

# Our Green Mission **Defend the City**

Hangzhou Public Library's Approach by Establishing Environment Branch to Get Involved



# Hangzhou, China



CBD by the Qiantang River, Hangzhou

## I. BACKGROUND

# PARADISE ON EARTH

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Hangzhou is renowned as the “Paradise in Earth” in China, famous for its perfect combination of man and nature.

Hangzhou used to be the capital of Wuyue State and South Song Dynasty; that made Hangzhou one of the seven ancient capitals in China. When Marco Polo came to Hangzhou in the 13th century, he praised it to be “the most beautiful city in the world”.





## SMART HIGH-TECH CITY

Besides being famous for its scenic beauty, current Hangzhou has gained another image as a smart high-tech city. With Alibaba Group and Netease, two of the most influential Internet giants in China based in Hangzhou, more and more talents all around the world flock to this city. Along with the increasingly rapid urbanization, the population in the city has passed 10 million in recent years.



## HUGE PRESSURE ON ENVIRONMENT PROTECTION

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At the same time, the pressure on environment protection is rapidly growing. According to the data, each person averagely produces 1.2kg per day in Hangzhou and the number grows by 6% every year. In 2017 and 2018, Hangzhou respectively generated 4.54 million and 4.66 million tons of garbage, the total amount of which is greater than the sum produced from 1991 to 2006 which was 9 million tons.





## MAIN TREATMENT: LANDFILL AND INCINERATION

Tianziling No.2 landfill is the only landfill being used at present in Hangzhou, with a total storage capacity of 220,000 cubic meters. It was planned to serve 24.5 years, but 70% of the space has been used only 13 years later.

A waste incineration plant was also built in Hangzhou, which processes one third of the urban waste every day now. Because of the universal resistance among the public, namely the “Not-In-My-Back-Yard”, the waste incineration had to be located in the suburbs, which has greatly increased the transportation cost of waste treatment.



cost **2 weeks**  
to be degraded



cost **5 years**  
to be degraded



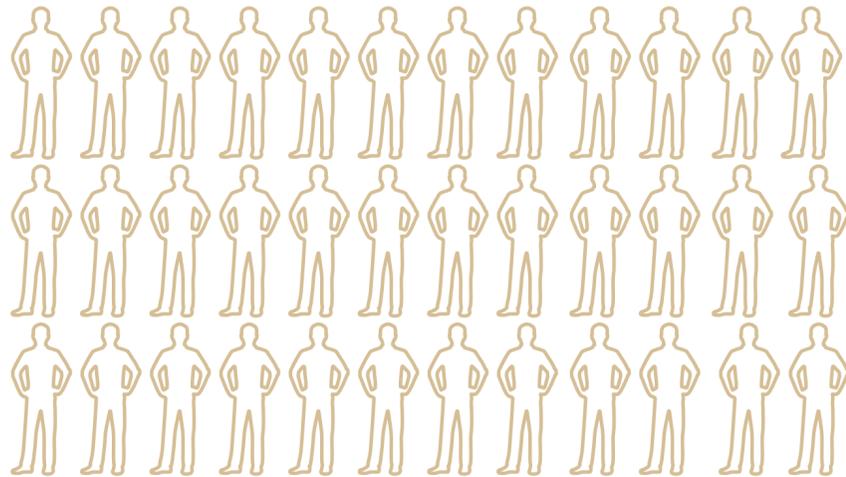
cost **200 years**  
to be degraded



cost **1,000 years**  
to be degraded



cost **2,000,000 years**  
to be degraded



## RUFUSE SORTING THINGS SHOULD HAVE BEEN DONE

As early as 2000, Hangzhou was identified as one of the first 8 pilot cities for garbage sorting and collection in China. In 2010, Hangzhou municipal government officially began to promote refuse sorting.

According to the Assessment on the Municipal Solid Waste Treatment in China, however, the amount of garbage generated in Hangzhou has an average rate of change 4.8% (from 2006 to 2012), while another two pilot cities Beijing and Shanghai respectively enjoy an average rate of change -1.5% and -2.8% (from 2006 to 2012).

