

LIVING CREATURES

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LIVING CREATURES

Adoptable, Breathable, Walkable

The demands for energy use increased along with the pace of the human race's development while the balance of our planet earth shakes with excessive Carbon dioxide, Methane, Nitrous Oxide, F-gases resulting in Global Warming. The Flood in Venice, the Australian bushfire, and many other signs are sound evidence that finding a solution to reduce carbon release is an urgent mission and responsibility of all architects.

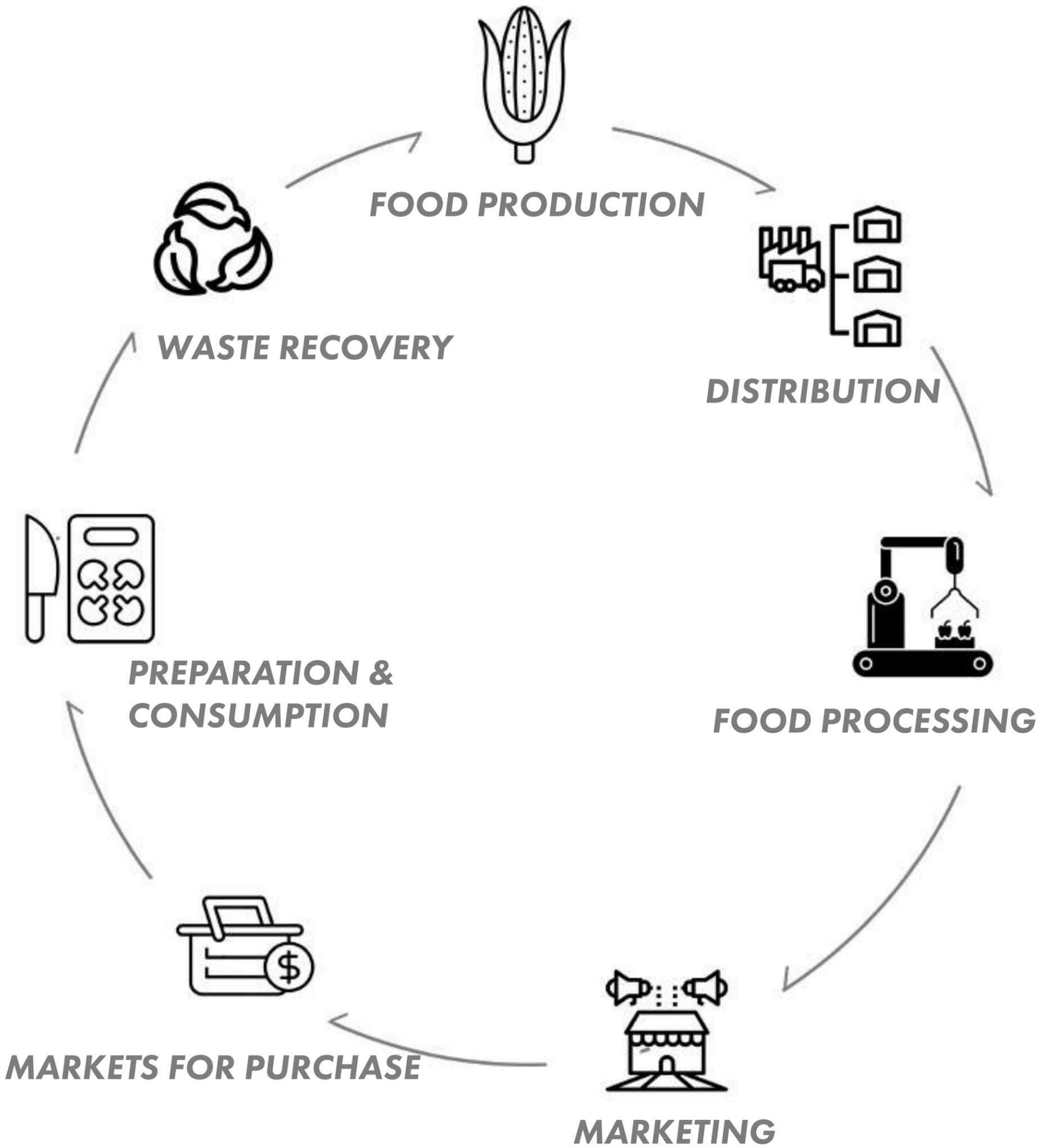
Architecture is heavily responsible for GHG (Greenhouse Gas) Emissions. Building materials and construction waste produce 11% of annual global GHG emissions. 28% of GHG Emission is produced with Building Operations. Wasted materials from the construction of buildings are reusable. Greywater, cooking oil, and heat gain from the sun are reusable. The previous generation of architecture didn't offer the capacity of growing food- vertical farming, reusing rainfall- greywater or composing waste- biodiesel facilities to turn material into products.

The Urban Jungle, the title of a book by Upton Sinclair describes the lives and atrocities of the Chicago Union Stockyards producing food for the world but polluting the very source of water and land in which the stockyards were built and limiting the prosperity of the workers and their families. The Urban Jungle today refers to the life of the streets, the alleys, subway systems, and impoverished neighborhoods. It describes the densely packed living area with residential and commercial, civic and educational, recreational, and leisure activities of people without the opportunities to flourish. The urban jungle is not able to function on its own, requiring outsourcing of energy (from the US- three electrical grids; food, from global distributors, flying and shipping grapes and bananas and salmon to affluent neighborhoods without food deserts. Today's urban "jungle" lacks cohesiveness and connection between the underserved and the affluent and sustainable connectivity between human and ecological systems.

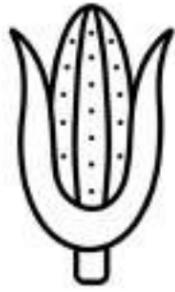
These Cube Cells reminds us of the source of our living on earth and asks architecture to be more responsive in its design. It's also a way to imagine how we can adapt to our existing architectural language. Reusing building waste, growing food, inviting social interactions are other ways effective ways nature reduces greenhouse emissions and so can humans. Perhaps the building shouldn't begin on the ground floor, but follow Corbusier's theory, raising the building on pilotis and allowing the prairie to grow freely.



