

# Planning off-the-grid

Berlin in the year 2030, where commodification of housing and gentrification have reached new heights, a small group of anarchists set out to find a place to build their homes. In Wedding they stumbled upon the walls of the Julius-Leber-kaserne which they - in the middle of the night - occupied. With sustainable practices they could provide in their own need. As word of this commune spread, more would join the group and systems could be improved. By 2060 their population has risen to 6500 which proved too large of a size, so smaller factions had formed. They named themselves 'The Localists' who favor arts, well-being and collective action. 'The agriculturalists', who embrace agriculture as their purpose. 'The Teslacollective', who create machines and structures to ease their lives and the 'Ecofront', that are responsible for integrating ecology into every system. Are are in the end influencing the landscape around them in their own specific way.

## Anarchism

The commune acts according to the core values of anarchism. Interventions in space or in culture always follows these values.



**Direct action**  
To assert one's autonomy in decision making



**Non-hierarchy**  
Mutual agreement on the distribution of responsibility and organization.



**Mutual aid**  
Voluntary and collaborative exchange of resources and services for common benefit



**Anti consumerism**  
Concern about private actions or corporate influence on the well-being of the ecosphere for capital gain

## Situation

**Housing** and **facilities** connected by a **loop** and large green structure. The wall is an aggressive structure and makes you feel unwelcome.



## Spatial needs

The commune needed to work on obtaining levels of agriculture, energyproduction and housing/working space. The following amounts are needed per person



**Agriculture**  
Each person requires 2000 m<sup>2</sup> / 0,2 ha of field agriculture for sustaining a vegetarian diet.



**Energy**  
Each household requires 1300 Kwh of energy per year.



**Housing**  
Each person requires 20 m<sup>2</sup> of housing space. Households with more than one person can use more 20 m<sup>2</sup> units.



**Work / community facilities**  
Each person requires 10 m<sup>2</sup> of working space and 5 m<sup>2</sup> of communal space

## A systems based approach

In order to make self sufficient living feasible, a number of systems need to be in place for the community to operate. The most important systems are agriculture, energy, water and socio-cultural systems. As the community grows and attracts specialists they are able to improve upon their system. I have observed that these systems evolve from land use to optimization to integration into existing structures or other systems.

### Agriculture

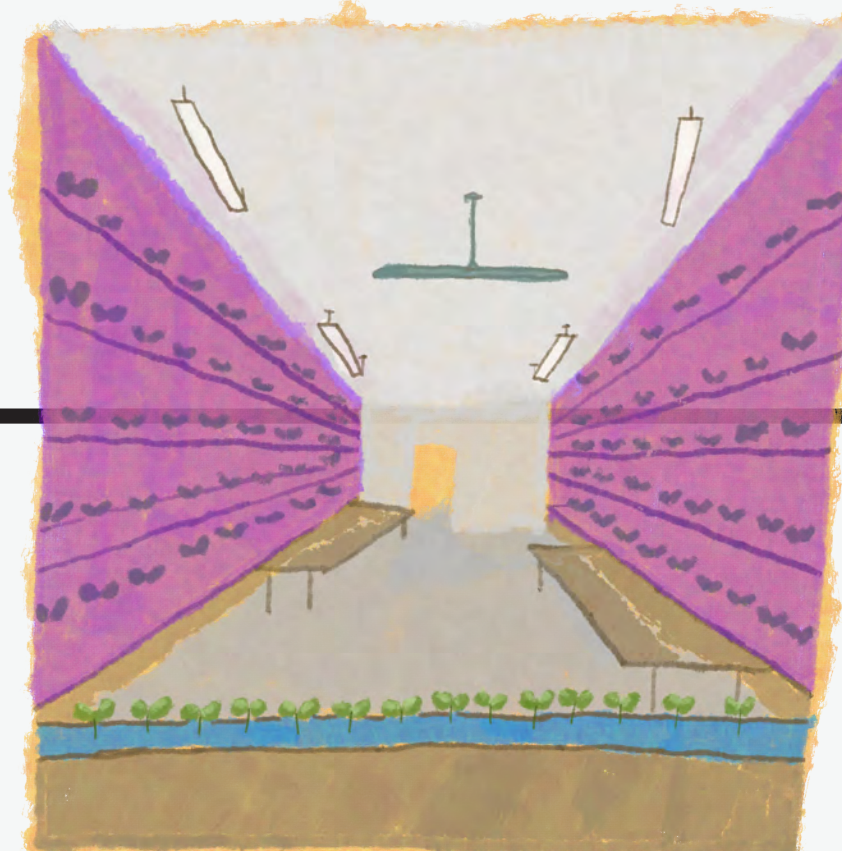
Field gardening as a basic form of food production. Energy loss and evaporation.



