



SUSTAINABLE VILLAGE DEVELOPMENT: INSIGHTS-WANGZHAI

Location: Ouhai, Wenzhou

Program: Sustainable Strategy on Wangzhai Village Planning and the Environment

Year: 2021

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Cultural

Introduction:

Abandoned cultural halls and factories.

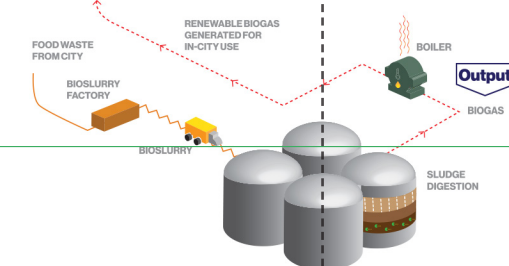
Solution:

The abandoned auditorium will be rebuilt into a Wangzhai Activity Service Center and the factory will be used as a sports field.



Biogas

The biogas released during sludge digestion can be used to produce heat and electricity. Once purified it can be distributed as renewable natural gas for the community. Recovering and reusing biogas enhances clean air operations and significantly reduces greenhouse gas emissions.



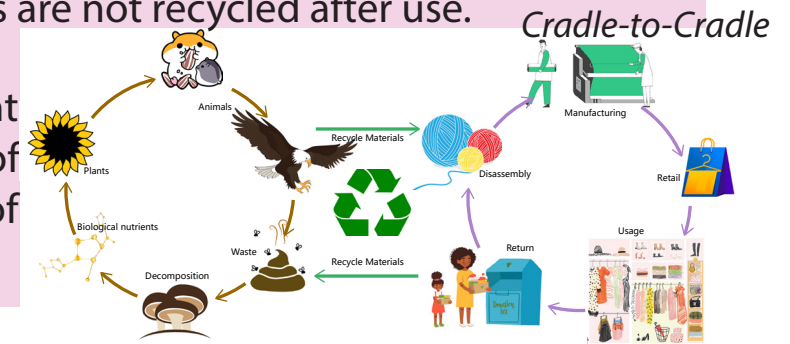
Industry

Introduction:

Industry is abandoned, and industrial production in Wangzhai Village has come to a standstill. The old industrial facilities are no longer usable. Traditional industrial production methods have a large amount of energy consumption and waste output. The products are not recycled after use.

Solution:

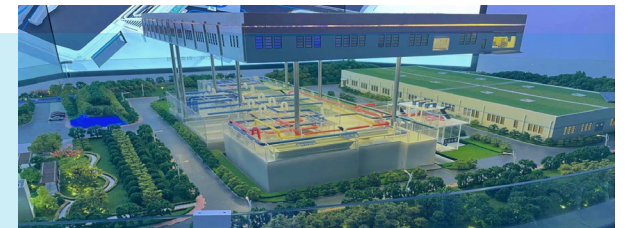
It is more reasonable to build a new factory with good equipment than to rebuild the old one. We want to rebuild the industrial ecology of Wangzhai Village by imitating the ecosystem and using the method of converting waste into energy.



Water Pollution

Introduction:

1. With the development of industrialization and urbanization, the water flowing into Wangzhai Village has been polluted and cannot be used for people's daily life. 2. Wangzhai village uses traditional ditches to drain water, which flows downstream without treatment. 3. Due to agricultural irrigation water, Wangzhai Village has a large number of non-point sewage sources, the sewage from which contains a large number of fertilizers and pesticides, which is extremely suitable for the growth of algae, leading to the eutrophication of the water. The Wangzhai village dump is also near the river, and sewage flows into the river when it rains. 4. Because of water pollution, Wangzhai Village can only use groundwater, which will lead to land subsidence in the long term.



