



# COMPREHENSIVE ENVIRONMENTAL GOVERNANCE SOLUTIONS

PEAKS-ECO (Shandong Qunfeng Heavy Industry Technology Co. Ltd)

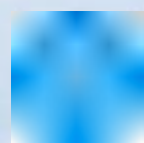


# Company Introduction

Shandong Qunfeng Heavy Industry Technology Co., Ltd. (PEAKS-ECO) was founded in 2005, with a registered capital of RMB 120 million yuan (USD 16.4 million). It is a Chinese high-tech enterprise that fully integrates garbage pretreatment system, transfer system, sorting and recycling system, Internet of Things system and weighing system. The company combines independent R&D with production and investment. Its business has expanded to many regions both domestically and internationally, with main production bases in Hainan, Xinjiang and Guangxi. The company has more than 300 employees and about 50 senior technicians. In 2018, it established Huaxia Qingshan (Beijing) Eco-Environmental Technology Co., Ltd in Beijing, focusing on the design of solid waste treatment system and the research and development of high-tech products. The company has reached strategic cooperation with world's leading environmental governance enterprises. It also collaborated with research institutes and China's state-owned enterprises in waste treatment projects.

Qunfeng Heavy Industry has reached strategic cooperation with Beijing Institute of Technology, Beijing University of Technology and Qingdao University of Technology to provide technical research and development support and talent reserve for equipment manufacturing and comprehensive waste treatment. At the same time, our company set up Beijing Qingshan Environmental Research Institute in Beijing, mainly focusing on the research and exploration of comprehensive waste treatment. Since 2019, the company has reached a cooperation consensus with well-known domestic and foreign enterprises such as willibald, a German garden waste treatment system manufacturer, Walair, a Dutch waste system equipment manufacturer, Kiverco, an European waste treatment contracting operator, wolma of Finland and Brisort of Taiwan. To provide advanced technology support for domestic waste pretreatment. In 2020, our company reached strategic cooperation with well-known domestic enterprises such as China Railway Construction Corporation, China State Construction Corporation, China Communications Corporation, Everbright International North China Research Institute, Shanghai Municipal Administration General Institute, Power China Construction Corporation, Sinosteel Group, Three Gorges Group, Capital Environment Corporation, Hangzhou Environment Corporation and MCC Group on the common development of the environmental industry, injecting a strong emerging force for environmental business development at home and abroad.

As a high-tech enterprise, Qunfeng Heavy Industry innovatively applies artificial intelligence technology to the garbage classification industry, and achieves the goal of accurate and efficient product recycling, which is of great significance to promote the process of recycling, reduction and harmless treatment of garbage in China.



**2005**

The company was founded in 2005



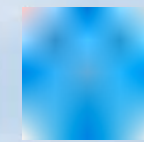
**50+**

More than 50 senior technical personnels



**500+**

The production bases cover a total area of more than 500 mu (33.33 hectares)



**350+**

More than 350 employees



Huaxia Qingshan (Beijing) Ecological Environment Technology Co.,Ltd ( Huaxia Qingshan Research Center and production base )

Shandong Qunfeng Heavy Industry Technology Co. Ltd



# Corporate Culture

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## Our Philosophy

People-oriented, green development, harmony and win-win

## Our Mission

Adhere to green development  
Adhere to sustainable development  
Fostering a new pattern of modernization in which man and nature develop in harmony  
Contributing to global ecology

## Our Vision

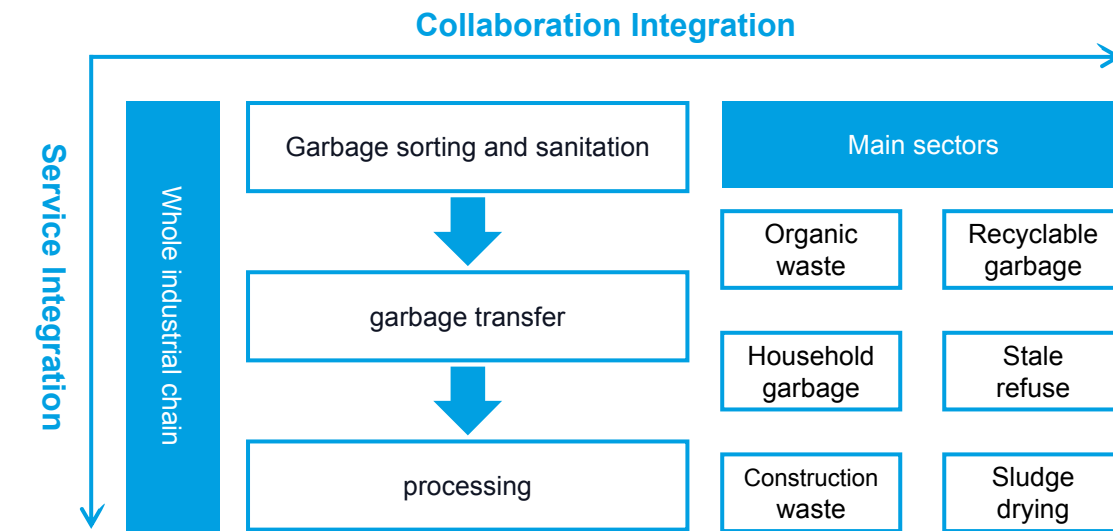
Contributing to global environmental governance

# Service Advantage

A domestic high-quality environmental protection service provider  
 Focusing on solid waste comprehensive treatment and resource utilization



## Coordinate efforts for the treatment of all kinds of solid waste



## Multiple Services

From single project to one-stop integrated parks, we provide consulting, planning, investment, design, construction and operation management services.

Cooperation can be carried out through BOT, BOO, ROT, TOT, PPP, etc.





## Efficient project planning and construction management

The planning and design quality of project is industry-leading, and the design and construction are perfectly integrated.

Services cover cities in East China, South China, Central China, Northeast and Southwest China, with mature experience in designing and building solid waste treatment facilities suitable for different climate areas with high temperature or freezing cold weather.

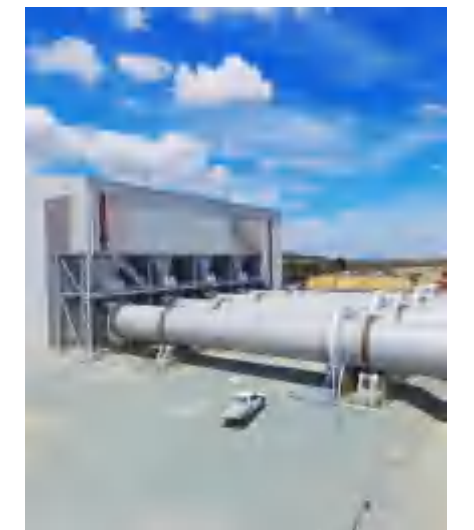
Multi-project collaboration, rich experience in overall design and planning.

Project construction progress and construction quality are guaranteed, with less adjustment and repetition to effectively control investment cost.

## Stable and Fast

After the the project is completed, the debugging speed is at the industry-leading level.

Projects are stable and reach the industry-leading level.