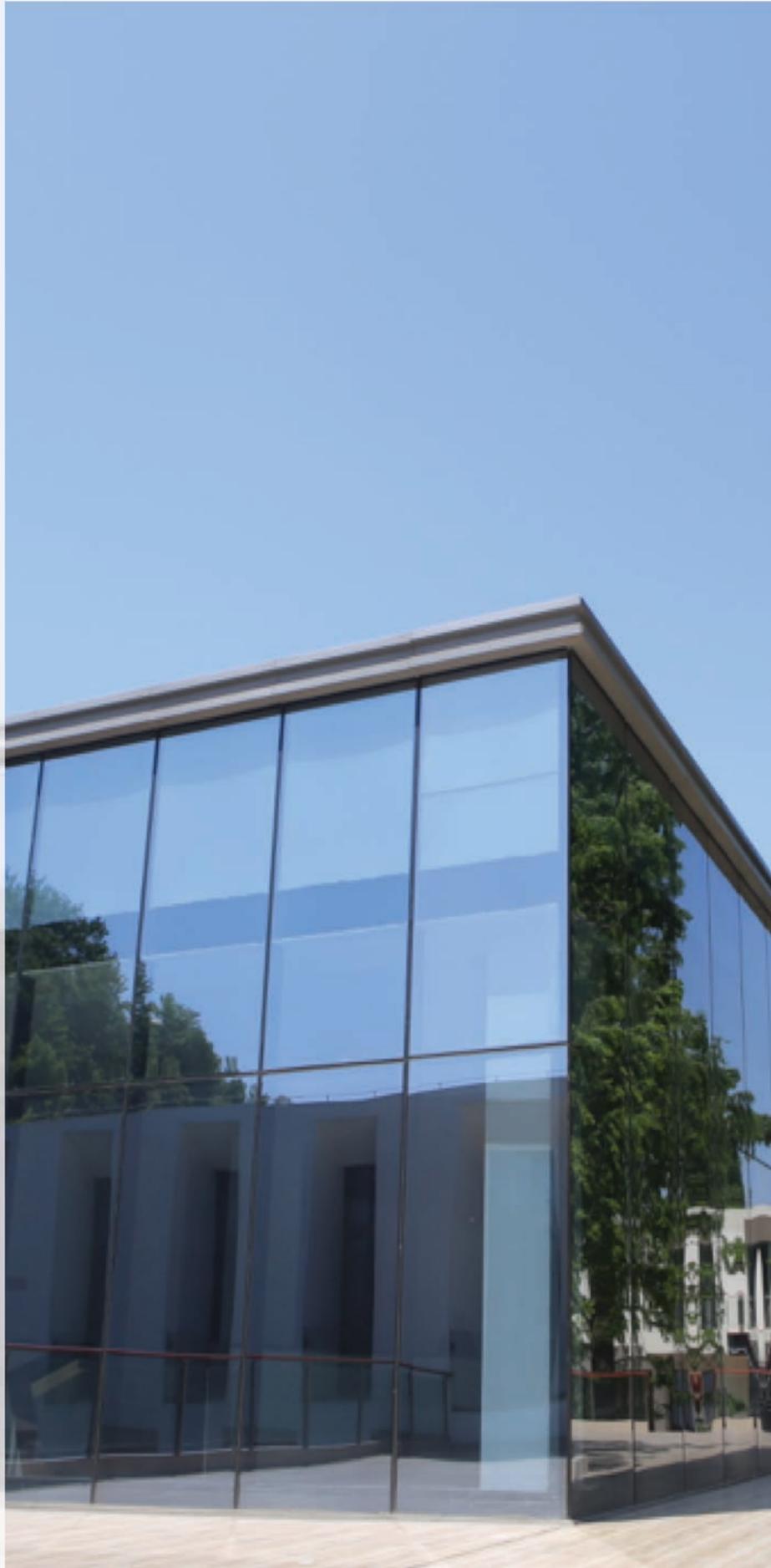
# HANGZHOU'S DILEMMA

It's time to change the top-down government-led approach to popular participation to defend "the most beautiful city" Marco Polo referred to.



## II. THE LIBRARY BUILT ON LANDFILL

In June 2016, Hangzhou Public Library opened its **Environment Branch** to the public, starting a new chapter of popular participation on environment protection around Hangzhou. Besides providing general library services, the environmental protection themed branch penetrates “green” into the location it chose to stand, the building and design, the operation scheme, and its approaches and practices to promote popular participation.



**SURROUNDINGS**



**BUILDING AND DESIGN**



**OPERATION SCHEME**



**PRACTICES**

## SURROUNDINGS

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The Environment Branch is built in the Tianziling landfill area, only hundreds meters away from the first landfill which was operated from 1991 to 2007. The landfill was filled in 2007 and then the green landscape covering project began to implement there. In March 2010, the first landfill turned into the Tianziling Ecological Park and opened to the public.