The greenhouse as a way of controlling inputs and outputs. High efficient production.



Hydroponics as a method of water treatment and reclaiming nutrients.

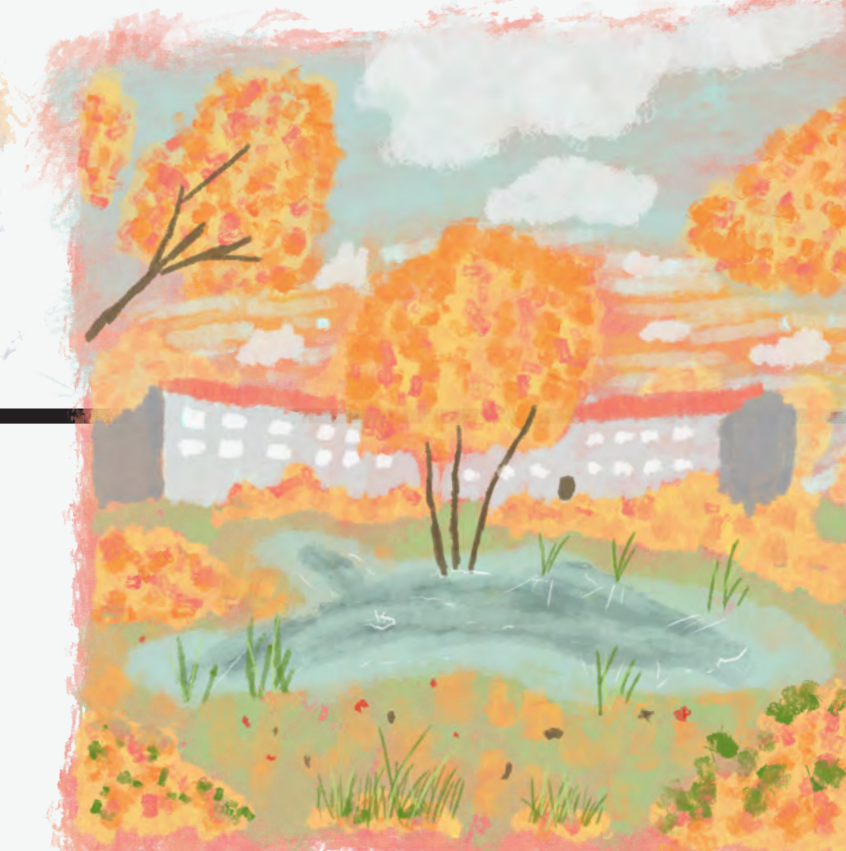


### Water

Floodable landscapes provide water storage and infiltration.



Raingardens optimize the human use of floodable plains.



Constructed wetlands with helofytes collect household water (grey and black) and purify it.



### Energy

Wood frame, copper and magnet wind turbines as a rudimentary and unreliable form of energy generation.



Integration of energy generation onto buildings. Higher level certainty of power generation.



Re-using household heat to benefit greenhouses and stimulate crop yield. Provides energy reduction.



### Socio-cultural

Manifestations in open air with a podium and amfiteheater like structure.



Organized and subdivided communal spaces that are free to use.



Large scale communal debated and governance in congress centre.

