

Beihu Street, Wuhan

Jiangnan District, Wuhan City, 430000

Beihu Street is located in the middle of Jiangnan District, Wuhan City. It is the seat of the Jiangnan District Committee and the district government.

The project area is centred around Northwest Lake, and its borders extend to Changjiang Ribao Road in the east, Qingnian Road in the west, Jianshe Avenue in the south, and Beihu West Road in the north. The total area is 1.837 square kilometres, with a permanent population of 24,000.

Beihu Street is located within "Wuhan Financial District", home to 500 global companies, with a combined workforce of 11,000.

The area is rich in cultural tourism, education, medical and nursing resources, and has beautiful natural scenery, developed transportation, convenient living facilities, and a complete neighbourhood layout.

In recent years, the street has undergone a green and low-carbon transformation, affecting the community, residents and commerce.

Through this competition, the city would like to receive strategies based on the recent transformation, focusing on green spaces and climate resilience, connected places and sustainable living. The recommended measures should help Beihu Street achieve its goal of a "near-zero carbon neighbourhood."



Site area:
183.7 hectares.

Key information:
The selected area includes 13 commercial buildings, 1,460 enterprises and 1 commercial block. 3 subways pass through the street, and more than 20 bus lines extend in all directions. The density of public transportation ranks among the highest in Wuhan.

Priority areas and key expectations:
The competition strategies should focus on the following themes:

Green spaces and climate resilience:
continue to increase the neighbourhood's

blue and green spaces, preserve biodiversity, increase climate resilience, and achieve harmonious coexistence between man and nature.

Connected places: strengthen physical and digital connections between various parts of the area, improve digital infrastructure, and social and economic connections throughout the jurisdiction.

Sustainable production and living: introduce new technologies and business models to explore green production methods. Use various schemes to guide residents to reduce carbon emissions and recycle resources in their daily lives.

Introducing the site and development expectations

In recent years, Beihu Street has accelerated its green transformation, economic and social development, bringing it closer to its goal of carbon neutrality. It has comprehensively built a multi-faceted co-governance system with government guidance, business entities, and social participation to guide the formation of resource conservation and environmental protection production methods, lifestyles, and spatial patterns, striving to explore a demonstrative and popular green and low-carbon development path based on the central urban areas of megacities with high population density and prosperous economies.

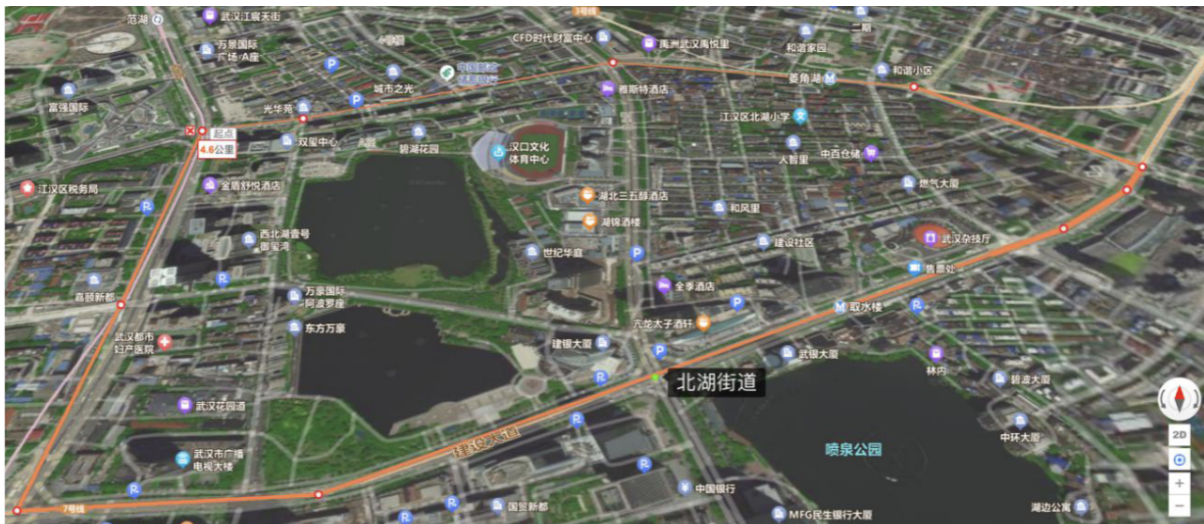


Figure 1: Three-dimensional image of the selected area for this competition (orange area)

The project area is home to the national and regional headquarters of more than 10 major financial institutions, such as China Construction Bank Hubei Branch and China CITIC Bank Wuhan Branch.

