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THE ARCHITECTURE OF THE BELT AND ROAD INITIATIVE

Explore the impact of different types of Super Gathering Places on the development of cities along the BRI

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Content

Abstract

Through the ages, goods, ideas and people traveled along the road that connected ancient China with the Western world which is named "Silk Road". This road was blazed for those who are adventurous and courageous and actively connected civilizations of centuries. Since 21 century, this road has been given a new implication which is the inheritance and continuation of the past meaning called “the Belt and Road Initiative”.

This thesis outlines the basic Information of “the Belt and Road Initiative” and on the basic of that we focuses on the development of the Architecture and construction industry along the Belt and Road and its influence on modern economic, political and cultural of related countries and regions. It aims to introduce a series of architecture of the Belt and Road Initiative which could be named “made in BRI”. And this thesis will discuss the difference between cluster buildings and non-cluster buildings on local economic and cultural development and the influence of single buildings in cluster buildings on this difference in important cities along the “Belt and Road”.

Keywords: Silk Road, the Belt and Road Initiative, Architecture, Super gathering places, Cluster buildings, Conference center, Exhibition center

Chapter 1 The Belt and Road Project

1. Background

Since the “New Silk Road Economic Belt” was announced by Chinese President Xi Jinping in September 2013 and then in October 2013 the “21st Century Maritime Silk Road” was also proposed, which taken together have been known as the “One Belt One Road Initiative”, officially addressed as the “Belt and Road Initiative” (BRI) nowadays, has attracted worldwide attention and interest in various fields (Routle, 2020).

1.1 Historical Background

It is obvious that the Silk Road existed in ancient times since now it is called the “Silk Road of the 21st century”. The routes of the New Silk Road Economic Belt are developed on the basis of the ancient Silk Road. The ancient Silk Road consists of two routes which are the land Silk Road and the maritime Silk Road. Many reports said that in 1877, the geological geologist Mr. Richthofen also wrote in his book ‘*China’* that "from 114 BC to 127 AD, the western traffic road between China and Central Asia, China and India, which uses silk trade as the medium " named "Silk Road", the term was quickly accepted by the academia and the public, and became an official vocabulary (Hubei, 2014) using in articles and daily life. This road is considered to be

the intersection of the ancient Eastern and Western civilizations that connected the Eurasian continent, as well as the passageway for all political and economic exchanges between ancient China and the West.

1.2 Contemporary Background

In modern society, all countries are faced with similar problems related to resources, environment and development opportunities. As the country with the largest population in the world, China is faced with the shortage of many resources, such as oil and gas resources and mineral resources. As a result, China's dependence on other countries' resources is a serious shortcoming in China's economic development. On the contrary, China has the problem about its own overcapacity. China is also the only country in the world who have all industrial categories and complete industrial system declared by the United Nations. This makes a large number of excellent development opportunities emerge in the society. However, this also causes a waste of resources to some extent. In recent years, due to the rapid development and improvement of the network system, China's internal e-commerce has risen rapidly, which also provides excellent development opportunities for many aspects. Other countries, such as those in the Middle East, who are rich in oil and gas, which are an important part of their economic development, have weaknesses that need to rely on other countries in fields such as light industry. Due to population restrictions in other countries, development

opportunities are also restricted to varying degrees.

All these problems facing the modern world and the new developments brought about by the Belt and Road Initiative have aroused wide discussion among scholars from all walks of life. They consider it as an initiative and policy related to geopolitical and economic development opportunities, and they are also analyzing the relationship and interaction between geopolitics, economic development, and the Belt and Road initiative. However, the new cognition of the Belt and Road Initiative proposed by some scholars has also aroused wide discussion in academic community.