EXISTING URBAN FOOD CHAIN



MICRO FOOD CHAIN



FOOD PRODUCTION



MARKETS FOR PURCHASE



**PREPARATION &
CONSUMPTION**



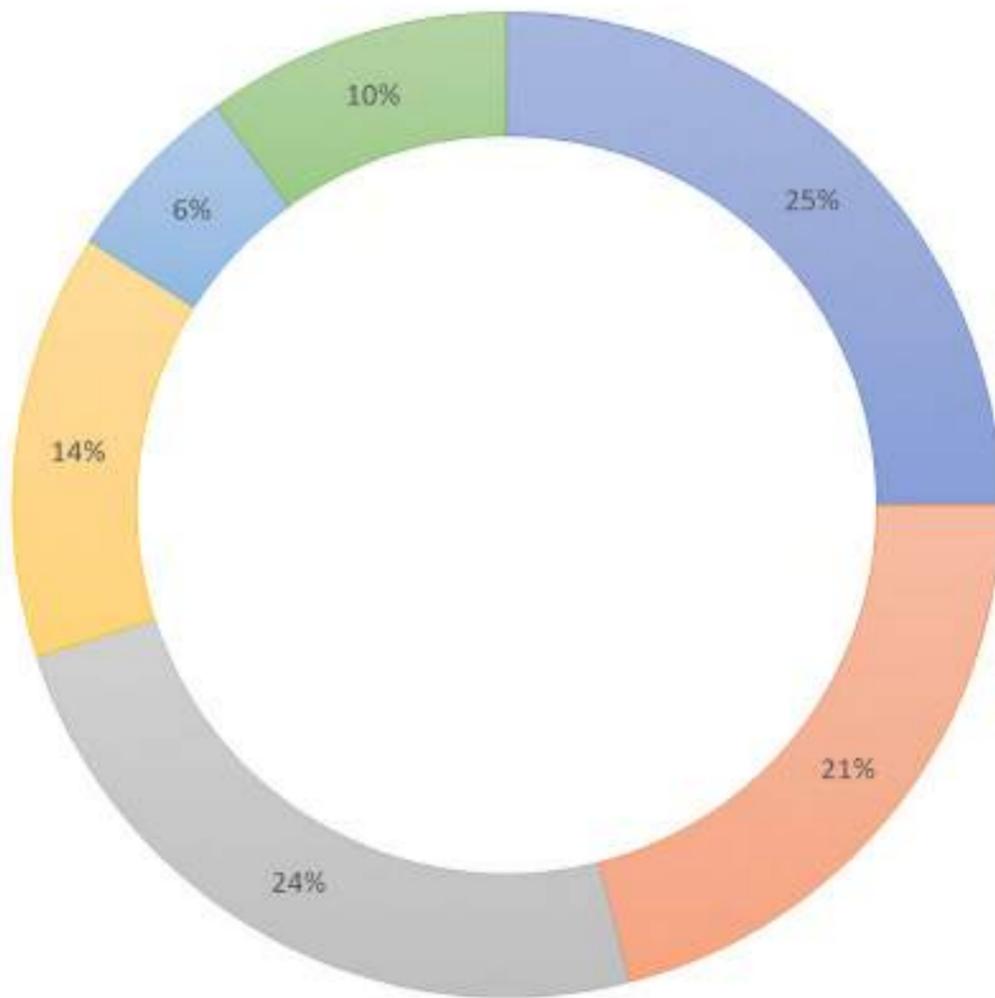
WASTE RECOVERY

Global Emission by Gas



- Carbon Dioxide (Fossil Fuel & Industrial Processes)
- Carbon Dioxide (Forestry and other land use)
- Methane
- Nitrous Oxide
- F-gases

Global Emissions by Economic Sector



- Electricity and Heat Production
- Industry
- Agriculture, Forestry, and other Land Use
- Transportation
- Buildings
- Other Energy



EMPTY PARKING LOT



Void Space

Loyola University

FARMERS MARKET

The Loyola Farmers Market provides local farmers and producers with the opportunity to share their products with the community. It serves three neighborhoods - Rogers Park, West Ridge, and Edgewater.