Garden Avenue Art and Commercial Street, the city's first shopping mega-centres, are also located within the study area. Attracting a daily average passenger flow of 15,000 people, these centres were awarded the best "Characteristic Commercial Place of Hubei Province". The area is characterised as a "young" cultural hub, with a "night economy", attracting many social media celebrities.

Other must-see places within the study area include Hankou Cultural and Sports Centre, Wuhan Peking Opera Theatre, Wuhan Han Theater, Wuhan Acrobatic Hall, Tianyi Theater, Jiangnan District Library, and Northwest Lake Park. In order to promote national culture, Wuhan Opera Pier Cultural Street has integrated elements of opera to build street museums, small theatres, etc., that are popular tourist spots.

Moreover, the street is equipped with public institutions such as education, medical care, and nursing care. These include 6 schools (Tianmendun Middle School, Beihu Primary School, and Beihu Kindergarten), and 3 community elderly care service centres, close to Hubei Provincial Hospital of Integrated Traditional Chinese and Western Medicine.

Beihu Street actively implements the concept of "energy conservation, carbon reduction,

and green development" and explores energy trusteeship projects in the street

government office buildings. Energy-saving infrastructures are embedded in offices, to

save electricity and water. Many rooftops have solar energy photovoltaics, while streets have ample vehicle charging facilities. Beihu Street is building a comprehensive energy management platform to strengthen energy consumption data monitoring, management, and pre-control. Through this project, the comprehensive energy consumption of street office buildings will be reduced by more than 8% per year. From March to June 2023, the overall electricity consumption was reduced by approximately 4,718KWh, reducing CO2 emissions by approximately 2.48 tons.

Beihu Street also actively promotes the construction of near-zero carbon demonstration communities, whilst implementing low-carbon transformation measures in existing communities. Specific renovation measures include: investing social capital in the construction of rooftop distributed photovoltaics, increasing charging stations, creating low-carbon pocket parks, setting up smart recycling bins in residential communities, and actively incentivising social organisations to carry out recycling projects, mobilising residents to create community shared gardens, and exploring the establishment of a carbon charity fund.

Beihu Street has built a small wetland in the Northwest Lake Green Plaza, acting as a model for small wetlands in the city centre.

The Northwest Lake small wetland covers an area of about 1.09 hectares. Prior to its restoration in 2019, it was a long and narrow pond combined of stormwater and sewage. The exemplary case of protecting and utilising small wetlands in Northwest Lake was praised by the United Nations Human Settlements Agency. There were few aquatic plants and the water ecology was damaged. In 2019, by building a symbiotic system of "algae-eating insects-underwater forest-aquatic animals-microbial communities", the "grass-type clear water state" self-purification system was restored. The water quality is generally grade 3, and can reach grade 2 in winter. After the transformation, there are more than 50 kinds of emergent, floating, submerged plants, and the plants in the gentle slope flower border on the shore. The aquatic plants include calamus, philodendron, water lily, valgus grass, etc., and there are more than 10 species of fish in the water, such as crucian carp, Bass, shrimp, loach, etc., attracting 21 species of bird watching in June 2022. More than 1,000 local cherry blossoms and 40 ginkgo trees are planted on the lakeside, making it a good place for Wuhan's residents to watch cherry blossoms and ginkgo trees.

Beihu Street is committed to building a green and thriving neighbourhood, achieving harmonious unity between the economy, society and ecology through green development, green living, green innovation, and green cooperation, and improving the happiness index and reputation of the neighbourhood. Beihu Street will promote the concept of green living, cultivate the ecological culture and civic literacy of the neighbourhood, and enhance the cohesion and vitality.

Beihu Street's ambitions for redevelopment include building green infrastructure, improving energy efficiency and utilising resources and reducing the carbon emissions. The city is seeking to develop its green industries, and solicit advanced technologies, and carry out pilot projects. It also seeks to strengthen community engagement work with the government, experts, media, the public and other parties to promote its sustainable neighbourhood vision.