1. *Planetary Urbanization of BRI - The Emerging Geographies of Global Urbanization*

Joe Williams presents that we should approach the BRI as a distinctly urban question. He thought that maps of the Belt and Road Initiative envision a global geography of nodal points hyperconnected to one another by corridors of transport, trade and communication infrastructures, In other words, a re-territorialization of global capitalism in an explicitly urban form. By this, Williams means that the BRI presents a re-imagined geography of capitalism based on a reconstitution of strategic nodes through a vast infrastructural architecture for resource extraction from new hinterlands. He and his colleges argued that the spatial restructuring envisaged under the BRI is emblematic of what a growing number of theorists are calling planetary

urbanization. Planetary urbanization was proposed by Neil Brenner, and it contributes to frame the urban as a process rather than a spatial category to disrupt assumed distinctions between urban and rural. (Williams, Robinson, & Bouzarovski)[1]

2. Environmental Debate

The Belt and Road policy is a development-oriented initiative, and construction for development will definitely bring a certain burden to the environment. Infrastructure development, trade, and investments under the BRI could bring unprecedented negative environmental impacts that may outweigh its economic benefits (Li, Qian, & Zhou, 2017)[2]. Scholars see BRI's potential impact in many ways. Some infrastructure projects will cause direct or indirect impacts on the ecological environment, damage the ecological environment and reduce biodiversity. Investment in industrial manufacturing will accelerate greenhouse gas emissions. Energy will accelerate the exploitation and consumption of non-renewable resources such as minerals and oil.

Chinese government always says that the “Belt and Road Initiative” aims to borrow the historical symbols of the ancient Silk Road, Relying on the existing bilateral and

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[1] Williams, J., Robinson, C., & Bouzarovski, S. (n.d.). China's Belt and Road Initiative andthe emerging geographies of global urbanisation. *The Geographical Journal*, pp. 128-140

[2] Li, P., Qian, H., & Zhou, W. (2017). Finding harmony between the environment and humanity: An introduction to the thematic issue of the silk road. *Environmental Earth Sciences*

multilateral mechanisms between China and relevant countries, and with the help of existing and proven regional cooperation platforms, to inherit and expand the role and influence of the ancient Silk Road. Such a move will accelerate cultural exchanges between countries, and promote the rapid development and prosperity of the economies of all countries in various fields. These ambitious visions are achieved by improving connectivity through massive investments to build networks of rail, ports and airports, and maritime, energy, communication and internet infrastructure. Faced with the problem of environmentally sustainable development, Chinese government has developed a complex institutional framework for environmental protection in the context of the BRI, which is composed of BRI-specific and BRI-related policies (Johanna , Simon, Patrick, Jens, & Edward, 2020)[1].

[1] Johanna , C., Simon, B., Patrick, M., Jens, N., & Edward, C. (2020). Environmental Governance of China's Belt and Road Initiative. *Environmental Policy and Governance*

2. Developing Course

2.1 Current Development State of the World

Contemporary world is undergoing complex and profound changes which are reflected in the continuing profound impact of the international financial crisis, the slow recovery of the world economy and divergent development, and profound adjustments in the international investment and trade pattern and multilateral investment and trade rules. These all make the development problem that all countries facing still grim. Faced with such a dilemma, countries in the world are trying to find particular solutions that adapt to their own national circumstances.

For Chinese government, since the 21 century they also have made many attempts to promote the social development process improve the speed of economic development in the first decade. Since ancient times, China has believed that "lips and teeth are interdependent" which means that things are closely related and mutually dependent. With the appearance of this common grim for all over the world, the Chinese government realizes that only paying attention to its own development is far from reaching the set goals. Because we people from a country do not live in an isolated world, the goods we produce are not only provided to our own country, and the energy and the source we need to produce do not only come from our own country. What we need and use have interacted with other countries. Only when the relevant countries

that have mutual exports with us have a sustainable great momentum of development, could China’s development be stable and rapid. The proposal and construction of the “Belt and Road Initiative” is a manifestation of China's brave confrontation with such a dilemma.

2.2 Theoretical Basis

The author of *The Bipolar World history* claim that this theory is on the basic of inheriting and developing basic principle of Marxism, especially the theory of world history, the integrated use of materialist dialectics, the economic geography, geopolitics and the perspective of social morphology, based on the analysis of the history of the world structure, which provides a theoretical basis and basic principles for the "Belt and Road" initiative strategy implementation. The "Belt and Road" Initiative makes these contents that are a part of theory named “third-generation bipolar world process” moving from theory to reality. These contents can be summed up in four principles. The first one is the principle of cooperation steps which narrates collaborate with other in economics firstly and then politics. The second one is the principle of Geopolitical promote which force on Central Asia Russia firstly, then South Asia, Southeast Asia, the Middle East Africa and finally Europe. The third one is the principle of industrial advancement which force on the field of competition firstly, then the field of natural monopoly and then the field of public goods. The final one is the principle of

advancement of property rights cooperation based on the basic principles of socialism which has been initially embodied ((Fenglin, 2016).