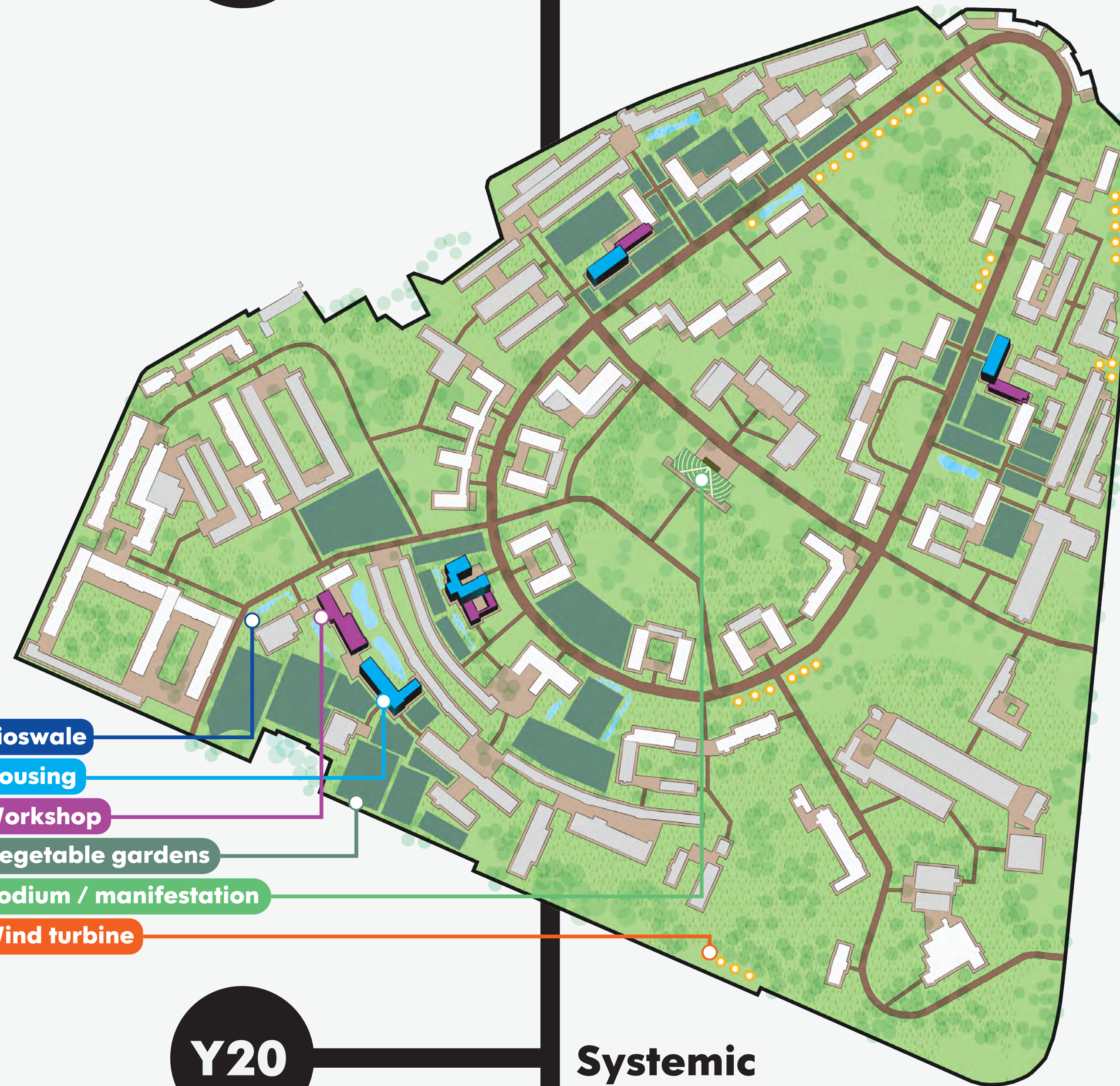




# A possible community growth scenario

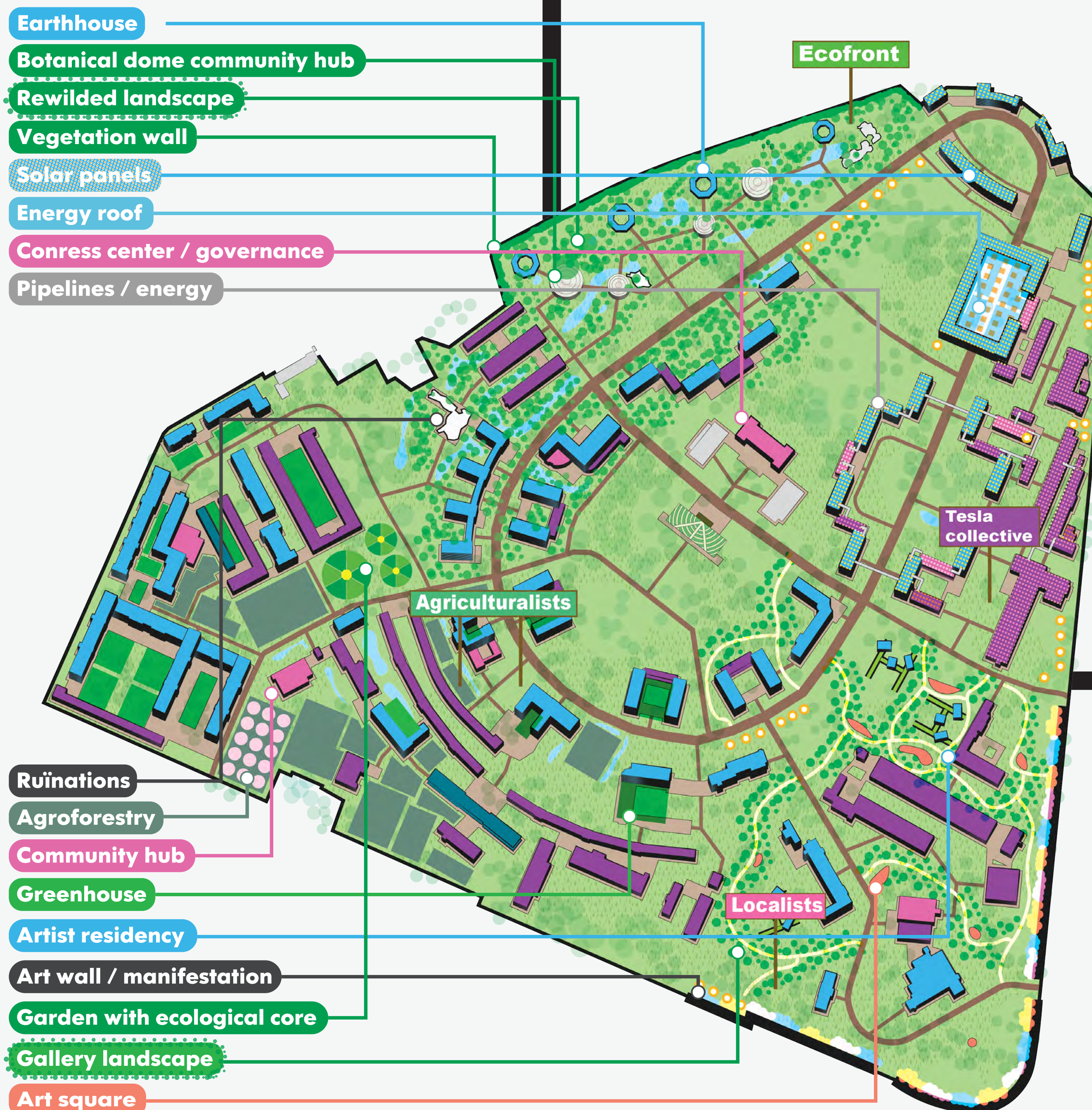
Y10

Neo-neolithic revolution



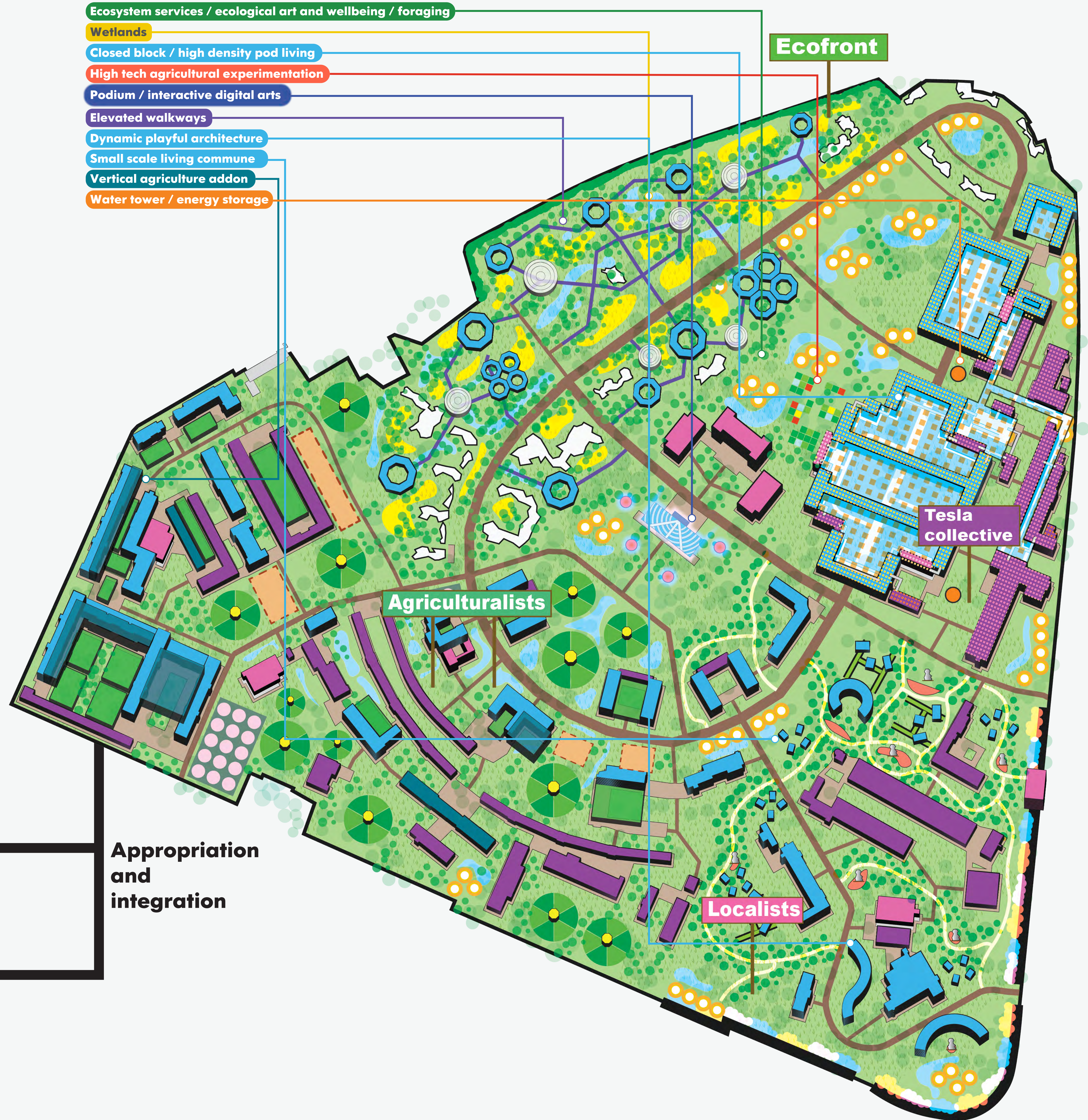
Y20

Systemic society



Y30

Appropriation and integration





# Development timeline

At the first community meeting...

"I believe we will need a lot of space for agriculture"

"So... we all agree on the initial housing and working allocation?"

"Stormwater management, anyone?!"

"Let's move away from these monocultures. I want to combine gardening with forestation, not destroy it!"

"The community hubs are great, we can meet each other near our homes"

"The majority has been heard and we will split into four factions, to name the Tesla collective who favor technology and engineering, the Agriculturalists who favor food production, the Localists who favour art and wellbeing, the Ecofront who favour ecology and landscape"

"Green energy always has the issue of there being not enough at peak demand. With our water tower with integrated turbine we store excess energy for later use!"

"We also need to think of quality of life! I propose a podium for manifestations and entertainment"

"We can use our landscape as a storage basin for the vegetation"

"Our commune has grown to a size that poses significant challenges to unity. I believe we need to split into factions under one federation."

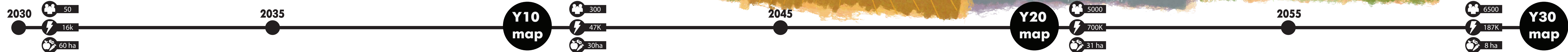
"At first we had no sewage system. I can't describe the smell. The helofyfe filters prove to be excellent though."

"Yes, and energy production as well. We could use the wood gained from felling trees to construct wind turbines. After all they only require copper and magnets in their simplest form..."

"Did you know that a greenhouse produces 15 times more than field agriculture?"