Students' projects to develop and enhance Beihu Street should promote the concept of green living by: increase the neighbourhood's blue and green spaces, preserve biodiversity, and increase climate resilience; improve physical and digital connections between the area and other parts of the city, and beyond; encourage residents to practise

green and sustainable lifestyles, recycle resources, and guide residents to reduce carbon emissions in their daily lives.

Urban climate priorities and specific environmental challenges

In 2014, Wuhan joined C40 (Cities Climate Leadership Alliance), becoming the fifth city in China to do so. Wuhan carried out a series of international exchanges and cooperation with C40, and obtained relevant low-carbon data and international best practice cases. In 2020, Hubei Province released the "Implementation Plan for the Near-Zero Carbon Emission Zone Demonstration Project in Hubei Province" and began to build near-zero carbon neighbourhoods. The competition plan should take this policy into consideration and promote the construction of a near-zero carbon emission neighbourhood in Beihu Street in the future.

In 2022, Wuhan issued the "Wuhan City's 14th Five-Year Plan for Addressing Climate Change", which aims to respond to the challenges of climate change and promote sustainable development through measures such as reducing greenhouse gas emissions, improving urban adaptability, and promoting low-carbon economic transformation. Competition plans should take this policy into consideration and help achieve the policy development goals.

In 2022, Wuhan issued the "Wuhan City 'Waste-Free City' Construction Implementation Plan", which aims to promote the formation of green development methods and lifestyles, strengthen solid waste source reduction, improve the level of comprehensive recycling of waste resources, and effectively ensure harmful chemical processing capabilities. Sustainable lifestyle plans should take this policy into consideration, promoting solid waste reduction, resource recycling and garbage classification in the neighbourhood, and guiding residents to enjoy a near-zero carbon life.

In 2022, Wuhan issued the "14th Five-Year Plan for the Development of Wuhan City's Digital Economy" (Draft for Comments) and the "14th Five-Year Plan for Wuhan City's New Smart City". The goal is to create ubiquitous and cooperative IoT sensing, secure and efficient infrastructure, intensive and shared database, intelligent and agile processing and response, and application scenarios that benefit people and optimise governance through the strengthening of digitalization reform. Competitors should take these policies into consideration when it comes to connectivity solutions to strengthen the digital connectivity of the road.

In 2022, Wuhan issued the "Wuhan City's 14th Five-Year Plan for Garden and Forestry Development", which aims to expand green space, continuously improve the city's energy level and quality, and continuously enhance its carbon sink capacity. Green and nature-based solutions should take this policy into account and fully incorporate the direction of planning measures to increase neighbourhood's blue and green spaces.

In 2023, Wuhan issued the "Wuhan City Cooling Action Plan", which aims to use demonstration projects as a guide to effectively reduce the area of strong heat islands and relatively strong heat islands, and significantly improve the urban living environment. Green and nature-based solutions can be combined with the specific measures, and demonstration projects in this document to reduce the street heat island effect.

In 2023, Wuhan released the "Wuhan Metropolitan Area Ecological Environment Co-protection and Joint Governance Plan (2023-2027)" (Draft for Comments), which aims to enhance the city's green and low-carbon development level, continue to improve the

quality of urban and rural living environment, and protect the ecology safety, and first

build an integrated pattern of ecological and environmental protection. Competition plans should take this policy into consideration and help achieve the policy development goals.

Wuhan is located in central China. The temperature in summer is high and it is prone to heat waves, which may impact on people's health, and increase the risk of diseases such as heat stroke and heat exhaustion.

Thunderstorms and heavy rains often occur in Wuhan during the summer, which may trigger urban flooding and cause risks of waterlogging on roads, traffic jams, and damage to homes and infrastructure. It is expected that the frequency of high-temperature heat waves and extreme heavy precipitation will increase in Wuhan in the future. Therefore, mitigating the urban heat island (UHI) effect, improving urban flood control and drainage capabilities, and improving resilience measures are crucial .

Students should consider the above factors when designing proposals and come up with practical and feasible solutions.

Specific policy plans

It is recommended that participants read the following documents to better understand the specific policies, plans and regulations.