**Efficient Management**  
**Stable and Fast**



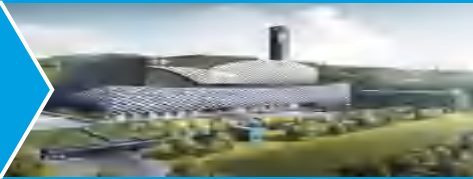


## SOLUTION

Qunfeng Heavy Industry invested in the construction and operation of the industrial park. With household waste incineration power generation as the core, it involves the integrated treatment of waste such as sludge, kitchen waste and construction waste.

Waste heat from incineration can be provided for sludge drying, kitchen waste fermentation, etc. At the same time, the combustible residue of all kinds of solid waste treatment can be returned to the incinerator for burning, generating heat energy, so as to realize the recycling of materials and energy.

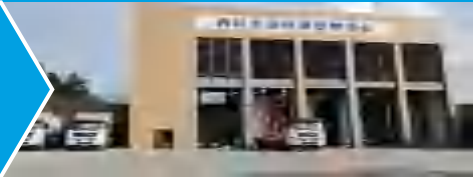
① Comprehensive waste treatment industrial park



② Intelligent garbage sorting



③ Waste Transfer Station



④ Kitchen waste treatment



⑤ Construction waste recycle and treatment



⑥ Recyclable waste sorting center



⑦ Stale waste treatment (landfill restoration)



⑧ Sludge drying



⑨ Household waste incineration to generate electricity

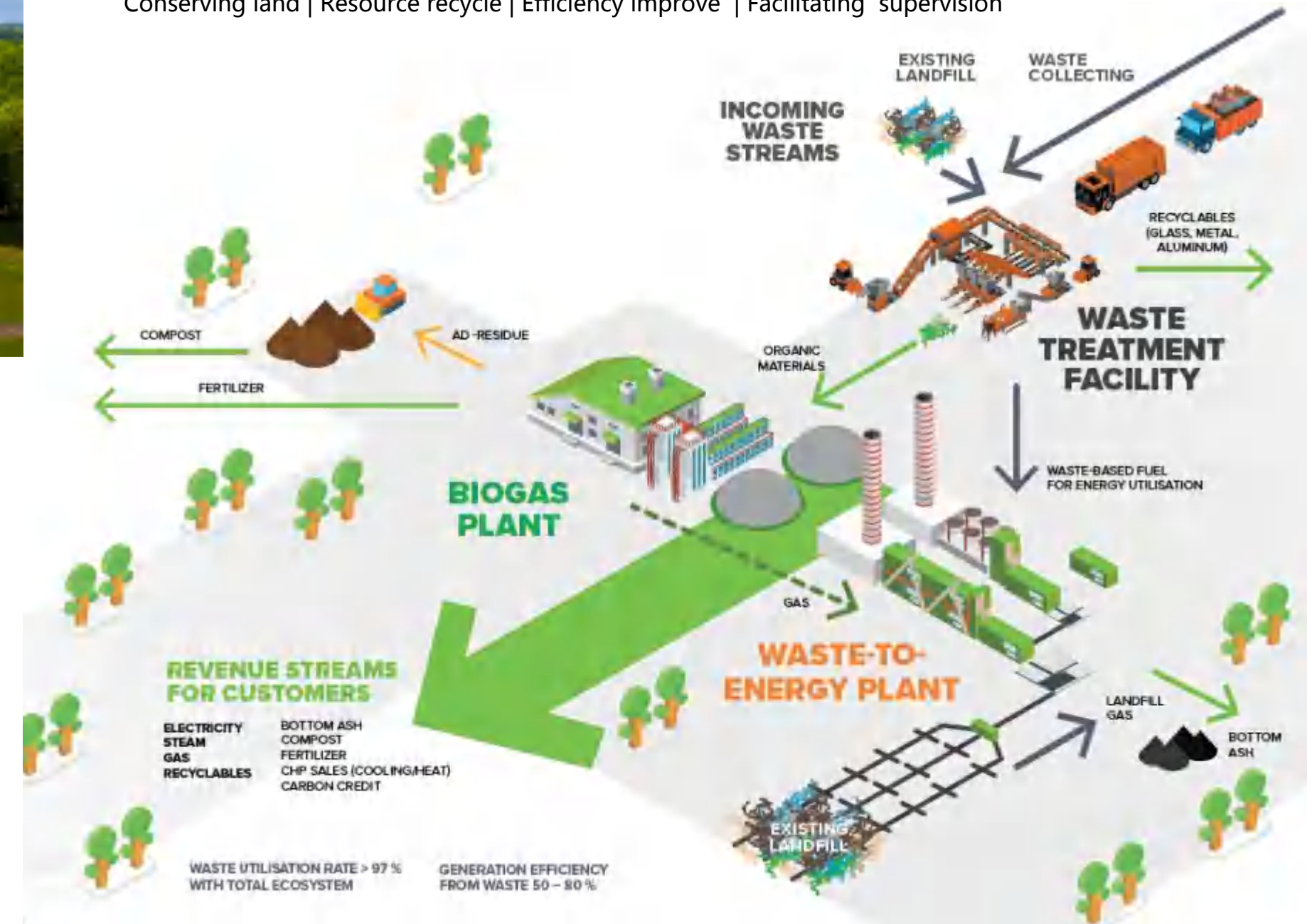






## Industrial Park Advantage: minimization of social comprehensive cost

Conserving land | Resource recycle | Efficiency improve | Facilitating supervision