2.3 Chinese Objective of BRI

BRI stated objectives are "to construct a unified large market and make full use of both international and domestic markets, through cultural exchange and integration, to enhance mutual understanding and trust of member nations, resulting in an innovative pattern of capital inflows, talent pools, and technology databases." The Belt and Road Initiative addresses an "infrastructure gap" and thus has the potential to accelerate economic growth across the Asia Pacific, Africa and Central and Eastern Europe (Firzli, 2017).Chinese government always says that the “Belt and Road” Initiative itself is an initiative whose ultimate goal is to build a community of shared interests, shared responsibilities, and shared future for mankind. This move of the “Belt and Road” Initiative conforms to the trend of world multi-polarization, economic globalization, cultural diversification and social informationization.

The community mentioned above is a multi-level concept. The first level of community is formed on the basis of common interests, so it is called community of interests. The community at the second level emphasizes the equivalence of rights and responsibilities, and assumes corresponding responsibilities while realizing interests,

so it is called the responsibility community. At the third level, a community of mutual trust and harmony in politics, win-win cooperation in economy, mutual assistance in security, mutual affinity in culture, and openness and inclusiveness in external relations is emphasized. This is the community with a shared future for mankind (Qiang, 2017). A community of shared interests is the basis for a community of shared responsibilities. A more interconnected economic development will help all parties form a community with a shared future for mankind.

Building a community of shared interests is the keynote. During the 1997 Asian financial crisis, China and Southeast Asian countries had a deep understanding of the power of a community of shared interests. To stabilize the Asian economy, China did not devalue its currency to boost exports, instead supported its neighbors. The economic stability of neighboring countries has also helped China's economic development. Cause of this the Chinese government is keenly aware of that through in-depth international economic cooperation such as connectivity among countries along the “Belt and Road” and trade and investment facilitation, we should create new growth poles for the world economy and achieve mutual benefit and win-win results (Dongfeng, 2015).

Building a community of shared responsibilities is to live up to our responsibility. At present, the world economy is unbalanced, and developed countries are unable to

balance the world economy by themselves. Therefore, countries with the ability to undertake more responsibilities within their capacity will promote the development of the whole world. China has become the country with the most infrastructure construction capacity in the world, and has the strength to help countries along the "Belt and Road" to carry out large-scale infrastructure construction. Building the "Belt and Road" Initiative together is a process of balanced development of the world economy, and it also provides rare development opportunities for developing countries (Dongfeng, 2015). Since the financial crisis in 2008, developing countries have made great contributions to the development of the world economy and become an important part of the world economic growth. The construction of the "Belt and Road" Initiative not only is conducive to the rapid development of developing countries alone the route, but also provides support for the stability of the world economy.

Building a community with a shared future for mankind is sublimation of the whole objective. It is a natural distillation of ideas which from a community of shared interests, a community of shared responsibilities to a community of shared future for mankind. The goal of building a "community with a shared future for mankind" shows that China hopes to work together with other countries along the Belt and Road to achieve mutual benefit and common development. The "Belt and Road" Initiative is the path, support, bridge and bond for building a "community with a shared future for mankind" (Qiang, 2017). To build a community of shared future for mankind, countries must respect each

other, treat each other as equals, pursue win-win cooperation for common development, and embrace inclusiveness and exchanges among different civilizations. It is also important to strengthen cooperation in non-economic areas (Dongfeng, 2015).

Chinese objective of BRI has been narrated clearly in Chapter 51 and other parts of the 13th Five-Year Plan (People's Republic of China, 2016)[1].