Outline of the 14th Five-Year Plan for the National Economic and Social Development of Wuhan City and the Long-term Goals for 2035

<https://czj.wuhan.gov.cn/FBJD/XXGKML/GHJH/SSWGH/202112/P020230128379254417516.pdf>

Implementation Plan for the Demonstration Project of Near-Zero Carbon Emission Zone in Hubei Province

http://hbj.wuhan.gov.cn/fbjd_19/xxgkml/zwgk/wrfz/dqwrzf/202009/t20200928_1457507.html

Wuhan 14th Five-Year Plan for Responding to Climate Change

http://hbj.wuhan.gov.cn/fbjd_19/zc/sthjwj/wh/202301/t20230117_2135476.html

Implementation Plan for the Construction of a Waste-Free City in Wuhan City

https://www.wuhan.gov.cn/zwgk/xxqk/zfwj/szfwj/202208/t20220804_2018264.shtml

Wuhan Digital Economy Development "14th Five-Year Plan"

https://jxj.wuhan.gov.cn/xwzx_9/tztg/202203/P020220311548981342925.pdf?eqid=a198049a0000502900000006648c1c4e

Wuhan Metropolitan Area Ecological Environment Co-Protection and Co-Governance Plan (2023-2027) (Draft for Public Comments)

<https://www.chndaqi.com/news/343883.html>

Wuhan New Smart City 14th Five-Year Plan

https://www.wuhan.gov.cn/zwgk/xxqk/ghjh/sswah/202205/t20220523_1975300.shtml

The 14th Five-Year Plan for the Development of Gardening and Forestry in Wuhan City

http://ylj.wuhan.gov.cn/zwgk/zwxxgkzl_12298/jhgh_12314/zxgh/202211/t20221115_2095787.shtml

Wuhan Ecological Environmental Protection 14th Five-Year Plan

http://hbj.wuhan.gov.cn/fbjd_19/zc/sthjijw/xgwj/202204/t20220411_1953478.html

Interim Measures for Construction Waste Management in Wuhan

http://www.moj.gov.cn/pub/sfbgw/flfggz/flfggzdfzgwz/201111/t20111114_139227.html

Wuhan City Cooling Action Plan

https://www.jiangan.gov.cn/jaxxw/zfxxgk/zc_41333/qtzdqkwj/qzfwj/202309/t20230918_2265929.shtml

Wuhan Metropolitan Area Ecological Environment Co-Protection and Co-Governance Plan (2023-2027) (draft for comments)

http://hbj.wuhan.gov.cn/hdjl_19/yjzj/detail.shtml?siteId=19&collectionId=1291

Residents' Participation in Ecological Construction: Turning Vegetable Gardens in Small Areas into Shared Gardens

<https://news.hbtv.com.cn/p/2418386.html>

Co-Creation + Parent-Child Public Welfare | Plant for You: Building a Low-Carbon Green Home

<https://news.hbtv.com.cn/p/2418386.html>

Turning Waste into Treasure: Students' Handmade Works Can Be Exchanged for Goods and Carbon Coins at the Community Green Zero-Carbon Recycling Supermarket

<https://news.qq.com/rain/a/20231011A0AN6E00>

Jiangan District held a seminar on green financial products for the construction of "Green and Prosperous Communities"

https://jrj.wuhan.gov.cn/ynzx_57/whjrdt/202305/t20230523_2204478.shtml

"Beihu Experience" is Introduced to the World as the First in Wuhan to Taste Low-Carbon Construction in the Whole Region

<https://baijiahao.baidu.com/s?id=1774342364870846919&wfr=spider&for=pc>

The only one in Central China! Beihu Street of Jiangan District was selected as a pilot project of "C40 Green and Prosperous Community Program"

<https://news.hubeidaily.net/mobile/1220272.htm>

Revitalising Talents in the Business District, "Northwest Lake Promise" Takes Grassroots Governance to a New Level

https://www.wuhan.gov.cn/sy/whyw/202308/t20230831_2256255.shtml

北湖街道网格分布图



Figure 2: Schematic diagram of Beihu Street grid distribution

Language requirements

Proposals must be submitted in English or Chinese.

City specific awards

Any student that participates in the Beihu Street Project may receive internship opportunities in the following fields: architectural design, landscape design, environmental protection, charity, community business, community governance, etc.

In addition, particularly outstanding projects will be considered for implementation.