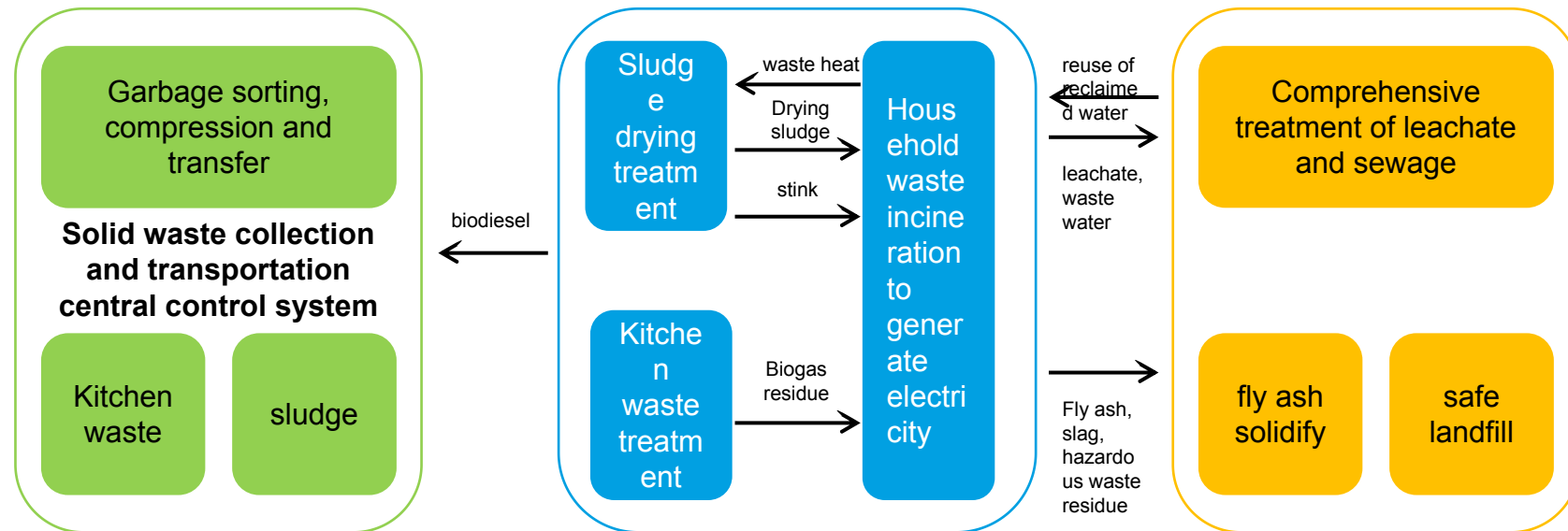


## ① Comprehensive Waste Treatment Industrial Park

Municipal solid waste (MSW), with its complexity, low calorific value, high moisture content and potentially harmful emissions, is the most challenging fuel for power generation. The Qunfeng ecosystem utilizes municipal solid waste to support the circular economy ideology, extract maximum energy from it, and minimize the discharge of wastewater, waste residue and exhaust gas to maximize the benefits of waste disposal. Virtually all waste can be recycled as raw material or energy, leaving less than 5% of waste for final disposal. Qunfeng Ecosystem Solutions combines three simple and powerful waste-to-value technologies into one comprehensive solution. Waste pre-sorting solutions divide waste into recyclable substances (glass, metal, plastic, etc.), organic and inorganic. Recyclable materials will replace raw materials in manufacturing and be re-made into daily necessities; Organic matter will be used for biogas production, so as to obtain purified natural gas or direct power generation and heating, and then the biogas residue is composted by the sun room, and finally processed into nutritious soil for green use; The inorganic matter will eventually be incinerated for energy.

## Intelligent comprehensive collection and transfer center

- Different types of solid waste classification transfer, patent transfer box to prevent "running and dripping" caused by pollution.
- Digital management, intelligent route planning and dispatching, improve the efficiency and controllability of collection and transportation.
- Effective supervision, the government can grasp the production and waste of sewage units in real time to improve safety.
- Connection between collection, transportation and disposal, garbage after collection and transportation into the park for centralized treatment, to eliminate illegal dumping and transfer of solid waste.



## Collaborative, resource-based treatment center

- Unified planning of a variety of solid waste treatment facilities, high land utilization rate, reduce the difficulty in site selection.
- Centralized construction to reduce the workload and difficulty of communication in early Environmental Impact Assessment, safety assessment, stability assessment and operation process.
- Improve resource utilization rate, maximize utilization, and eliminate related NIMBY risk.
- Coordination in the treatment of all kinds of waste in the process, improve efficiency and reduce emissions.

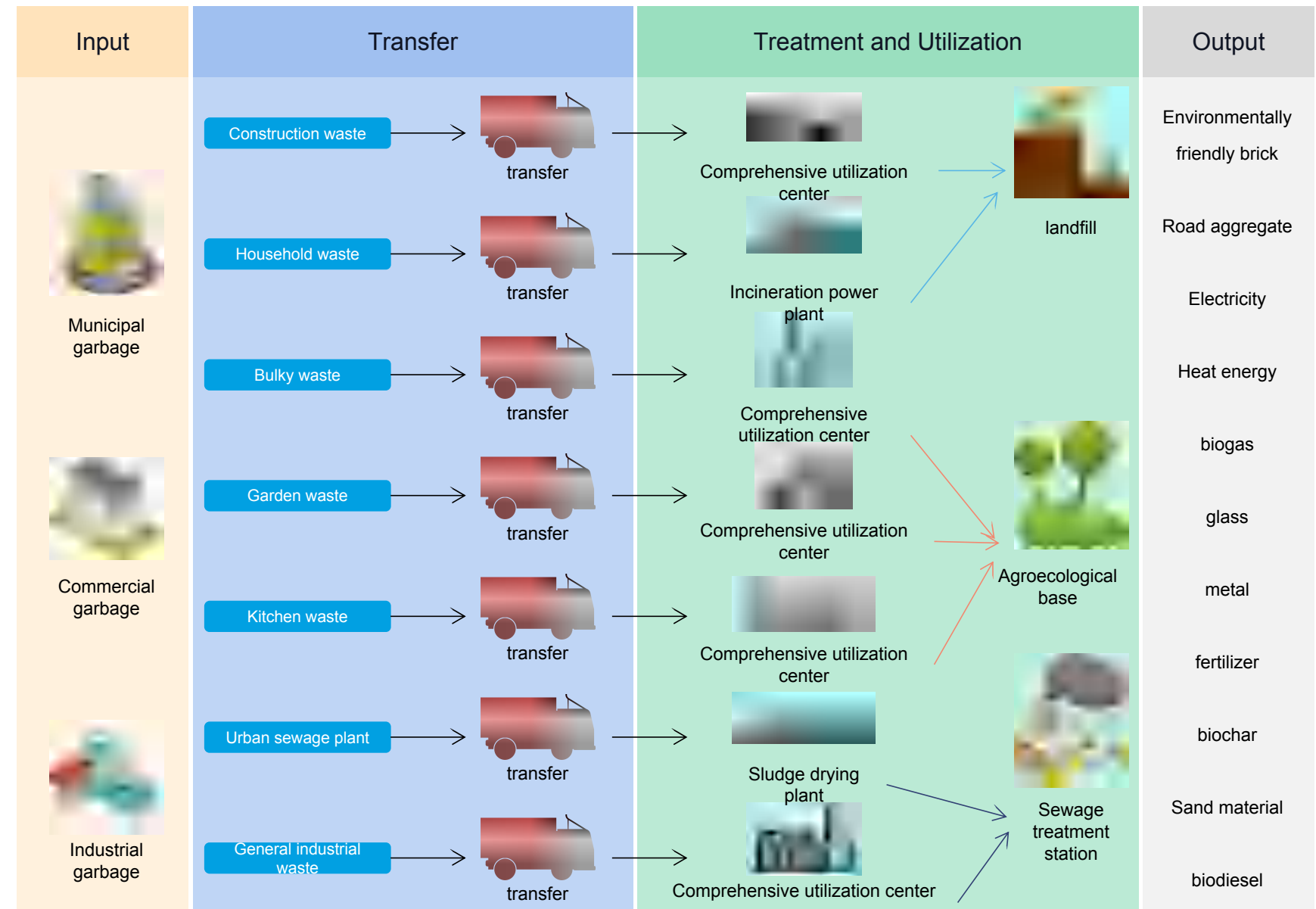
## Sharing the terminal governance center

- All project facilities in the park share sewage treatment facilities, and all treated water is reused.
- No odor and no waste water discharge in the park, and all solid waste treatment is harmless, eliminating worries of the public.
- Complete fly ash treatment facilities and slag landfill facilities.
- Safe and stable operation, meeting the emission standards, elimination of secondary NIMBY risk, reducing the government's urban solid waste treatment pressure, and achieving one-stop supervision of solid waste treatment facilities.





