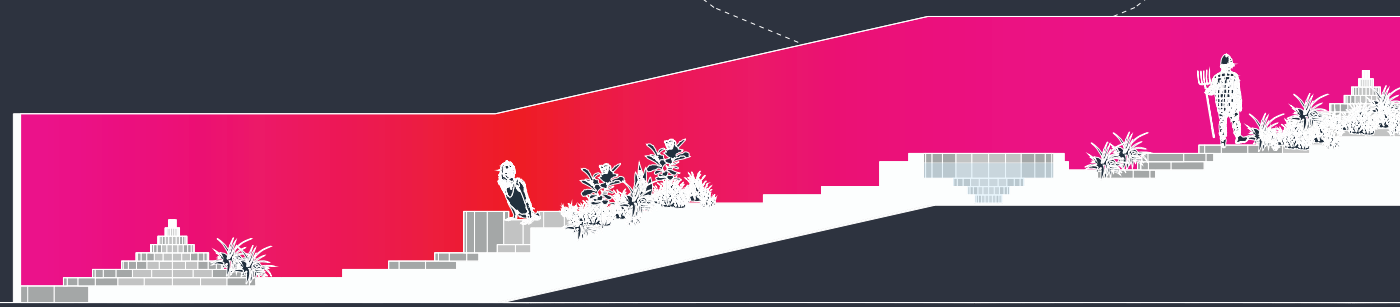
tall orchard

the tall space of the orchard consists of living vertically, on plateau's, treehouses, you name it. Inviting the user to a mild climate of 18 to 20 degrees Celcius, 50 to 90% humidity, windy and misty weather with just 30% light intensity. Apples season will be early this year!



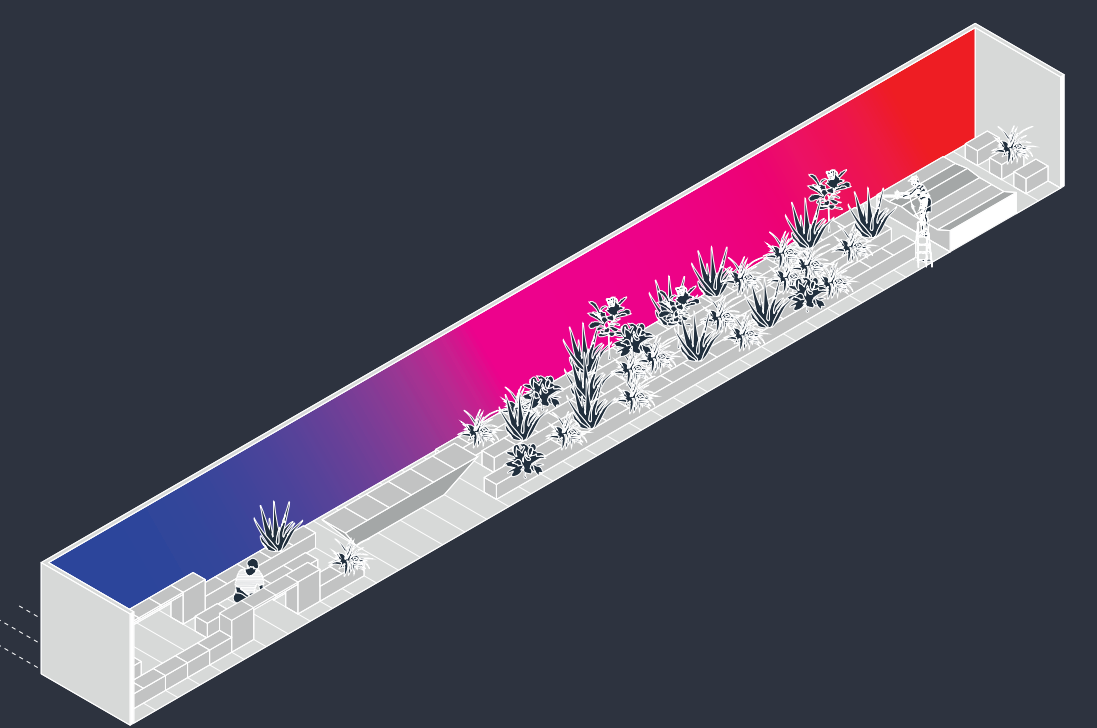
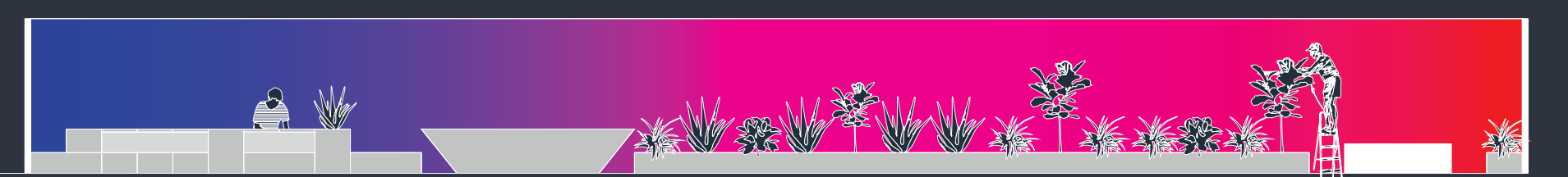
terraced ricefield

this dwelling encapsulates the farming typology of creating terraces, enabling mountainous terrain for agriculture. This dwelling offers it's users a climate with temperatures between 24 and 28 degrees Celcius, 70 to 90% humidity, mild windspeeds, high chance on monsoonrain, and an average of 70% light intensity. Living amongst mainly ricefields, treetrees and cherrytrees.



rowed vineyard

offering a stroll through rows of flourishing vinetrees, this dwelling contains the farming typology of creating rows of plants. Temperatures can range from 17 to 24 degrees Celcius with a mere 10 to 40% humidity. This ensures a mild windspeed and a clear sky estimating a whopping 90% light intensity. Grape and olivetrees will be right at home.



enjoying the calmth and quietness in red light, reading your favorite book in the purest state of mind, amidst the flourishing trees lying comfortably in your hammock.



surrounded in magenta lighting, radiating onto the fresh crops, teaching your daughter how to grow crops and how to harvest them - ecological farming, sustainably taught.



let your professional life bloom by concentrating in blue light - studying, working at home or sculpting, all is possible within these dwellings of efficiency.



dwellings explained 1 : 100

impressions of the red zone, magenta gradient and blue zone

