2018 FIRST PLACE

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LYCEUM
A traveling fellowship in Architecture
Guelph
Living City Market
Urban Metabolism
By viewing cities metaphorically as a metabolism, we can begin to conceptualize the input-output modes of all transformation processes into categories of people, food, resources, energy emission, products, and wastes. We can gain insight on the relationships between food consumption and social reproduction in various urban environments, including sustainable methods that will enhance the quality of life. The programmatic design for the market can generate awareness of the five types of sub-systems of food marketing: production, supply, distribution, and consumption of food. Users of all socioeconomic backgrounds will become knowledgeable about where their food comes from, how it is being distributed and how it can be recycled back into the urban community. The design of the market will be transformed into an interactive environment for users to sell & trade goods, farm their own produce and experience a unique culinary experience while dining under floating vertical gardens.
The first plans of the city were designed to help attract local farmers to the surrounding area.

Generating more agricultural land by building vertically. Food will be grown hydroponically.

New structures provide food, save land, while contributing to the biodiversity of Guelph, ON.

Mess

Plioch + Fold

Program

Spatial Adjacencies

Metabolic Process

Metabolic Process Applied to Form
Metabolic Processes: Indoor Farming & Renewable Energy

A technology-based approach toward food production and maintain optimal growing conditions within an enclosed growing structure such as a greenhouse or building. The fish waste provides an organic food source for the plants, and the plants naturally filter the water for the fish.

Aquaponic Farming Pods

Aquaculture (raising fish) and hydroponics (the soil-less growing of plants) that grow fish and plants together in one integrated system.

Algae Energy Panels

As algae grows and becomes dense, it exits the bioreactor volume and enters a combustion chamber. The biomass is converted into electricity for use and carbon dioxide is recycled in the growth process.
Level 01

1. Train Station
2. Dry Goods / Cash Wrap
3. Vendor Heli
4. Back of House
5. Administration
6. Residential Units
7. Retail Shops
8. Cafe
9. Restaurant