## Business Diagram



## ② Intelligent Garbage Sorting

### Process Flow

Government program implementation → Pilot → Advocacy → Source classification → Classified placement → Collection according to classification → Classified treatment → Promotion





## Advantages of Garbage Transfer Station

### Sorting and Transfer

The intelligent comprehensive collection and transfer center includes the collection and transfer of solid waste such as household waste, kitchen waste and industrial hazardous waste. Different types of solid waste are collected and transferred, special vehicle body to prevent pollution caused by dripping.

### Digital Management

Digital means for centralized route dispatching, improve the efficiency and controllability of receiving and transferring.

### Effective Supervision

The government can keep track of waste generation from different companies in real time, and supervision is convenient.

### Collection, Transportation and Treatment

After collecting and transferring, the waste will enter the related treatment facilities, and illegal dumping and transfer of solid waste are prevented.

## ③ Waste Transfer Station

The vertical waste transfer system utilizes state-of-the-art vertical compression technology that uses gravity to discharge waste from above into containers below.

The system makes full use of limited space and simplifies the waste transfer process. Garbage transfer containers can be painted into different colors according to the garbage type, and the garbage classification collection system is unified to facilitate the effective combination of garbage classification collection and transportation, so as to truly realize the complete system of garbage classification collection, transportation and processing.