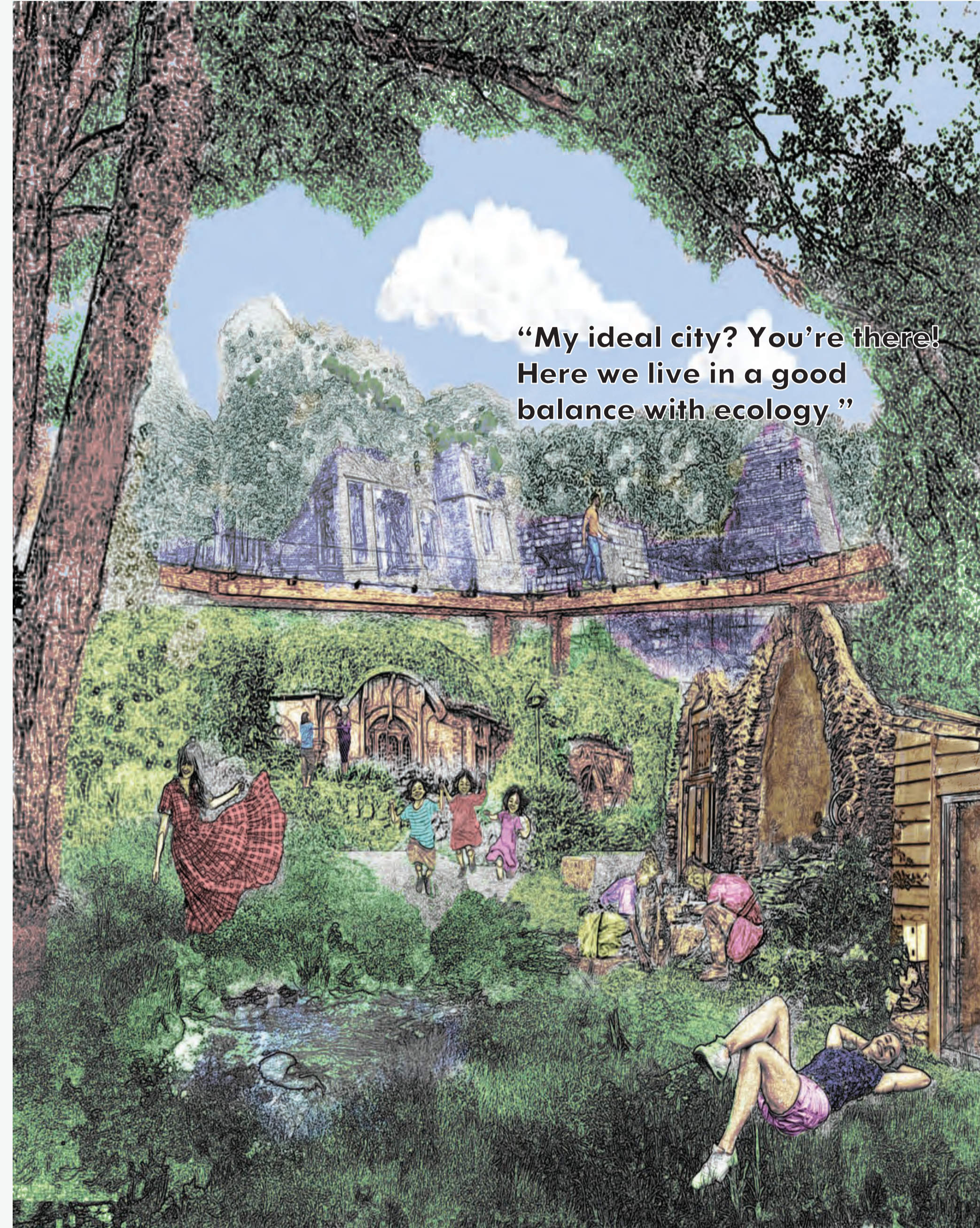
"At first I had my doubts, but the investment in solar panels paid off. We can combine the forces of wind and sun now!"

"I never realised I could integrate my profession with my house. The true gardeners' life is to live in a garden."