BIODIESEL PROGRAM



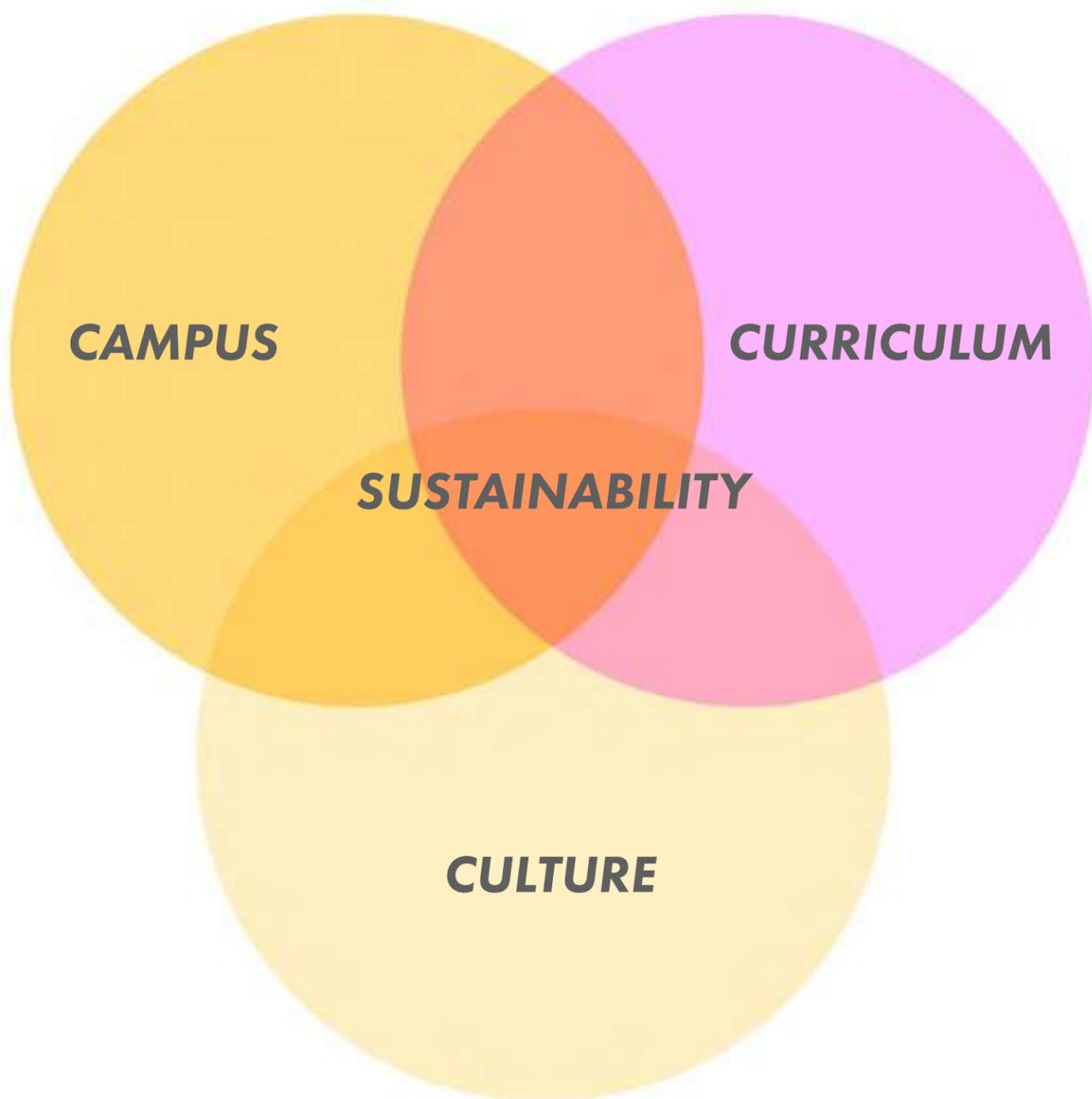
CONNECTION POCKET TO FARMERS MARKET



CONNECTION POCKET TO FARMERS MARKET



WHY LOYOLA UNIVERSITY AS TEST FIELD



Loyola's sustainability initiatives guiding principles

- ***Support sustainability across the curriculum***
- ***Believe sustainability is about Social Justice***
- ***Facilitate the campus as a learning laboratory***
- ***Envision the campus as a community change-agent***

BIODIESEL MIND MAP

Local Restaurants

Nighborhood

Cafeterias



WASTE VEGETABLE OIL (WVO)