## 4 Unifications

Unified planning

Unified construction

Unified transferring

Unified configuration

## 4 Reductions

Reduce waste retention time

Reduce leakage along the road

Reduce odor of the transfer station

Reduce waste volume and water content



## Power generation technology of waste water and kitchen waste



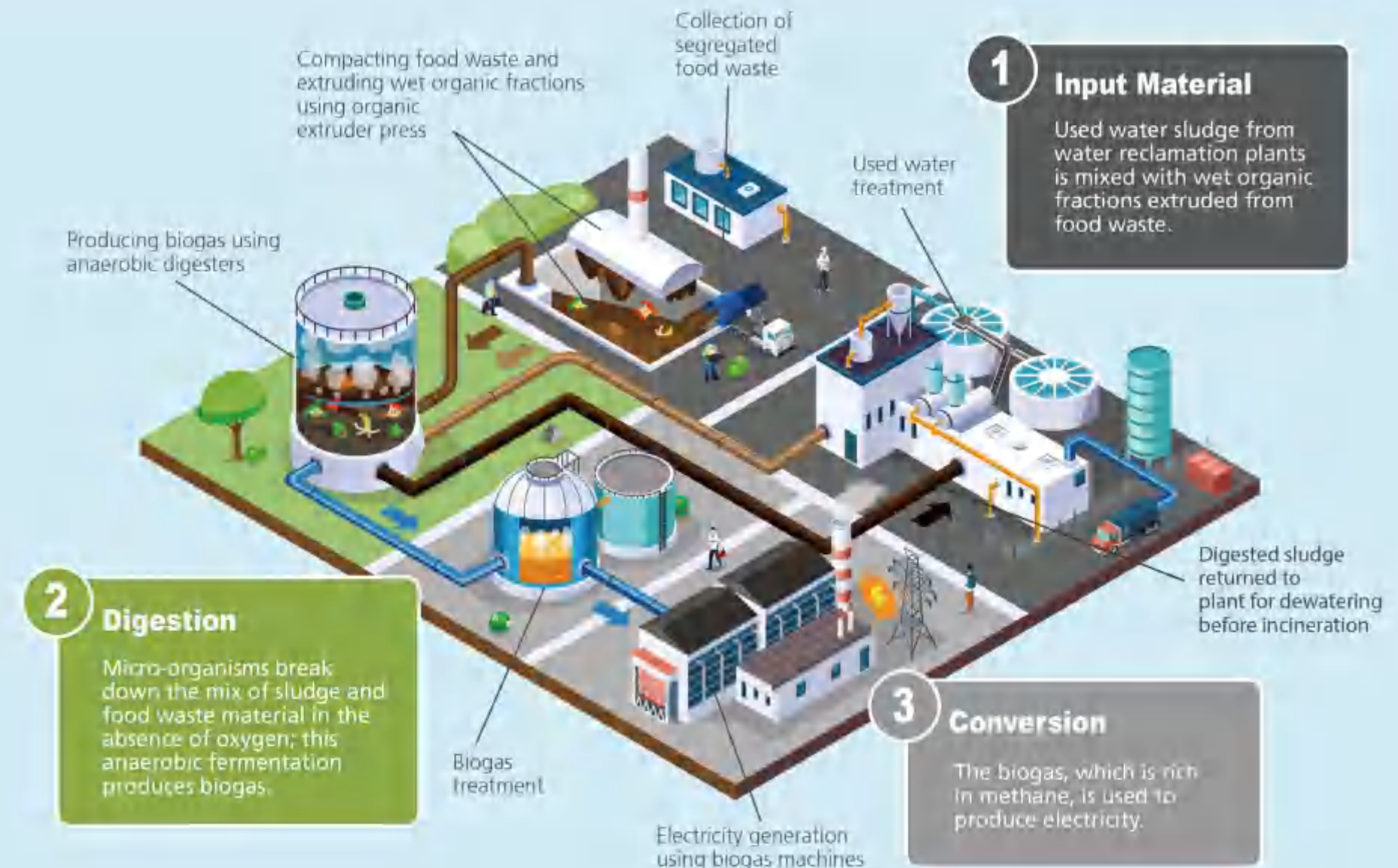
### ④ Kitchen Waste Treatment

#### Integration of receiving, transportation and processing

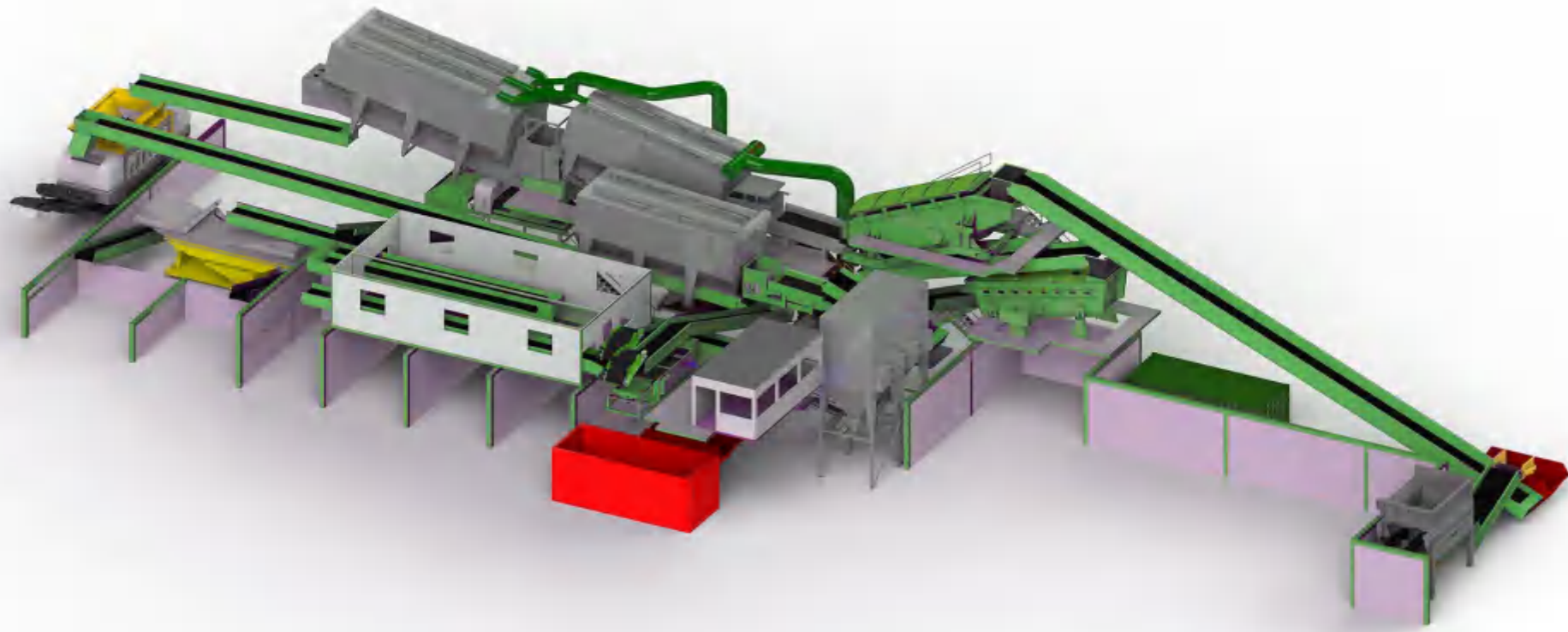
The collection and transportation system, processing system and resource utilization system are seamlessly connected to provide customers with integrated kitchen garbage collection, transportation and treatment services to solve the problem of kitchen garbage collection from the source.

#### Kitchen waste fully recycled

Harmless treatment, biogas residue is sent for incineration, biodiesel is returned to collection and transportation vehicles as fuel, biogas power generation is connected to the grid, and biogas slurry is returned to the farmland for utilization, so as to realize fully utilization of kitchen waste byproducts.





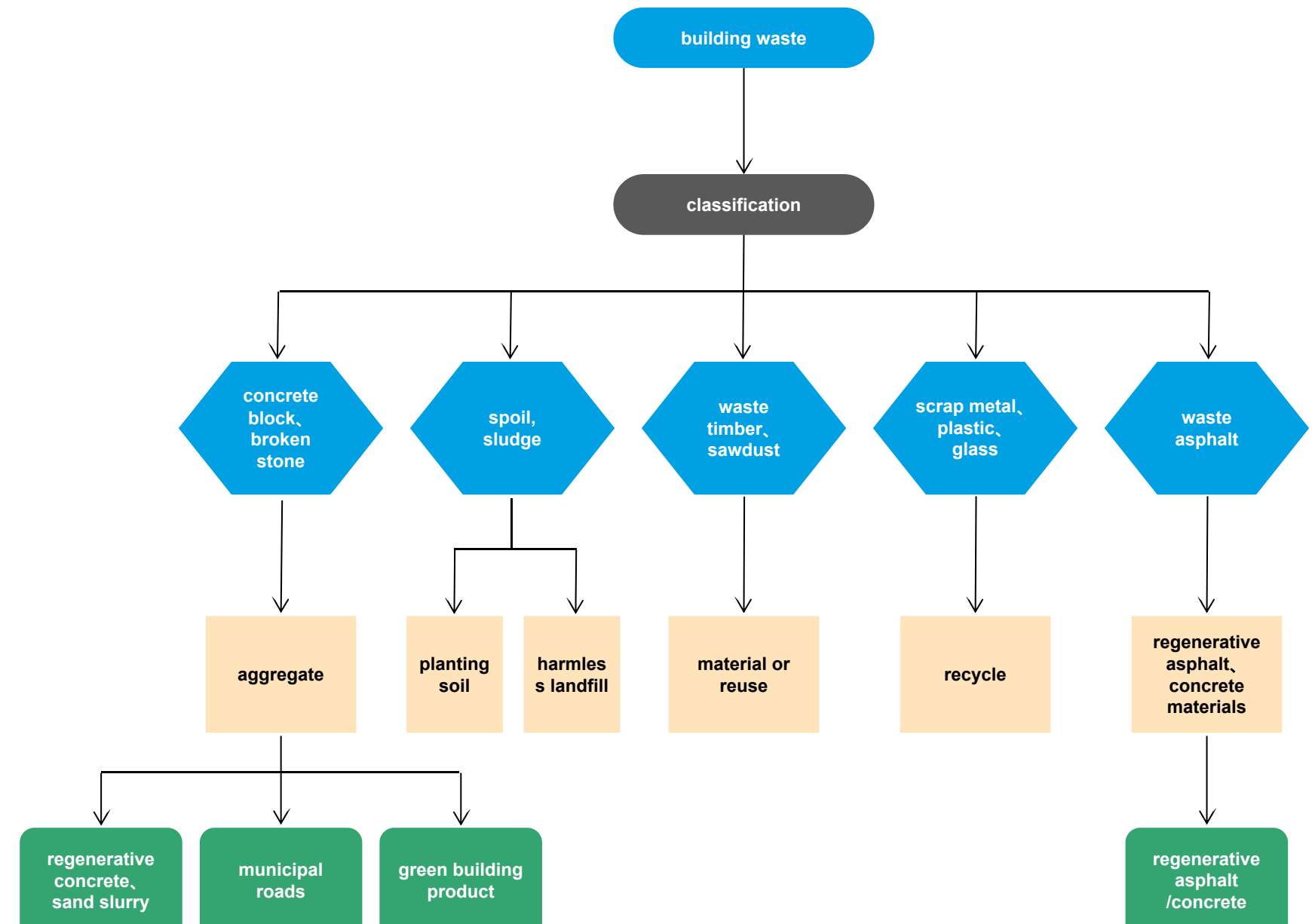


## ⑤ Construction Waste Resource Recycle And Treatment

### Process Flow

Dismantling → Sorting → Iron removal → Pre-screening → crushing → screening → light matter separating → recycled material treatment