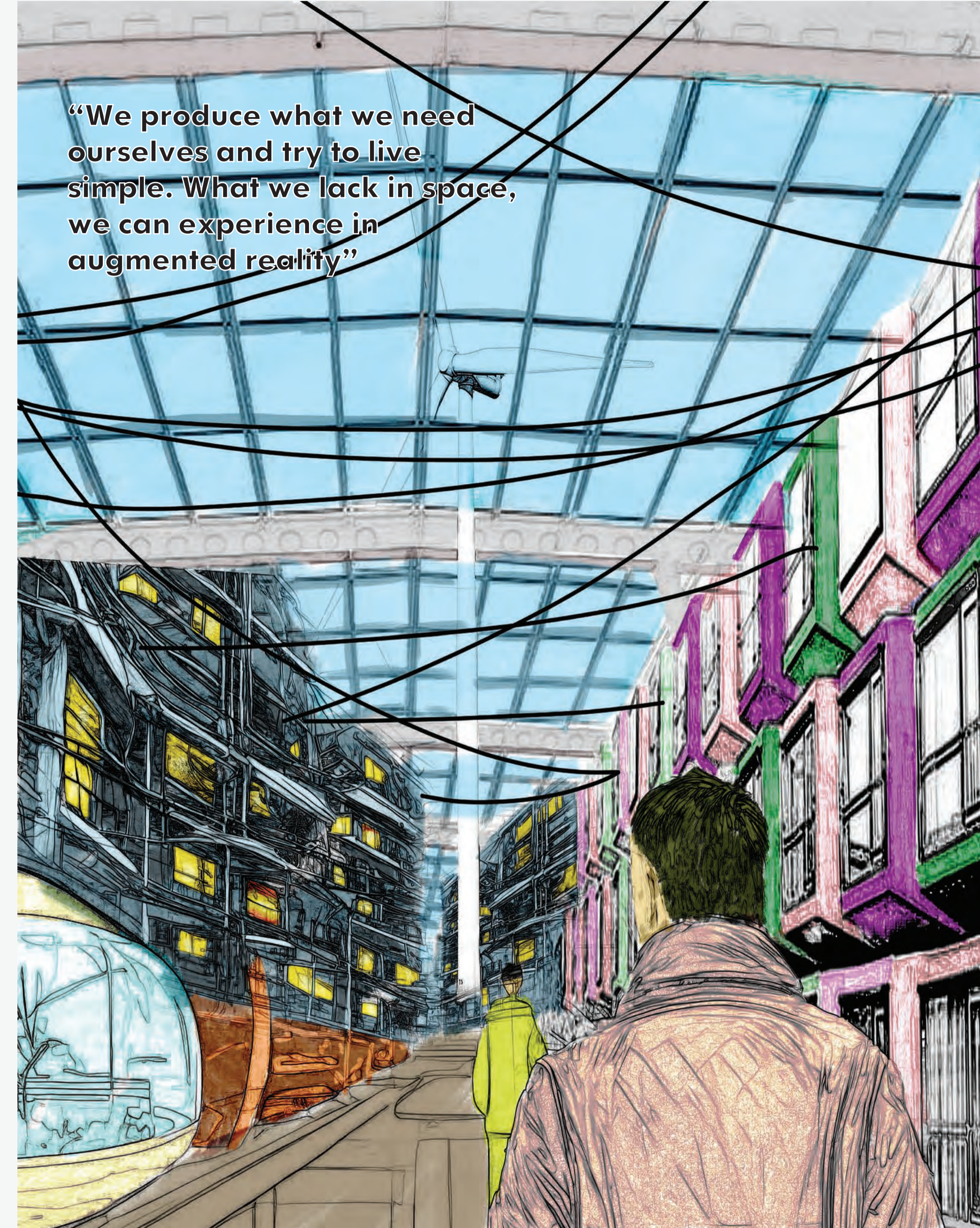




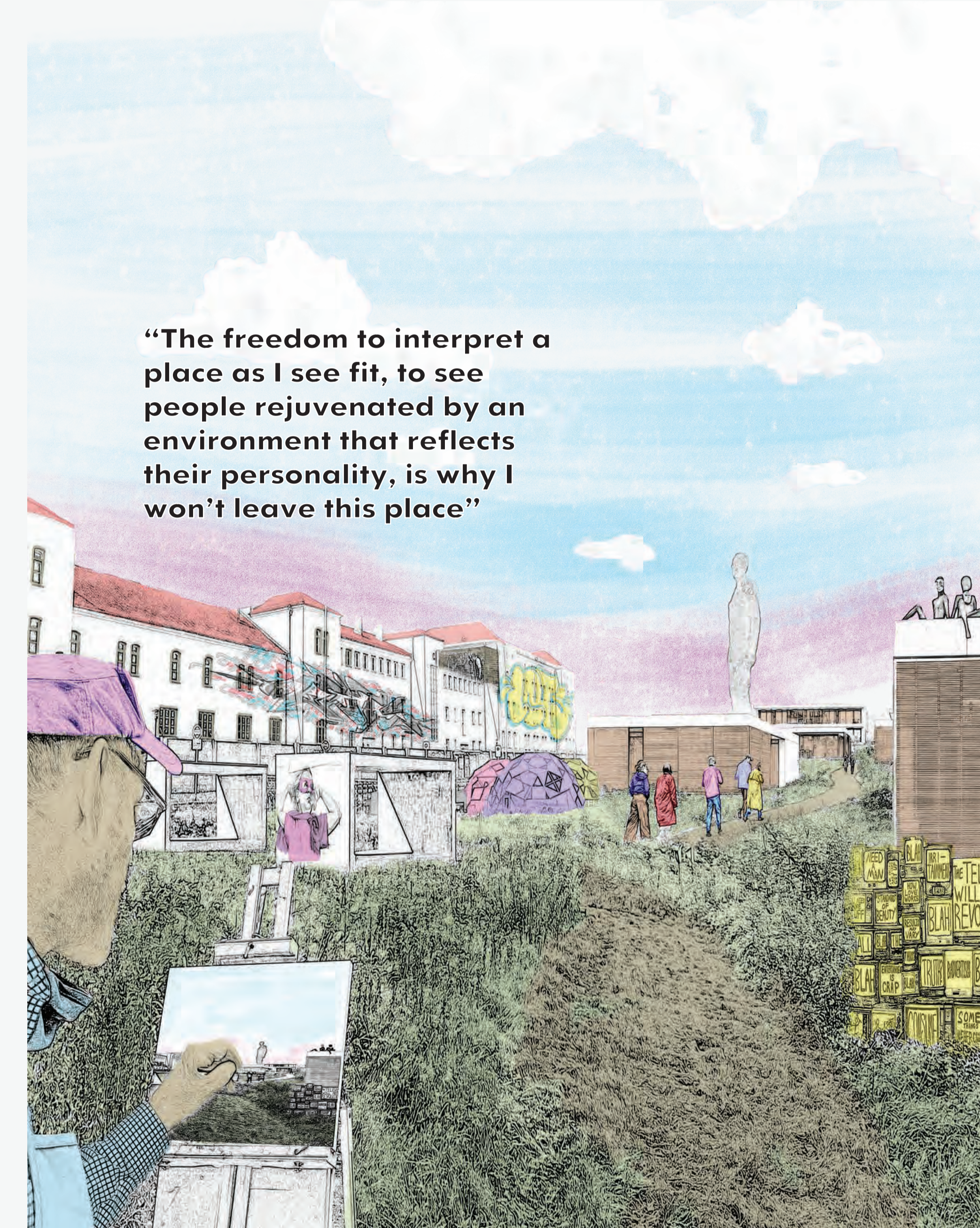
## Appropriation of urban form