## SURROUNDINGS

The green area of the park is 80,000 square meters, under which buried more than 9 million tons of domestic waste produced in Hangzhou from 1991 to 2007. The second landfill which is being used now can be seen from the peak of the park. When being in this place and seeing the contrast between the piles of rubbish and beautiful nature, people could not help thinking about the environmental issues and embracing the idea of harmonious coexistence between man and nature.

## **BUILDING AND DESIGN**

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The concept of environment friendly is fully integrated into the design of the Environment Branch.

The use of floor to ceiling windows makes full use of the natural light and enables the building to better blend into the surrounding natural environment; the use of LED energy-saving lights ensures both lighting and power saving; the whole building uses low-volatile paint to ensure tasteless and harmless indoor air; the bookshelves, tables and chairs in the branch are all made of waste materials; decorations made of recycled materials can be found everywhere inside of the branch.



## BUILDING AND DESIGN

This branch covers an area of 1000 square meters and has a collection of 100,000 books. Since June 2016, the branch has received more than 140,000 visitors with book loans 17,000.

Bookshelves, tables and chairs in the branch made of waste materials



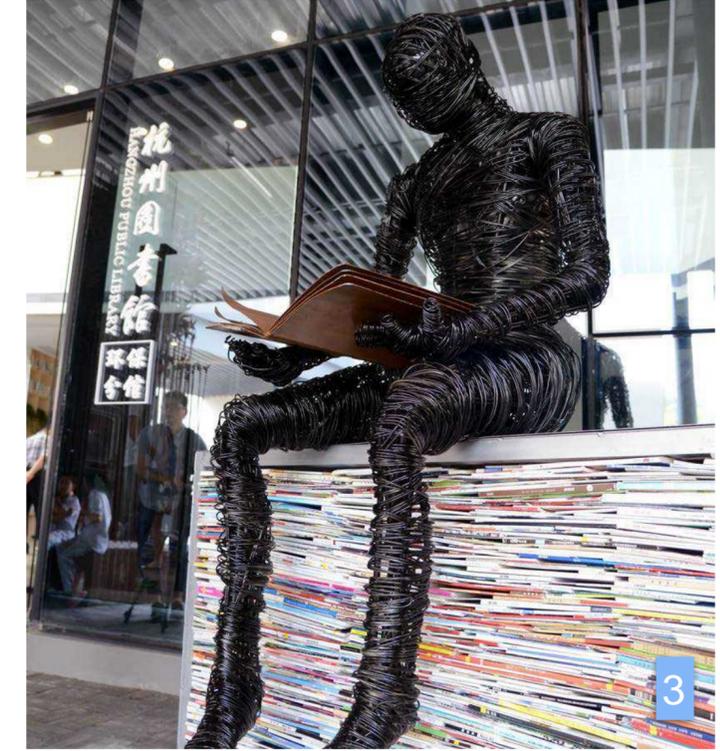
## BUILDING AND DESIGN



Scrap iron and waste paper made butterflies



Reprocessed waste shelves