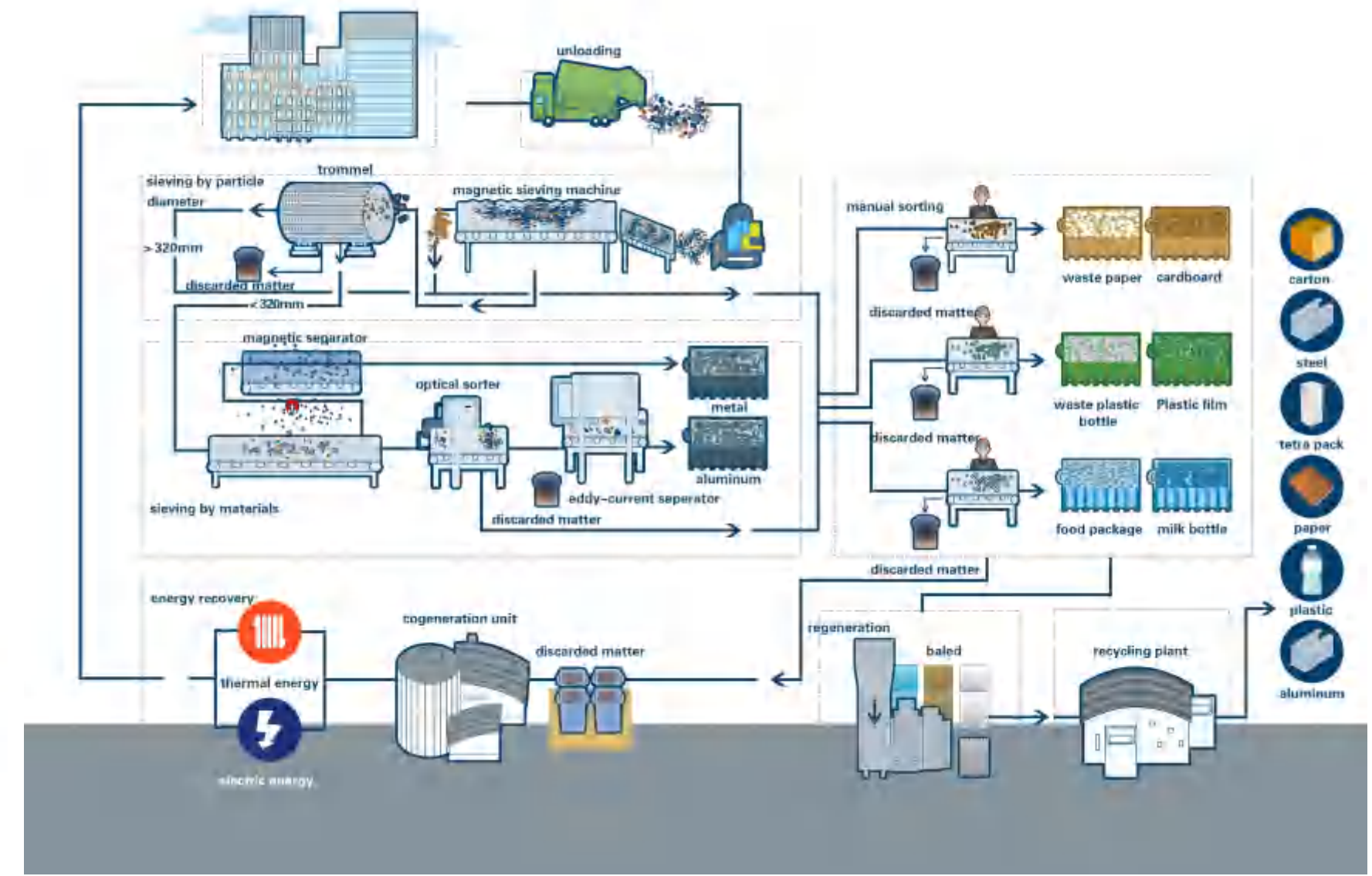
## Construction Waste Resource Utilization







## Recycling of Recyclable Garbage



## ⑥ Recyclable Waste Sorting Center

Recyclable waste (paper, plastic, metal cans) is weighed by an automatic weighing system and then enters the feeder. The waste is sorted by a belt conveyor, and then screened and pre-treated by a roller screen. After the metal and non-magnetic non-ferrous metals in the waste are screened by magnetic separation and eddy current, the paper, plastic and film in the waste are screened by wind separation, and the colored glass is screened by light separation.