FILTRATION



**OFF-SITE
ANAEROBIC
DIGESTER**



**COMPOST
FERTILIZER**

METHANE GAS



CLEANED WVO

GEOTHERMAL SYSTEM

HEAT

RAINWATER COLLECTION

WATER

BIODIESEL REACTION PROCESS

METHANOL DISTILLATION & RECOVERY

METHANOL

WINDSHIELD WASHER FLUID

TIKI TORCH FUEL

PURE BIODIESEL FUEL

BIOSOAP

FERTILIZER WATER



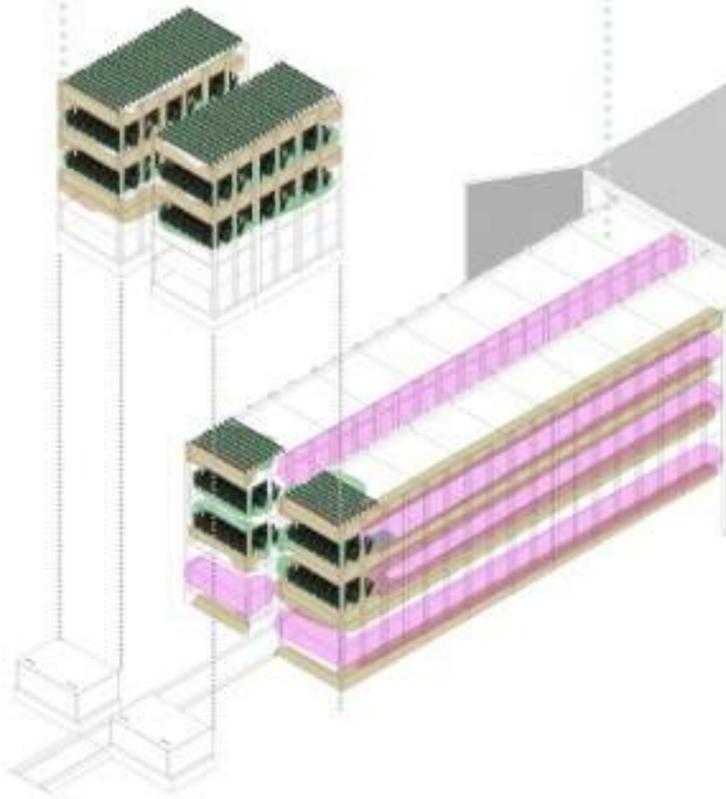
VERTICAL FARMING



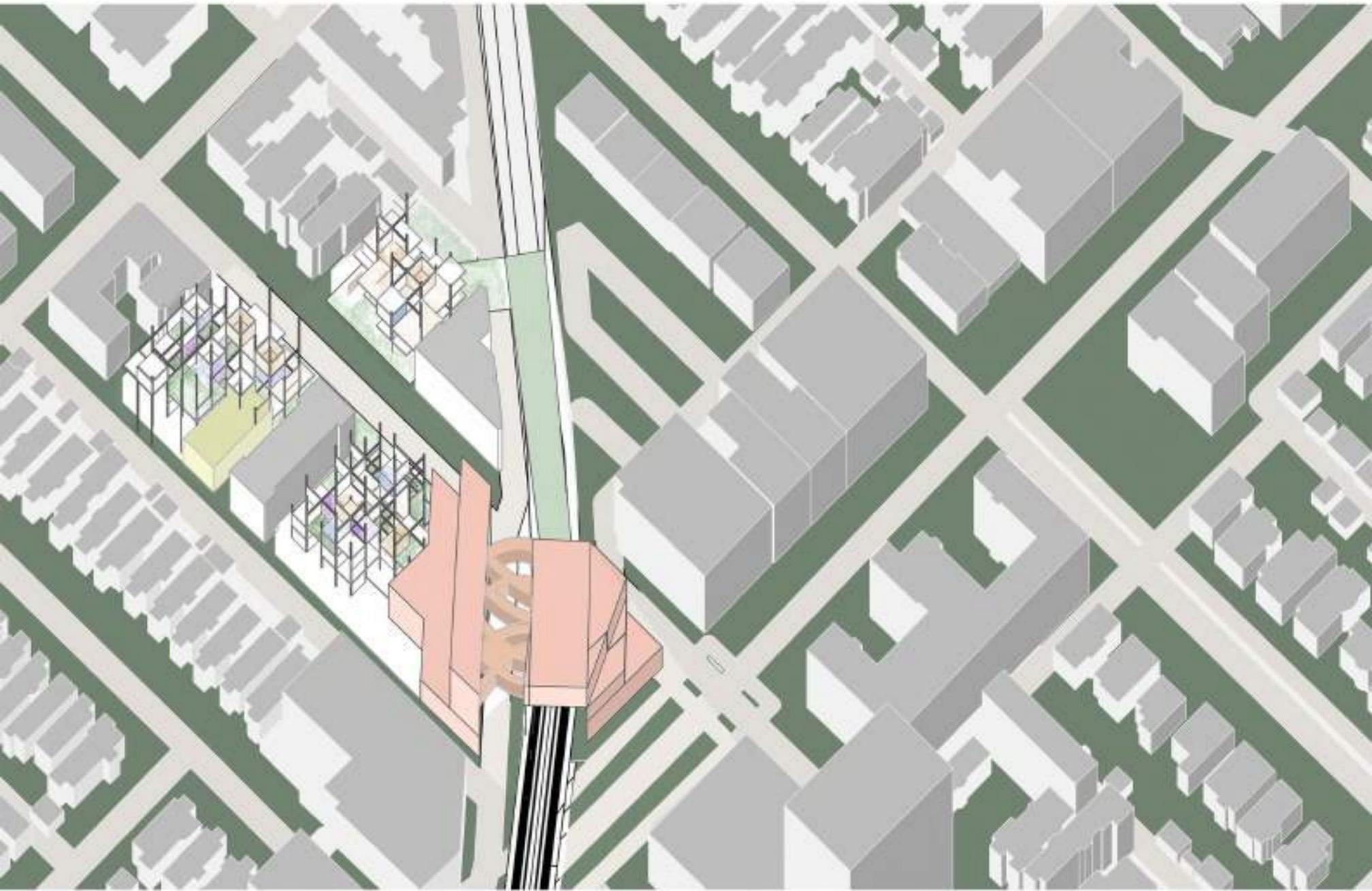
PINK LIGHT



AEROFARMS



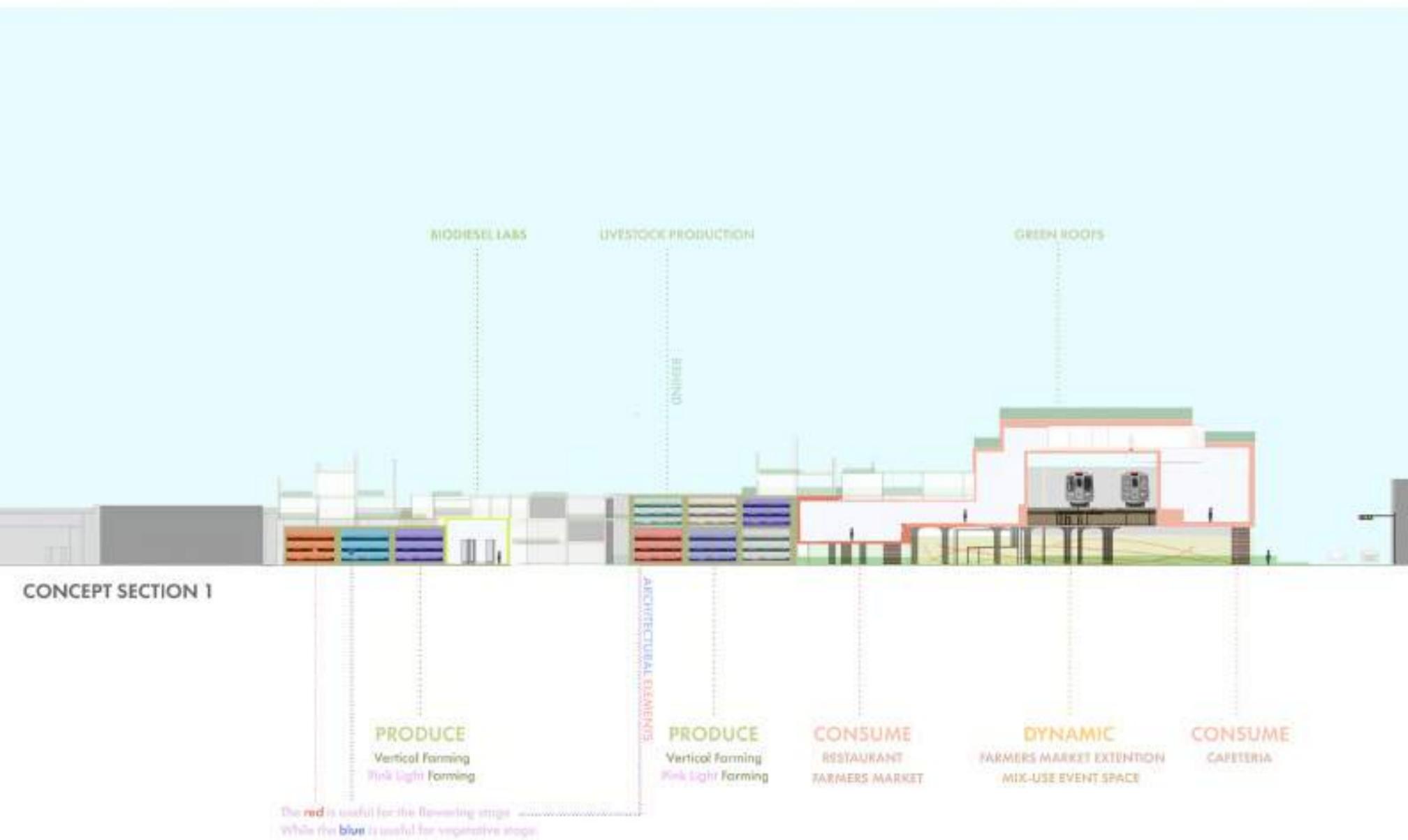
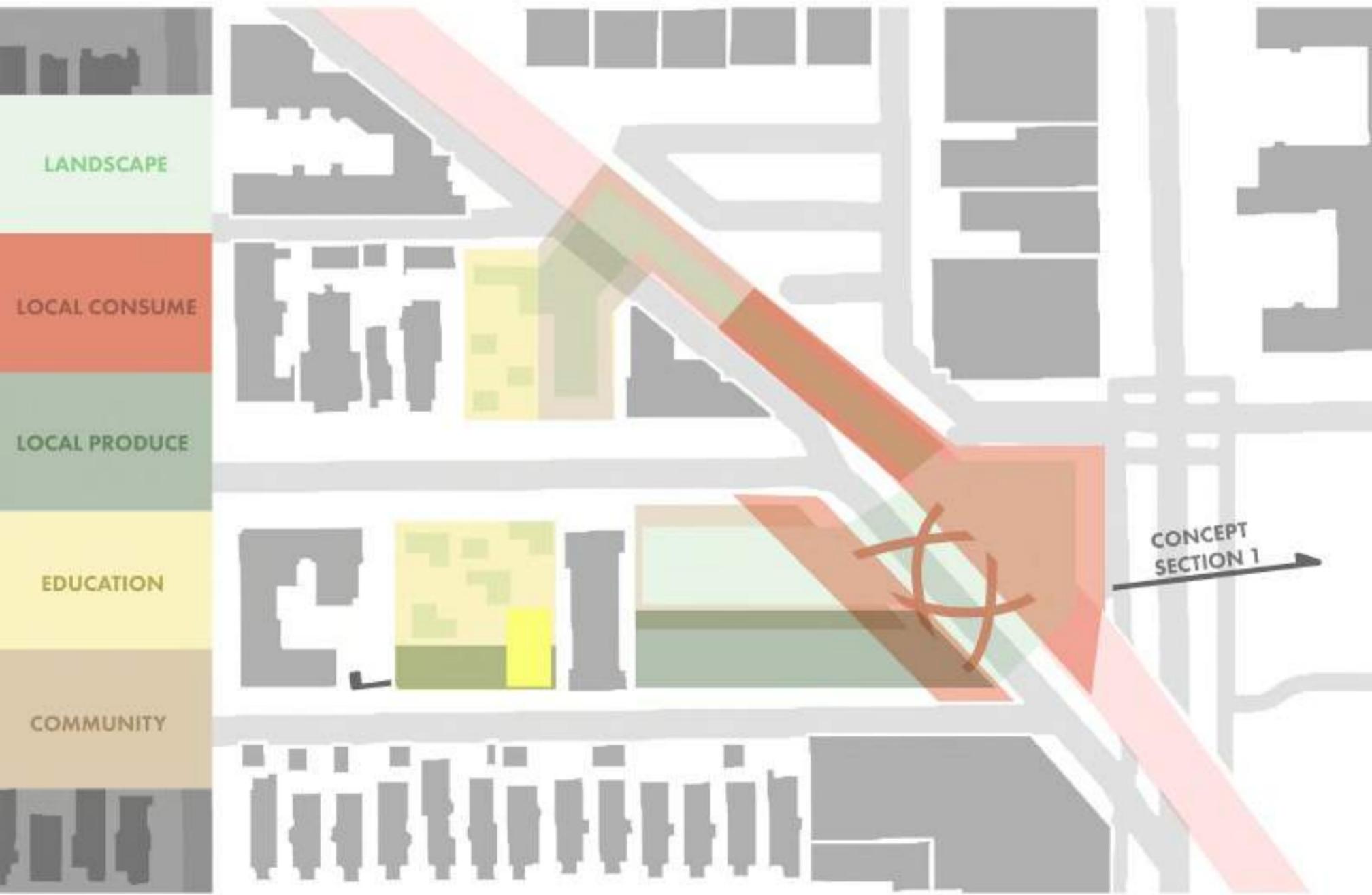
MODULAR FARMING