- To increase trade and investment in the BRI: "We will improve the bilateral and multilateral co-operation mechanisms of the Belt and Road Initiative focusing on policy communication, infrastructure connectivity, trade facilitation, capital flow, and people-to-people exchanges."
- Free trade zones along the Silk Road: "We will speed up efforts to implement the free trade area strategy, gradually establishing a network of high-standard free trade areas. We will actively engage in negotiations with countries and regions along the routes of the Belt and Road Initiative on the building of free trade areas."
- To enhance financial co-operation in the region to fund infrastructure: "We will strengthen co-operation with international organizations including international financial organizations and institutions, work actively to promote the development of the Asian Infrastructure Investment Bank and the New

[1] People's Republic of China. (2016). 13th Five-Year Plan on National Economic and Social Development

Development Bank, put the Silk Road Fund to effective use, and attract international capital for the creation of a financial co-operation platform that is open, pluralistic, and mutually beneficial."

- To gain access to natural resources: "We will strengthen international co-operation on energy and resources and production chains, and increase local processing and conversion."
- To strengthen transport infrastructure in the BRI corridors: "We will advance the development of multi-modal transportation that integrates expressways, railways, waterways, and airways, build international logistics thoroughfares, and strengthen infrastructure development along major routes and at major ports of entry. We will work to develop Xinjiang as the core region for the Silk Road Economic Belt and Fujian as the core region for the 21st Century Maritime Silk Road."
- To deepen cultural exchanges in the region: "We will conduct extensive international co-operation in the areas of education, science, technology, culture, sports, tourism, environmental protection, health care, and traditional Chinese medicine.

Most of these goals are achieved through constructing architectures and infrastructures.

2.4 Challenge

With the introduction of the Belt and Road Initiative, many different voices have emerged internationally about it. While some countries, on the other hand, point to the possibility of creating a new global growth by bringing Asia, Europe, and Africa closer together, others, especially in the West, are critical of the project due to the possible influence of China.

Opposition to the Belt and Road Initiative comes from non-participating countries such as the United States, Australia, Japan, and India, which interpret the Belt and Road Initiative as a plan for a China-centered international trade network. From the reports of the American government, they see the Belt and Road policy as a very ambitious policy by the Chinese government to significantly increase China's international influence. Some scholars believe it will increase Beijing's dominance of the world's political, economic, and military orders, and that it will be an important step toward Chinese world domination. Some scholars believe that the Belt and Road route, which runs directly through India's disputed Kashmir region with Pakistan, would impede India's sovereign integrity, which is one of the main reasons why they believe India is opposed to the Belt and Road policy. Japan, which has always been in dispute with China over territorial waters, from the reports of the Japanese government, has also clearly expressed its dissatisfaction with Beijing's growing,

unchecked military hegemony. The U.S. response, Japan and Australia formed a counter-initiative in 2019, the Blue Dot Network. Australia, for its part, announced through Foreign Minister Marise Payne on April 21, 2021, that it would withdraw entirely from the Belt and Road Initiative.

At the beginning of 2020, as the COVID-19 pandemic spread around the world, destabilizing factors and uncertainties in world economic development increased, posing new challenges to the Belt and Road cooperation.

2.5 Opportunity

Chinese President Xi Jinping pointed out in his speech that on the new journey, it is important to hold the banners of peace, development, cooperation, and win-win highly, and to pursue an independent foreign policy of peace and adhere to the path of peaceful development. It is necessary to contribute to the construction of new types of international relationships and to promote the construction of the community of human destiny. Using these as supports to accelerate the development of the Belt and Road. And then provide new opportunities for the world with China's new development. According to Wang Guoping, president of the Shanghai Marxist Research Association, the new opportunities offered by the Belt and Road for the world can be summed up in three aspects: growth opportunities, market opportunities, and opportunities for

peaceful development (Hu, 2021)[1].

Growth opportunities refer to the development opportunities associated with economic growth. When we talk about the rate of development of a country, the first thing we consider is the amount of economic growth. For the past 30 years, China's economic growth rate has been evident to the world. Since the outbreak of the new coronavirus outbreak, economies around the world have been severely affected. Under these circumstances, China is the only economy in the world with positive economic growth. This economic growth momentum also provides new opportunities for the development of the world economy.