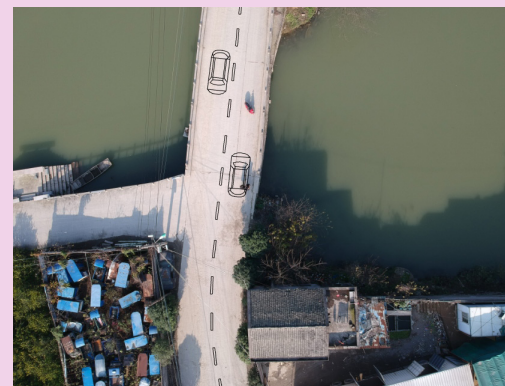
Narrow Road (Bad Transportation)

Introduction:

The traffic between Wang Zhai and the outside world is not convenient, the road is narrow, the lane road only allows single car to pass, and there is no fixed parking space or parking lot for car parking.

Solution:

1. Increase road width
2. Re-plan parking areas



The width of a single lane is 3.5m, the two sides are reserved for pedestrians, bicycles and battery cars are 1.5m, thus the narrowest road width is 10m.

Garbage

Introduction:

Few wastes in Wangzhai Village are reused and recycled. Wangzhai village has several centralized places for garbage, but most of it is thrown away at random. Rubbish at the central location has gone untreated for a long time. The rubbish travels with the wind and rain into the Wenruitang River and finally into the sea. Although Wangzhai is only a small village, but all the rubbish produced by such villages will cause great pollution when it flows into rivers and the sea. We have to start in a small village and dispose the rubbish well.

Solution:

The garbage of Wangzhai Village will be classified first, and the garbage will be reused and recycled as much as possible. The garbage that cannot be recycled will be placed in several places, and then transported to the landfill in Wangzhai Village, and the landfill will be carried out after strict indicators.



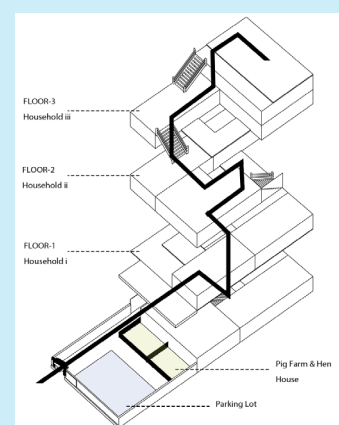
Buildings' Redesign

Introduction:

The old houses are dilapidated and the new ones are very different from the old ones, which make the entirety disharmonious. Therefore, we need to find a new way to make the metabolism of architecture natural: old buildings can be reinvigorated by renovation, and new buildings with many floors will not block the light of the old buildings.

Solution:

Our design concept focuses on how to deal with the relationship between the new building and the old building. In this scheme, the whole village is divided into several "small communities" according to the geographical location, each community can accommodate 3 to 5 households, each household has a separate floor, stacked like apartments on top of each other, and each community enjoys the same common area, including chicken coop, parking lot, green belt, water and power supply system. At the top of the building is a roof garden.



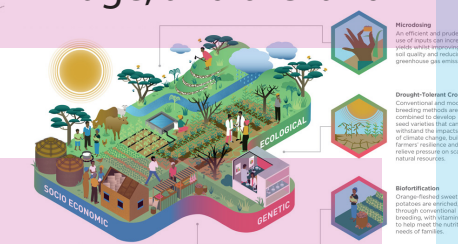
Outside village supply (markets/products)

Introduction:

There is no vegetable market inside the village. People have to go outside the village to buy food materials. Sometimes vendors drive tricycles carrying vegetables and meat into the village. At the same time, there are no large supermarkets in the village but only a few retail grocery stores, which makes people's life inconvenient.

Solution:

Build a large supermarket and vegetable market.



Agriculture

Introduction:

Wangzhai's agriculture has been ruined by an exodus of Labour. The village faced demolition, causing most of the young people to leave the royal house and find another way out, leaving only the elderly and children. Good agricultural resources are not being used.

Solution:

We are going to build fields, farms, fish farms and greenhouses using the agricultural resources.