GROUND LEVEL



TRAIN LEVEL



PROGRAM

LOCAL PRODUCE

VERTICAL FARMING

PINK LIGHT FARMING

ROOFTOP GARDENS

LIVESTOCK PRODUCTION

BIODIESEL PRODUCT

LOCAL CONSUME

FARMERS MARKET

RESTAURANT

CAFETERIA

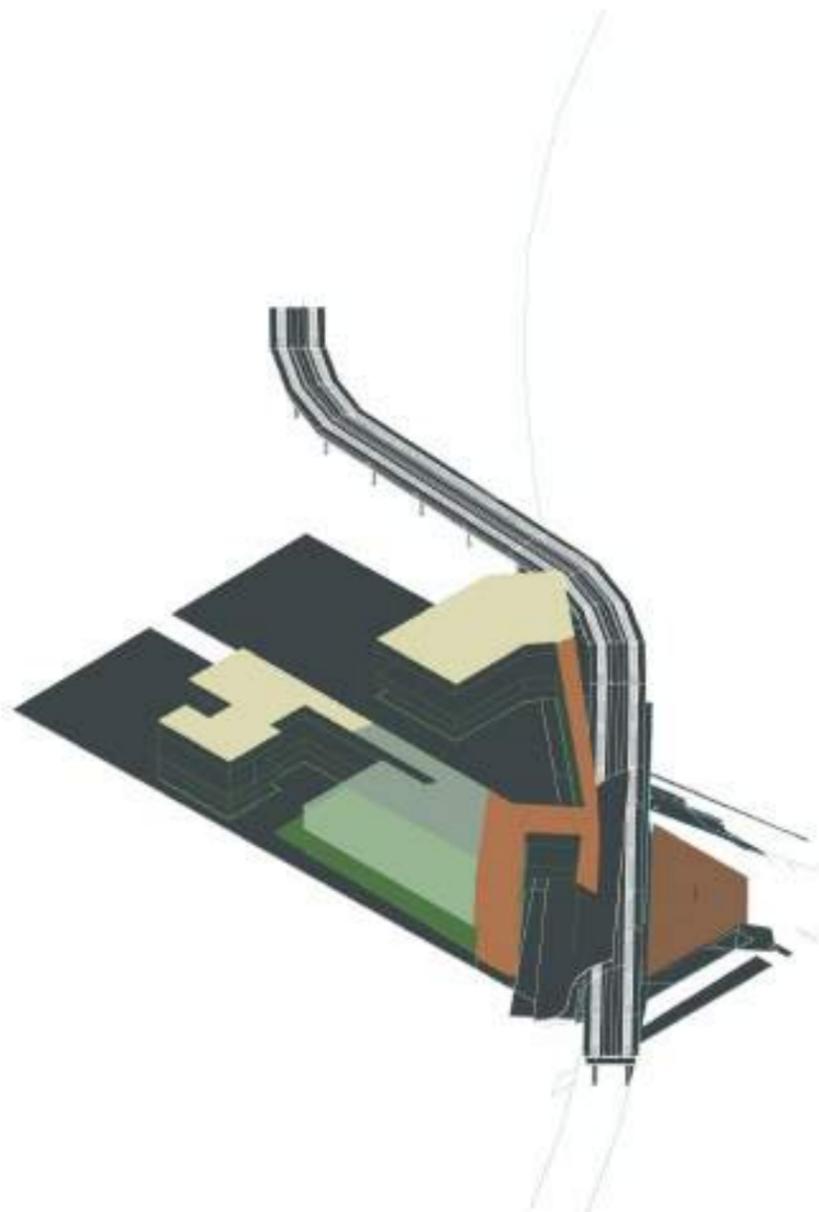
EDUCATION

LAB

LIBRARY

INTIMATE BOX

STUDENT HOUSING



WATER

GREYWATER RECYCLING

RAIN WATER REUSE

BLACK WATER TREATMENT

COMMUNITY

GATHERING SPACE

RETAIL SPACE

PLAZA

ARTIST MARKET

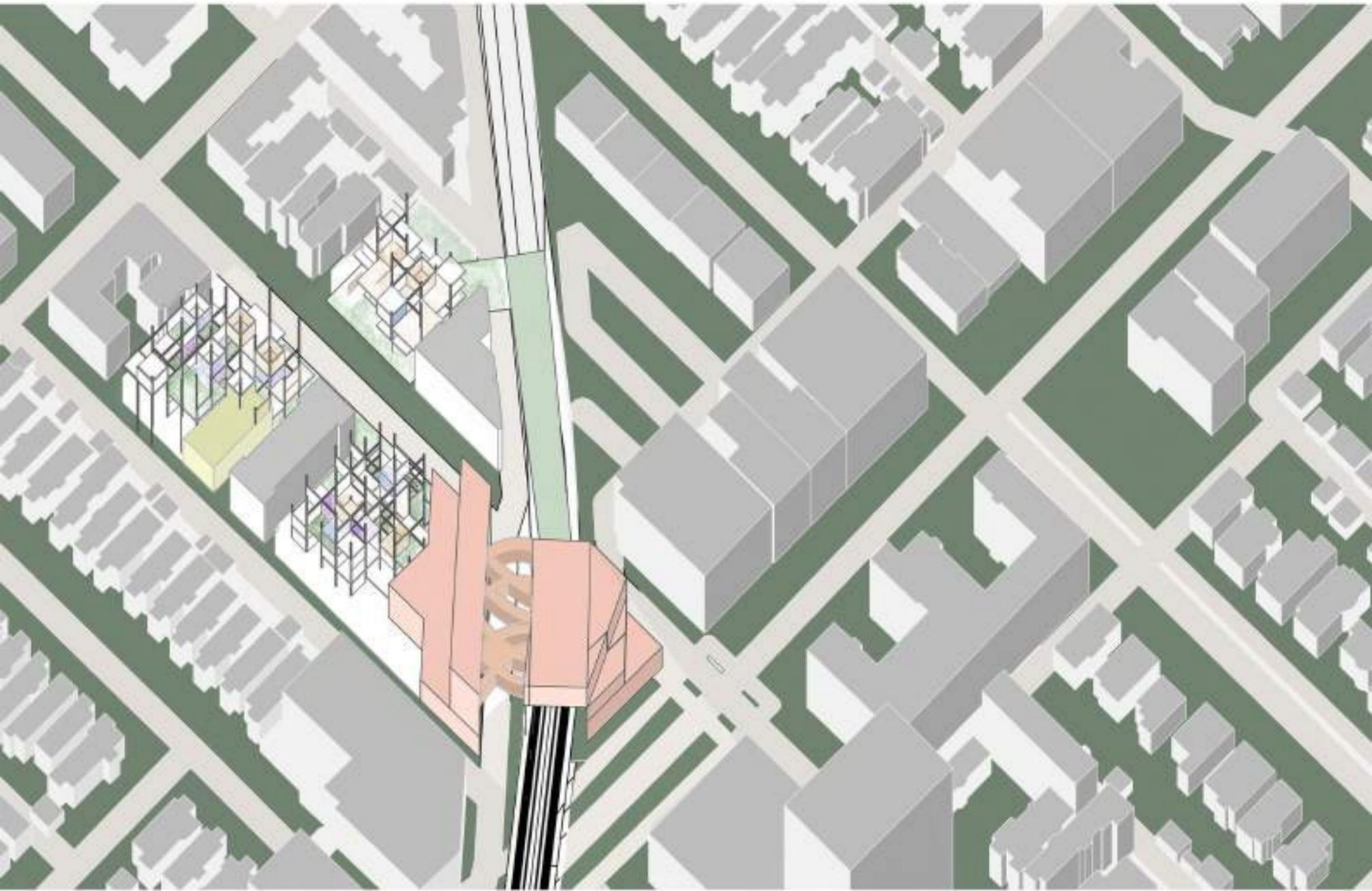
PLAYGROUND

ENERGY

ENERGY STORAGE
(Battery Bank)