The second is the market opportunity. China, with a population of 1.4 billion, is the world's most populous country. In the past three decades, many developed countries have set up their factories in China, because of the Chinese labor market. In recent years, due to the rapid economic development, China's consumer market is becoming more and more huge, and the holding of the China International Import Expo in consecutive years has also attracted companies from all over the world to enter the Chinese market. The growth and attractiveness of the Chinese market are currently

[1] Hu, P. (2021). On this new journey, China's new development will provide new opportunities for the world. *China Economic Times.*

difficult to estimate, and the Belt and Road also give countries along the route more opportunities to understand China and enter China, providing development opportunities for other countries.

Finally, there are opportunities for peaceful development. Peace is a necessary condition for development. Any conflict, confrontation, and especially the war in the world invariably become factors that hinder and destroy development. Therefore, peaceful development is both an inherent need for development itself and a fundamental expectation of human civilization. All individuals, organizations, and countries that make efforts for peaceful development are contributors with the ability to carry world civilization and human happiness. The Chinese government's many statements have expressed China's concern for peaceful development around the world and its original contribution to the world's peaceful development (Hu, 2021)[1]. Since the Belt and Road Initiative was proposed, the Chinese government has helped various infrastructures in the Third World to help narrow the gap with other developing countries.

[1] Hu, P. (2021). On this new journey, China's new development will provide new opportunities for the world. *China Economic Times.*

3. Strategic Framework & Routes of BRI

3.1 Framework

The "Belt and Road" runs through the continents of Asia, Europe, and Africa, with the active East Asian economic circle at one end and the developed European economic circle at the other, and the vast hinterland countries in the middle have great potential for economic development. The Silk Road Economic Belt focuses on the smooth passage of China through Central Asia, Russia to Europe (Baltic Sea); China through Central Asia, West Asia to the Persian Gulf, the Mediterranean Sea; China to Southeast Asia, South Asia, the Indian Ocean. 21st Century Maritime Silk Road focuses on the way from China's coastal ports across the South China Sea to the Indian Ocean, extending to Europe，and the way from China's coastal ports across the South China Sea to the South Pacific. According to the direction of the "Belt and Road", relying on the international corridor on land, supported by the central cities along the route, with key economic and trade industrial parks as a platform for cooperation, to jointly build the New Asia-Europe Continental Bridge, China-Mongolia-Russia, China-Central Asia - West Asia, The "Belt and Road" construction will be supported by the central cities along the route, with key economic and trade industrial parks as the cooperation platform, to jointly build the New Asia-Europe Continental Bridge, China-Mongolia-Russia, China-Central Asia-West Asia, China-South China Peninsula, and other international economic cooperation

corridors; the sea with key ports as nodes, to jointly build smooth, safe and efficient transport channels.

The construction of the "Belt and Road" is a grand economic vision of openness and cooperation among countries along the route, requiring countries to work together toward the goal of mutual benefit and common security. Efforts to achieve a more complete regional infrastructure, the basic formation of a safe and efficient land, sea, and air corridor network, a new level of interconnection. Investment, and trade facilitation level to further enhance the basic formation of a network of high-standard free trade zones, closer economic ties, deeper political mutual trust. Humanities exchanges more extensive and in-depth, different civilizations learn from each other and co-prosperity, people of all countries know each other, peace and friendship (Xinhua)[1].

3.2 Routes of BRI

The Silk Road Economic Belt Strategy covers the economic integration of Southeast Asia and Northeast Asia, and eventually merges to Europe, forming a general trend of economic integration in Eurasia. 21st Century Maritime Silk Road Economic Belt

[1] Xinhua. (n.d.). Promoting the vision and actions of jointly building the Silk Road Economic Belt and the 21st Century Maritime Silk Road.

Strategy connects the three continents of Eurasia and Africa by sea and the Silk Road Economic Belt Strategy to form a closed loop through sea and land.

There are thirteen provinces (municipalities directly under the Central Government) along the Silk Road, including Xinjiang, Chongqing, Shaanxi, Gansu, Ningxia, Qinghai, Inner Mongolia, Heilongjiang, Jilin, Liaoning, Guangxi, Yunnan, and Tibet. 5 provinces (municipalities directly under the Central Government) are involved in the 21st Century Maritime Silk Road: Shanghai, Fujian, Guangdong, Zhejiang, and Hainan.