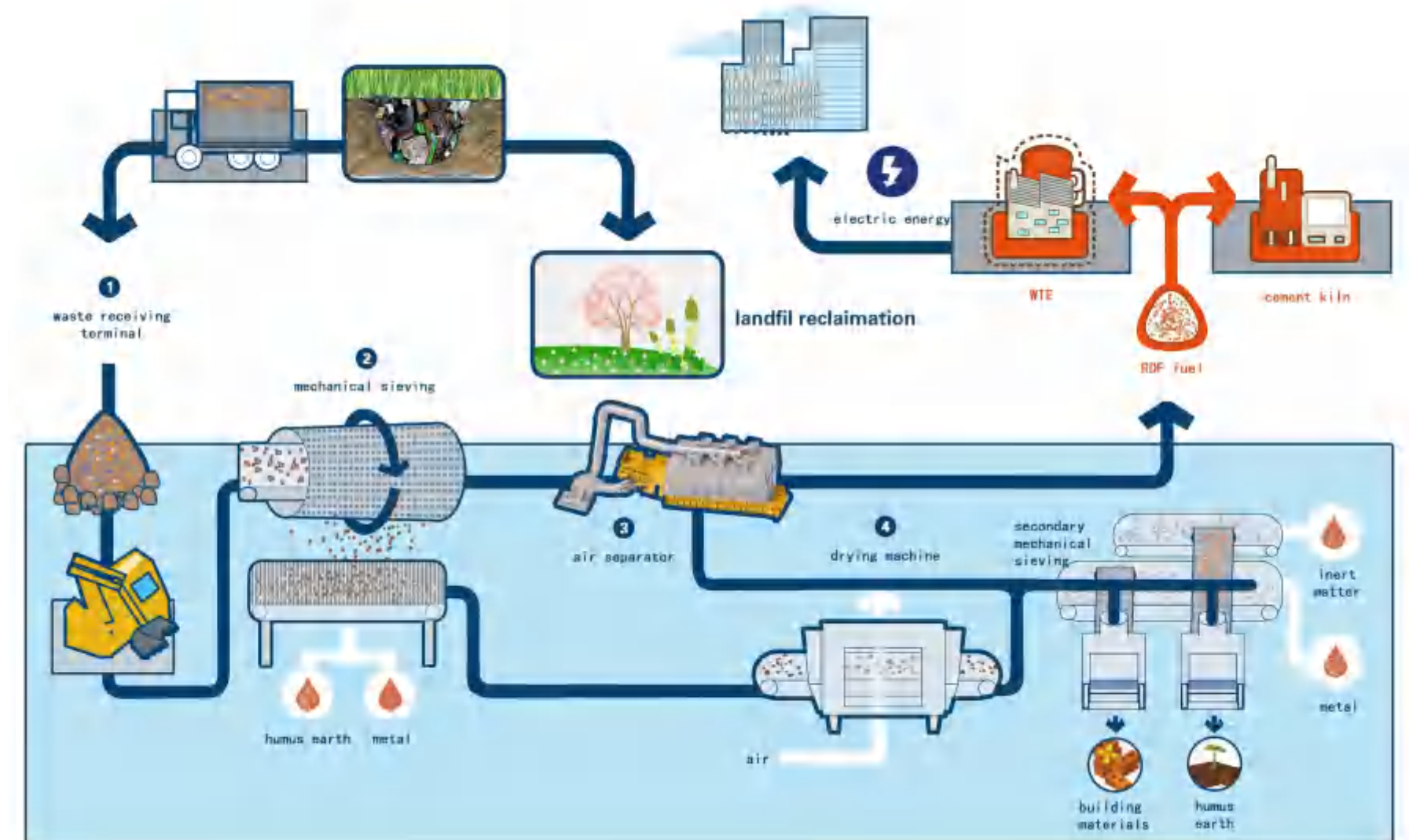
AI intelligent sorting robot



Optical sorting machine

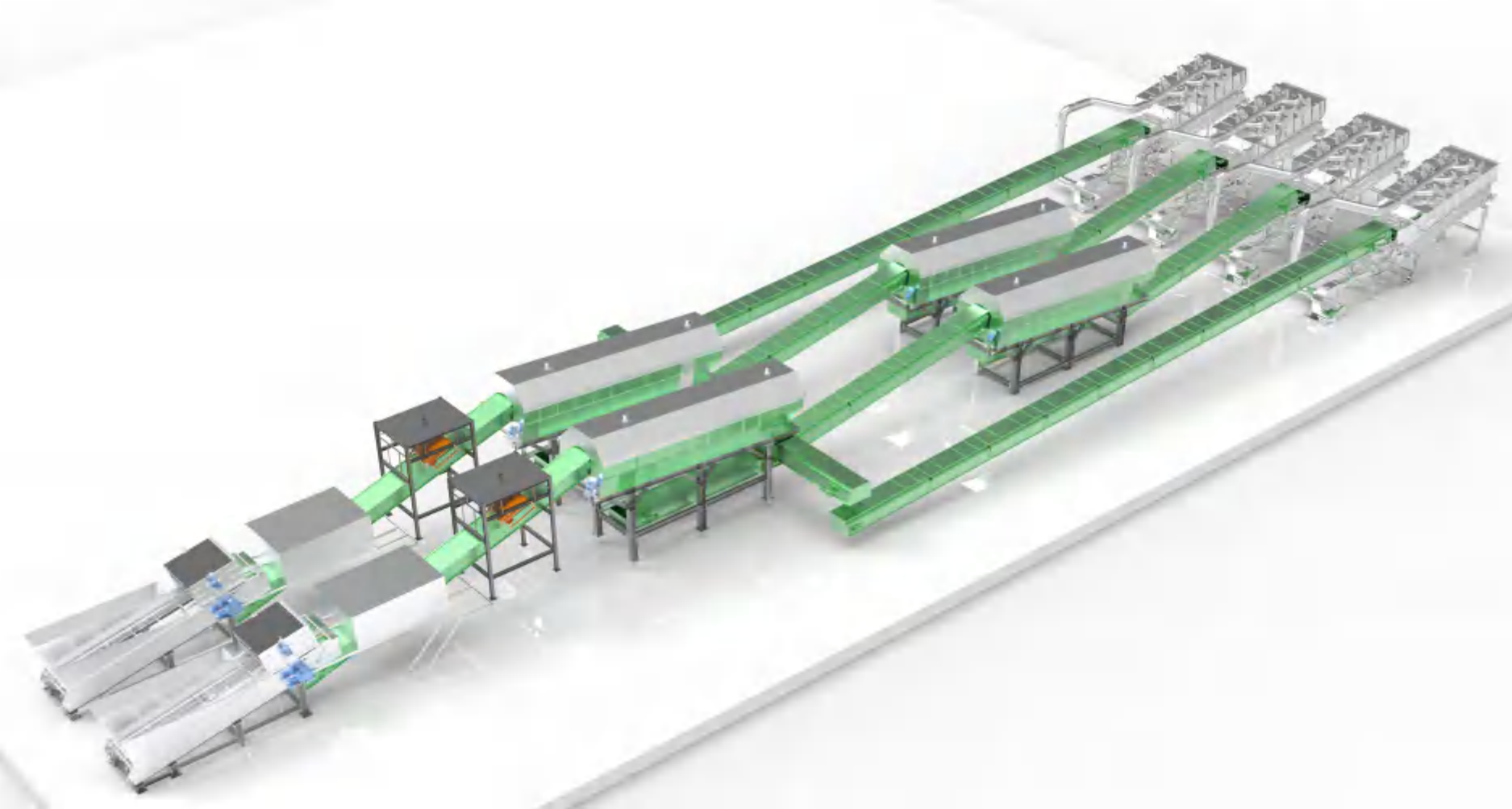


## Utilization of stale garbage as resources



## ⑦ Landfill Treatment (Landfill Restoration)

The landfill restoration process mainly includes garbage excavation, transfer, screening, dust suppression and deodorization, and land restoration. The landfill waste treatment system mainly includes trommel screen, sorting, iron remover and other equipment. After the garbage enters the site, it is first screened by a trommel screen, and the materials are divided into substances on the screen with large particle size and substances under the screen with small particle size. The substances under the screen are humus, and the substances above the screen are divided into heavy substances and light substances through the air separation equipment. The light substances are mostly waste plastics, and the heavy substances are humus and building waste. Humus soil and construction waste are then removed off iron metal by iron remover. The materials processed by the landfill garbage treatment system are divided into four categories: waste plastics, humus, building aggregates, metals, etc. Waste plastics can be used for incineration power generation or cement kiln, humus soil can be used for landscaping or backfilling. Construction waste soil can be used as building aggregate for resource reuse.