RENEWABLE ENERGY

PASSIVE HOUSE BUILD



GROUND LEVEL



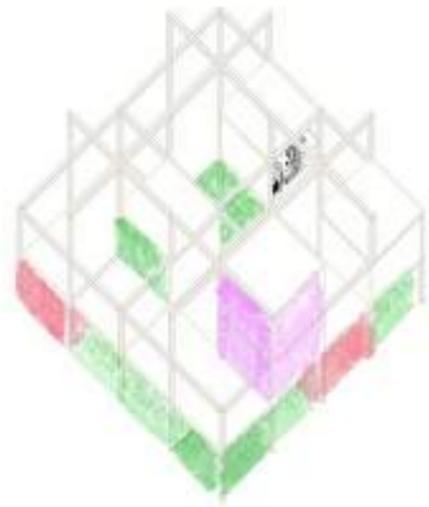
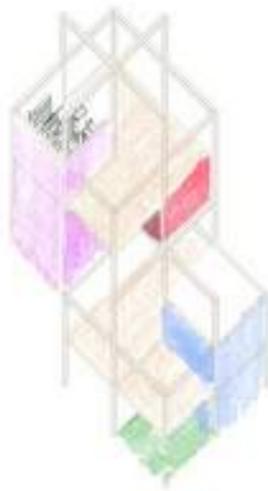
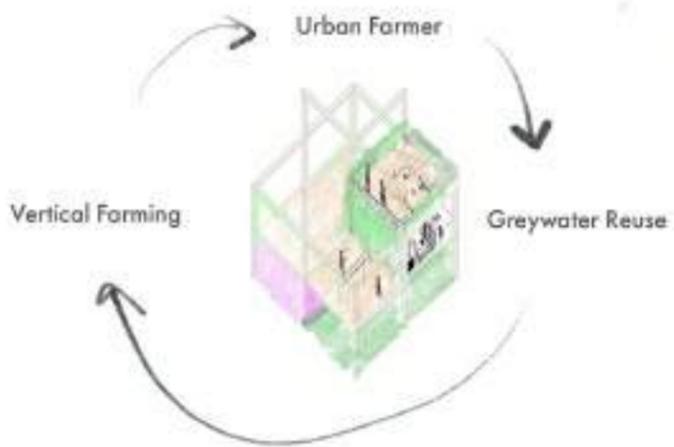
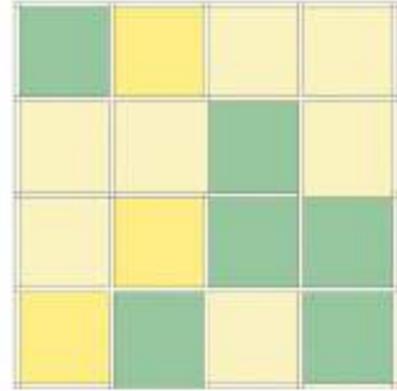
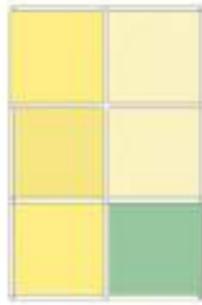
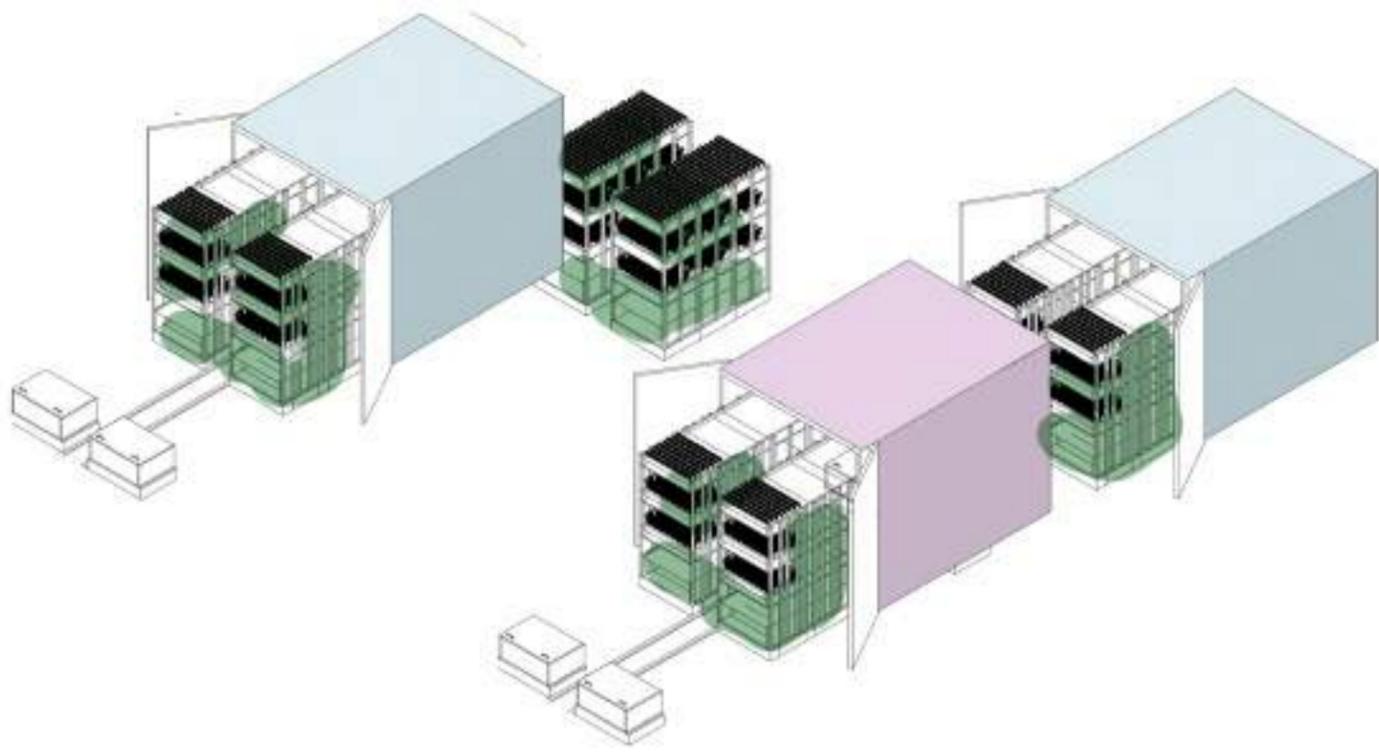
TRAIN LEVEL