At the beginning of the Belt and Road, there were 65 countries participating in this initiative along the routes. These include China and Mongolia in East Asia; 10 countries in ASEAN - Singapore, Malaysia, Indonesia, Myanmar, Thailand, Laos, Cambodia, Vietnam, Brunei, and the Philippines; 18 countries in West Asia - Iran, Iraq, Turkey, Syria, Jordan, Lebanon, Israel, Palestine, Saudi Arabia, Yemen, Oman, UAE, Qatar, Kuwait, Bahrain, Greece, Cyprus, and the Sinai Peninsula in Egypt; 8 countries in South Asia - India, Pakistan, Bangladesh, Afghanistan, Sri Lanka, Maldives Nepal, and Bhutan; 5 countries in Central Asia - Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, and Kyrgyzstan; 7 CIS countries - Russia, Ukraine, Belarus, Georgia, Azerbaijan, Armenia, and Moldova; 17 countries in the Middle East and Europe - Poland, Lithuania, Estonia, Latvia, Jack, Slovakia, Hungary, Slovenia,

Croatia, Bosnia and Herzegovina, Montenegro, Serbia, Romania, Bulgaria, Macedonia, and Albania.

Picture 1 shows the main routes of the Overland Silk Road and the 21st Century Maritime Silk Road. The land-based Silk Road Economic Belt, connecting China with Central Asia, the Middle East, Europe, and Russia. The 21st Century Maritime Silk Road, linking Chinese coastal cities to ports in the Indian Ocean, the African coast, the Red Sea, and the Mediterranean through the South China Sea. The Belt and Road will also plan the construction of six economic corridors (as shown in picture 2) as follows.

The New Eurasia Land Bridge Economic Corridor

This economic corridor is an international railway line from Lianyungang in China to Rotterdam in the Netherlands, with a total length of 10,900 kilometers, also known as the "Second Asia-Europe Continental Bridge". The New Asia-Europe Continental Bridge has an important role to play as it connects the two major economic centers of the Pacific and Atlantic Oceans at its eastern and western ends, penetrating deep into the hinterland of Asia and Europe and offering new development opportunities for resource-based countries. The development of the New Asia-Europe Economic Corridor has promoted economic cooperation and exchanges between Asia and Europe and has become an irreplaceable contributor to the economic prosperity of

Asia and Europe.

The China–Mongolia–Russia Economic Corridor

China, Mongolia, and Russia have a high degree of strategic convergence in their development, and through cross-border economic and trade cooperation between the three countries, an Economic Corridor will be created, which links China's Belt and Road Initiative with Russia's Trans-Eurasian Railway and Mongolia's Steppe Road Initiative.

China–Central Asia–West Asia Economic Corridor

The China-Central Asia-West Asia Economic Corridor (CCWAEC) links China and the Arabian Peninsula. The vast region it covers generally follows the trajectory of the ancient Silk Road. The corridor starts from China’s Xinjiang and traverses Central Asia before reaching the Persian Gulf, the Mediterranean Sea and the Arabian Peninsula. It crosses five Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan) and 17 countries and regions in West Asia (including Iran, Saudi Arab and Turkey). It is an important component of the Silk Road Economic Belt. Central and West Asia are rich in resources, but many factors – backward infrastructure and lack of funds in particular – hinder local development. The CCWAEC will facilitate economic and trade cooperation and flow of capital to these regions, boosting local economic and social development (Chinese Academy of

Translation, 2017)[1].

China–Indochina Peninsula Economic Corridor

China and the Indochina Peninsula are connected by land and sea, with close geographical, cultural, and people-to-people ties. The Indochina Peninsula is an important link on the Belt and Road (Liu X. , 2018)2. The China-Indochina Peninsula Economic Corridor (CICPEC) extends from Kunming - Yunnan province and Nanning - Guangxi province to Singapore, which extends across The Indo-China Peninsula from Vietnam, Laos, Cambodia, Thailand, Myanmar, Malaysia and other countries. It is a land bridge connecting China to the Indo-China Peninsula and also a transnational economic corridor for Cooperation between China and ASEAN.