**The Reader** made of waste iron wire

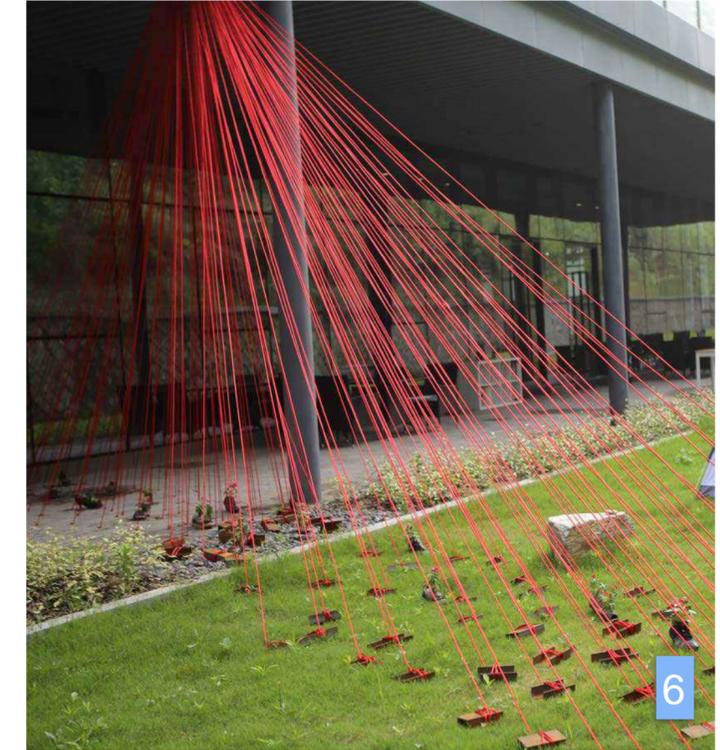
Waste shoes made flowerpots



**A Big Sofa** made of 30,000 outdated magazines



**Ray of Light** made of waste shoes and bricks





## OPERATION SCHEME

With the idea that everyone living in the city should take protecting environment as personal responsibility, the Environment Branch wanted to build itself as a library run by ordinary citizens. With only one professional librarian working there, the branch has been operated by hundreds of trained citizens in turn since it was opened.

It started out recruiting individual volunteers. After years of development, it has also built long-term partnerships with local organizations which could regularly provide their staff to serve in the branch and take it as an essential part to construct enterprises' culture. The current staff team of the branch is composed of one librarian and more than 200 volunteers.



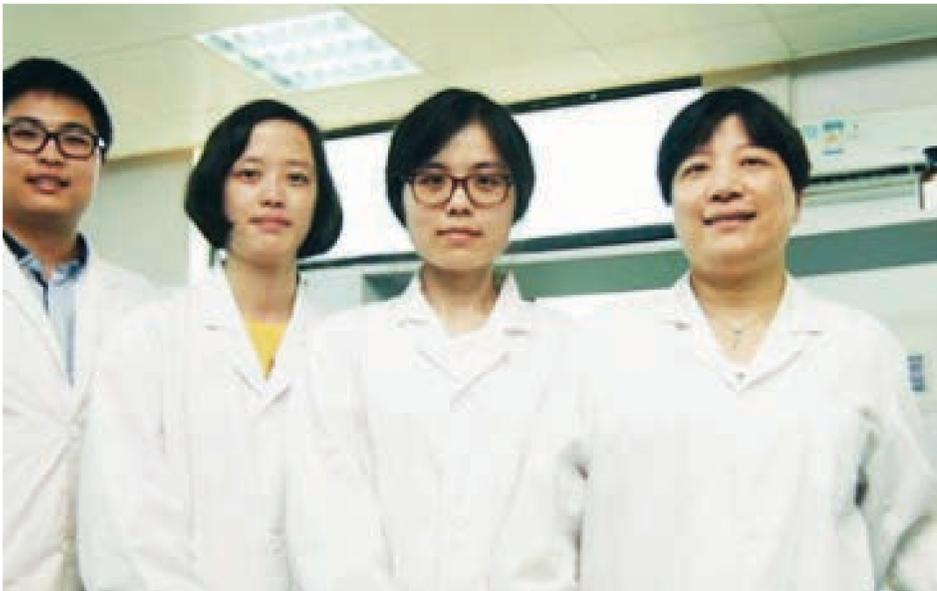
## OPERATION SCHEME

“If you have idle books or magazines on environmental protection, literature, tourism, culture and nature, we welcome you in the Environment Branch to donate them making them useful.” The Environment Branch has launched a long-term “Book Crowd-Funding” program encouraging the public to turn the “idle books at home” into the “collection in the library”. The invitation received a positive response from Hangzhou citizens. So far 3000 books has been selected out of tens of thousands and put in the “Book Crowd-Funding” shelves in the branch.