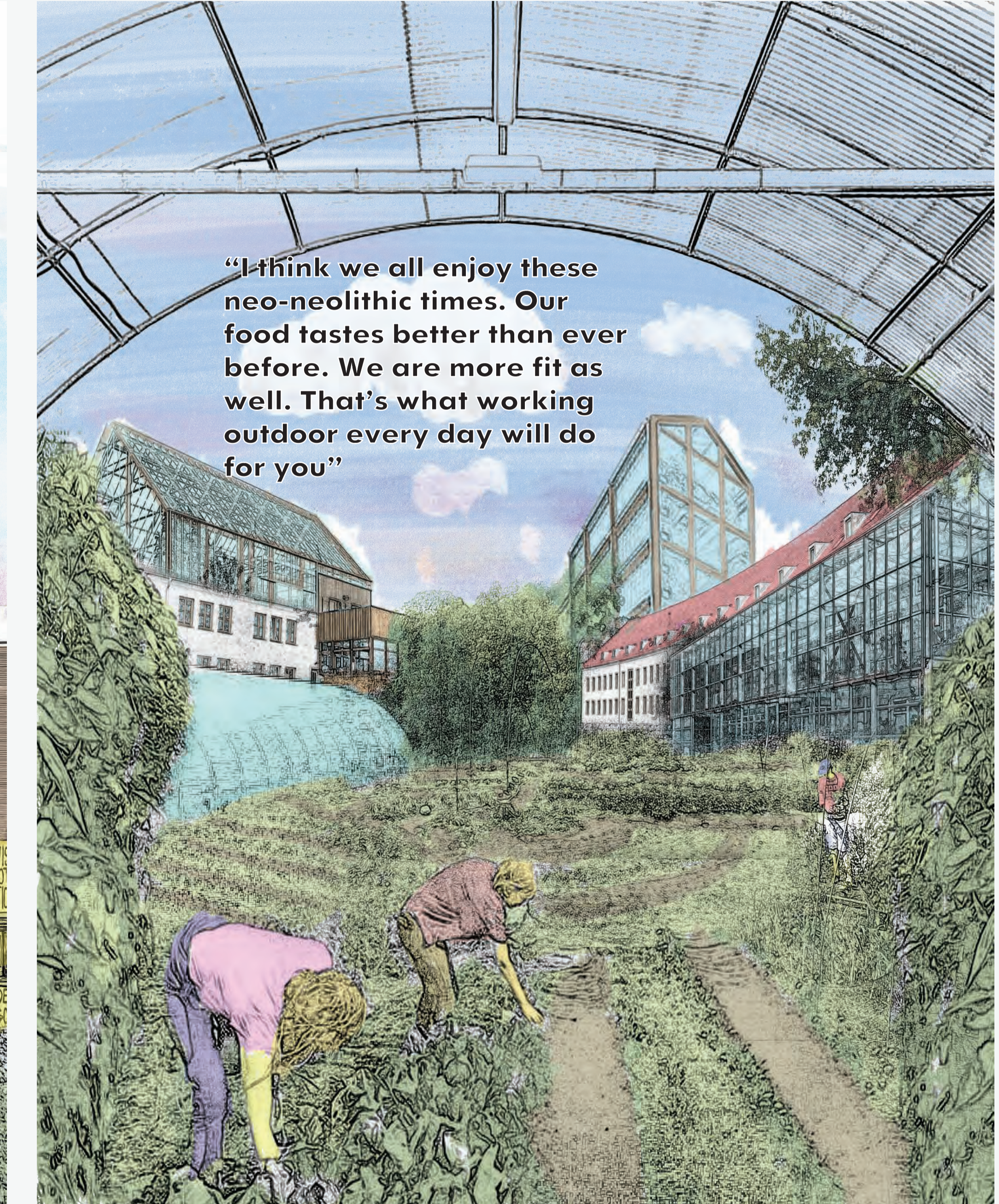
The Ecofront



The Teslacollective



The Localists



The Agriculturalists