CONNECTION POCKET TO FARMERS MARKET

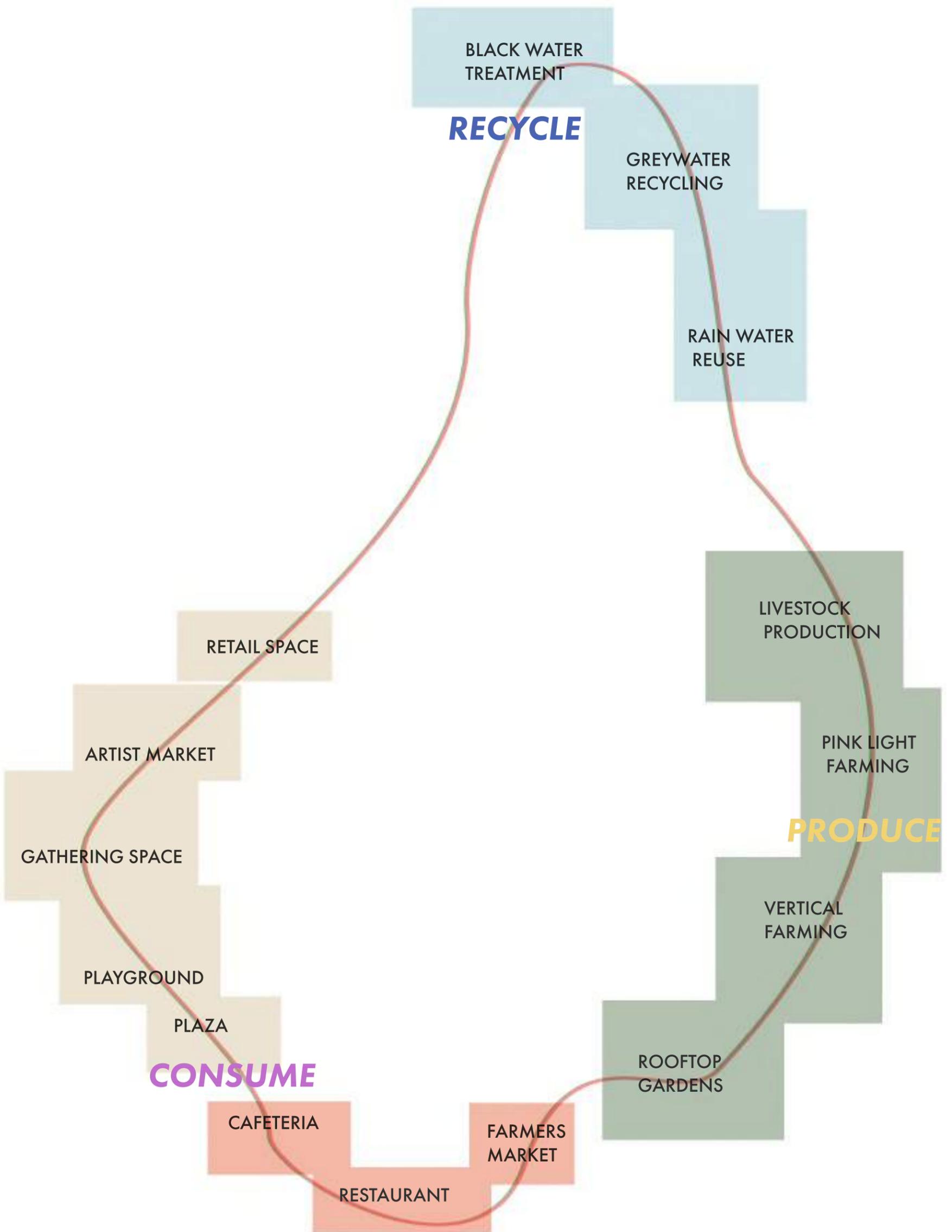


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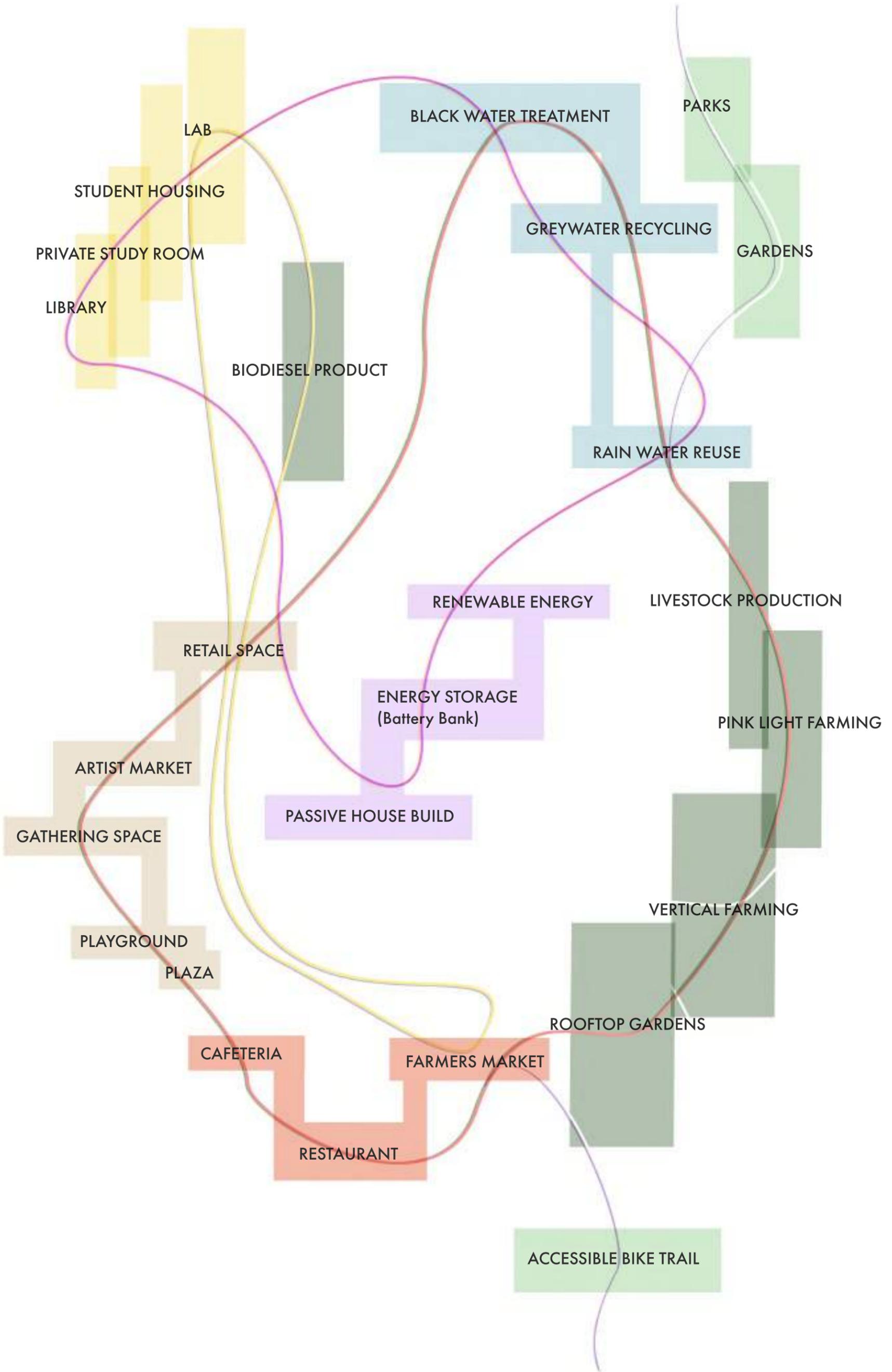
PROGRAM NODES



PROGRAM NODES



***Working with
existing School
infrastructure***



LIVING CREATURES