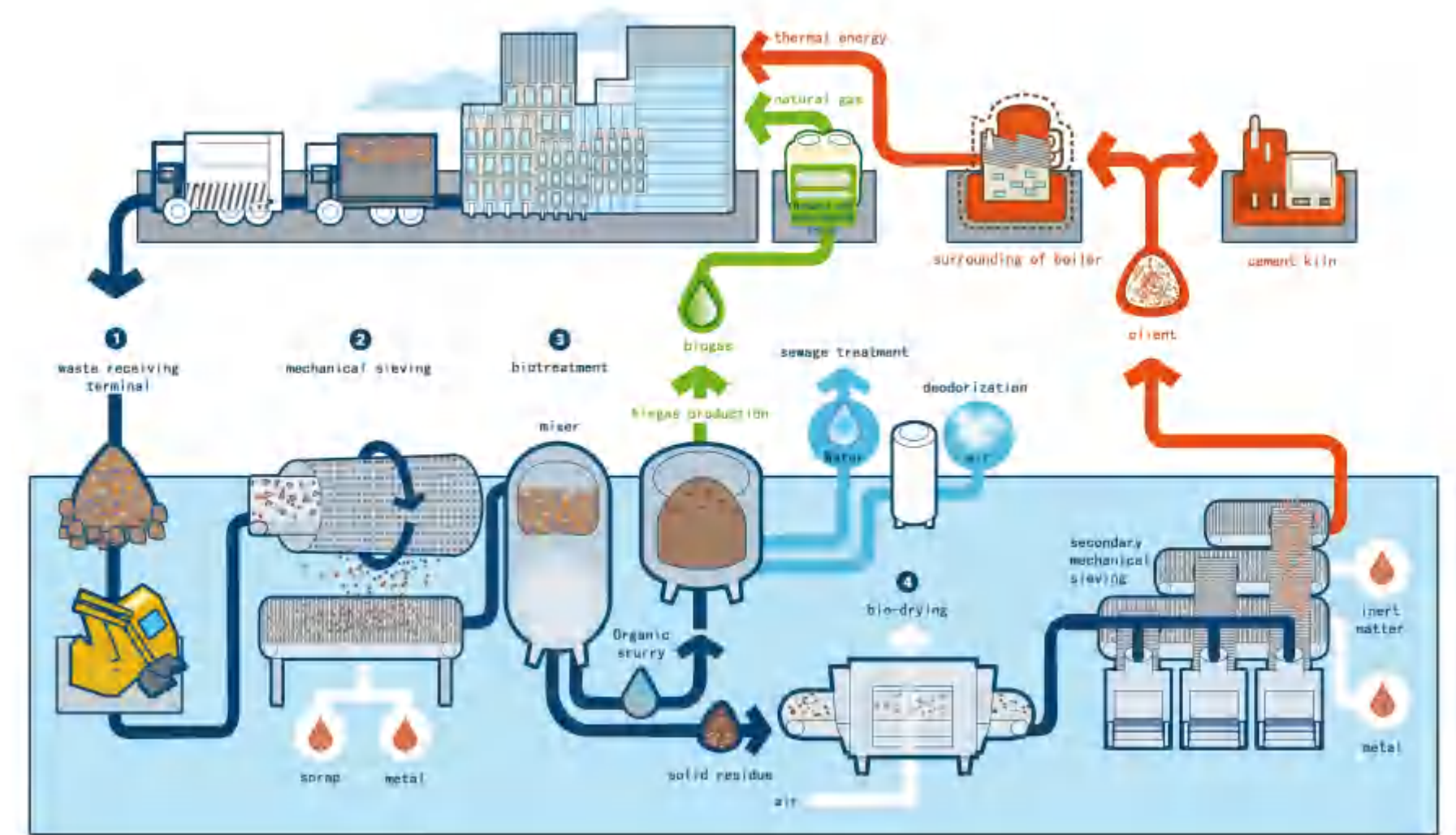


## Sludge Resource Utilization

### ⑧ Sludge Drying

The project is built with household waste incineration project, uses waste heat steam after waste incineration power generation to dry sludge, improves resource utilization efficiency and reduces carbon emissions.

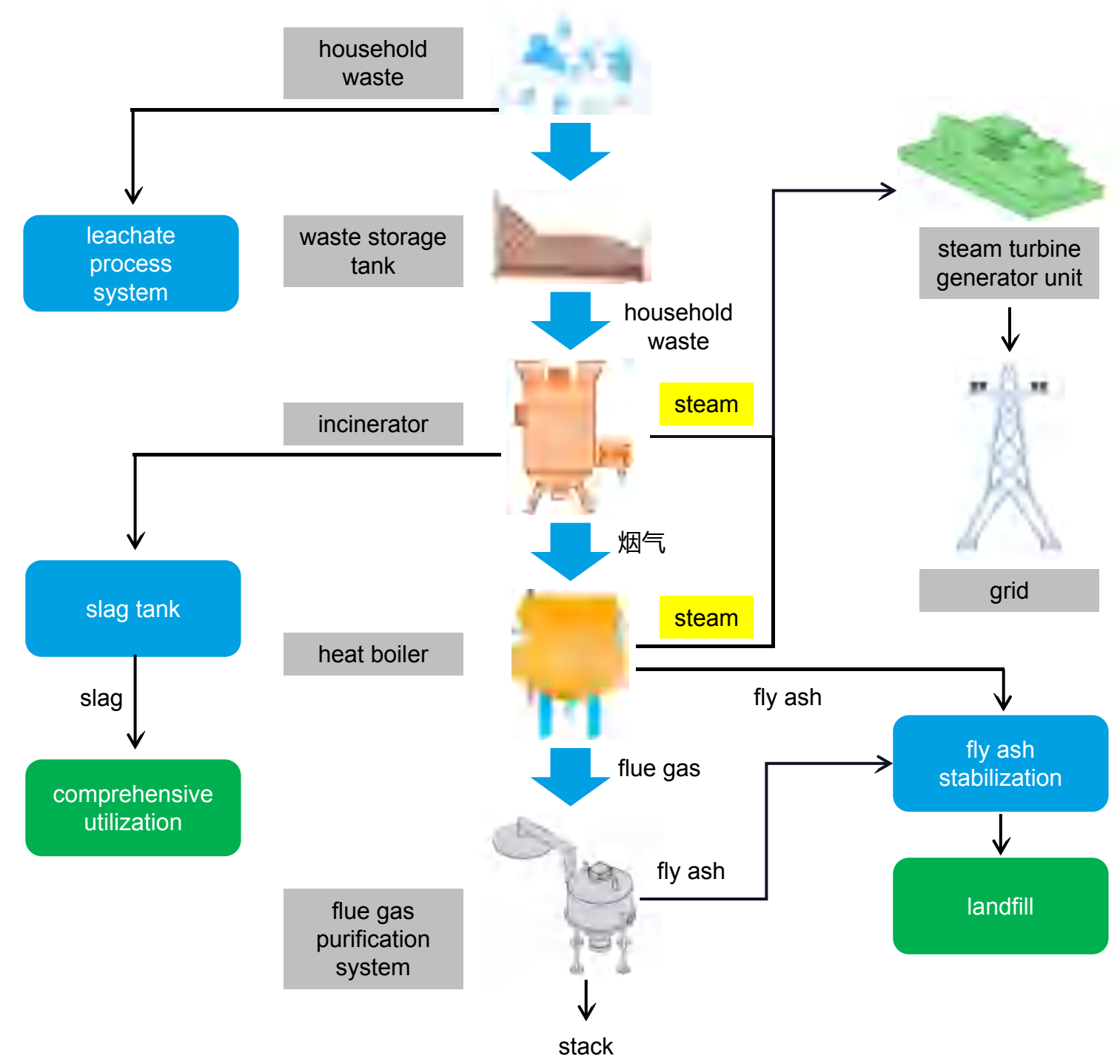
It shares sewage treatment facilities with waste incineration power generation projects to reduce costs and land use.







## Resource Utilization of Household Waste



## ⑨ Household Waste Incineration to Generate Electricity

Adapted to local conditions, with rich experience

Digital intelligent management

Fully transparent and harmless operation, community trust





## Qunfeng Heavy Industry ecological life industry chain

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With systematic thinking and experience in urban  
environmental management,  
Quickly provide environmental collaborative solutions

**70+**  
More than 70 comprehensive projects at home and abroad

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**30+**  
More than 30 large-scale transfer station projects

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**100+**  
More than 100 small and medium-sized transfer station projects

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# THANK YOU



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Watermelon video number

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