# OPERATION SCHEME

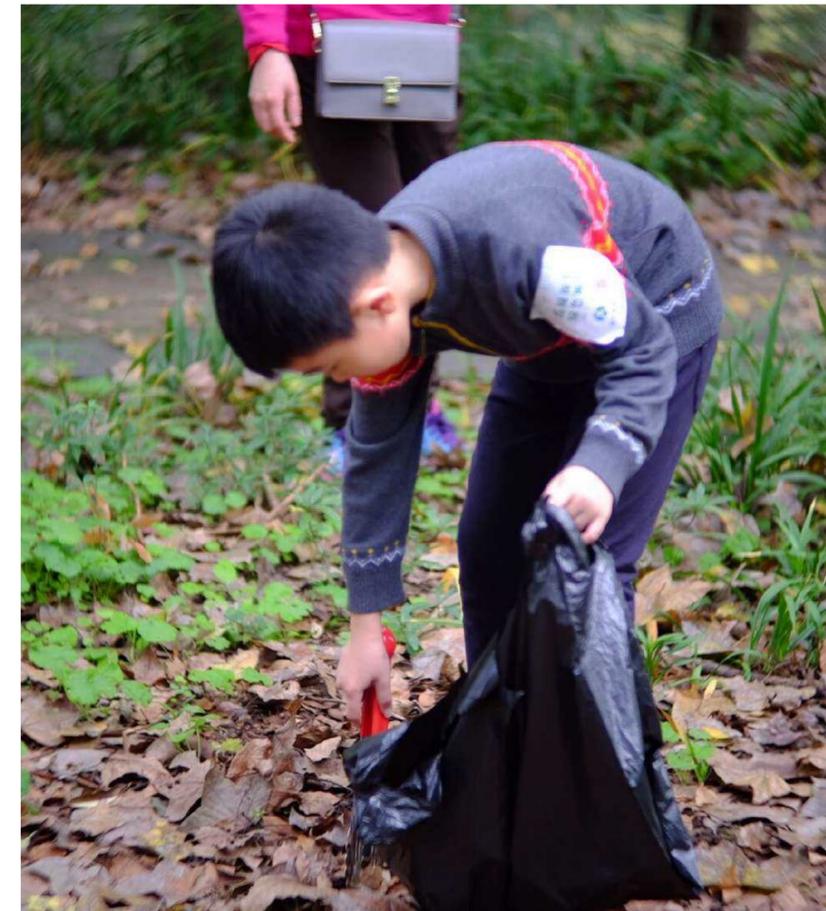
Hangzhou Environmental Group is a professional company engaged in the comprehensive treatment of municipal solid waste. Its business areas include sanitary landfill, clean direct transportation, sewage treatment, incineration and academic research, etc. By cooperating with Hangzhou Environmental Group, the branch gets financial support on operating expense. More importantly, relying on its team of experts and rich resources in the field, the branch is more capable to offer professional services to the public.



# PRACTICES

## Hold Experience-Oriented Activities

The branch has held 214 activities events in the library and all around the city participated by 910,000 people. By holding regular activities, the branch conveys the idea of turning trash to treasure, protecting nature and defending the city we are living in.





# PRACTICES

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## Connect Professional Organizations with the Public

The establishment of the branch attracts the public to go to the landfill area, the place where they never thought they would visit before. With more and more people coming to use the library and participate in the activities held there, the landfill decided to open parts of its working area to the public and develop a specific tour route for visiting. People can book the “Follow the Track of Waste” service in the branch and visit the landfill under the guidance of trained volunteers working in the branch.



## PRACTICES

### Organize a Team in Green Vest

The Environment Branch gathered a host of citizens keen on environment protection and trained them into professional green propagandists. Putting on green vests, they regularly go to streets and communities around the city, promoting environmental-protection knowledge and assisting people to classify the waste.



# PRACTICES

## Build the “Second Classroom”

By providing experience-oriented activities and lectures of high qualities, the Environment Branch has successfully built itself as an education base of the city and was selected as the “second classroom” by the education bureau. Participations in related events could be counted in the credit assessment of local primary and secondary schools.





## PRACTICES

### Support City-wide Event

By years of developments, with more and more experience and resources accumulated and close partnerships built with non-governmental organizations, the Environment Branch has become an influential institution in the environment protection field in Hangzhou. During the annual mega events of the city on World Environment Day, the branch plays the backbone role in coordination and implementation.



### III. VISION

## FUTURE DEVELOPMENTS

The Environment Branch is currently working on a design of a city-wide environmental credit system which may better motivate positive environmental acts and keep it sustainable. In the envisaged system, participation in the activities held by the branch, primarily focused on refuse sorting at present stage, could help earn credits which later could exchange for things (coupons, priority services and rate relief, etc) in different occasions around the city.

# THE ENVIRONMENTAL CREDIT SYSTEM

To build the environmental credit system, the branch is supposed to

1. Establish partnerships with city government and businesses to create as many credit-exchange occasions as possible;

2. Find win-win models in each partnership to ensure its sustainability. For example, when people exchange credits for discounts in merchants, the merchants will enjoy a corresponding reduction of eco fee levied by the environmental protection bureau.



**SCHOOL CREDIT**



**COUPONS**



**FREE GREEN TRAVEL**



**HOURS OF PUBLIC SERVICE ACTIVITIES**



**PRIORITY SERVICES**



**MORE**

**THANK YOU**



Yang Gong Causeway, the West Lake, Hangzhou