China–Pakistan Economic Corridor

The China-Pakistan Economic Corridor (CPEC) was proposed by Chinese Premier Li Keqiang during his visit to Pakistan in May 2013. The original intention was to strengthen exchanges and cooperation between China and Pakistan in the fields of transportation, energy, and maritime affairs, which aims to enhance connectivity

[1] Chinese Academy of Translation. (2017). *China–Central Asia–West Asia Economic Corridor | Chinese keywords*. Retrieved from https://www.sohu.com/a/198720572_488902

[2] Liu, X. (2018). *China-Indochina Peninsula Economics Corridor*. Retrieved from https://www.jianshu.com/p/2aff3d31a00f

between the two countries and to promote their co-development (CPEC)[1]. The China-Pakistan Economic Corridor is a model project and a flagship project of China's Belt and Road Initiative, and also provides important opportunities for the development of Pakistan and other neighboring countries through comprehensive and multi-faceted cooperation.

Bangladesh–China–India–Myanmar Economic Corridor

This corridor was jointly planned by China and India in May 2013. They also agreed on cooperation in certain areas: investment, transportation infrastructure, and people-to-people connectivity. The four governments signed on the proposal and approved the Bangladesh–China–India–Myanmar Economic Corridor joint study program (Iqbal, 2019)[2].

[1] CPEC. (n.d.). Retrieved from http://cpec.gov.pk/introduction/1.

[2] Iqbal, B. A. (2019). Impact of Belt and Road Initiative on Asian Economies. *Global Journal of Emerging Market Economies.*

Figure 1 Routes of the Belt and Road

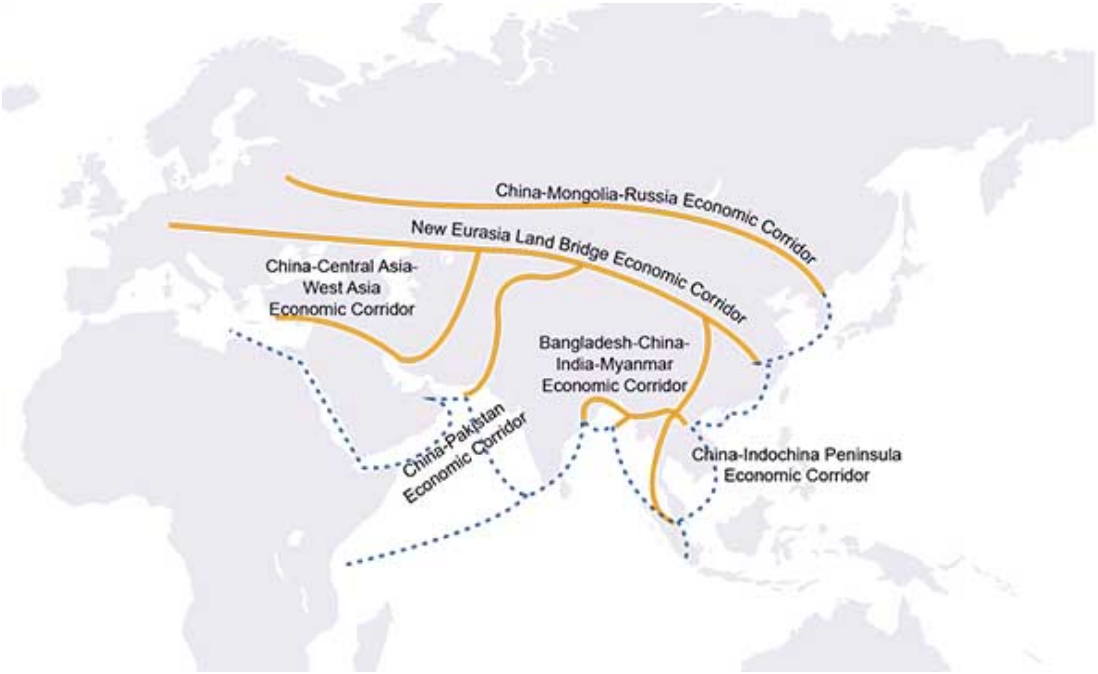
(Source:

https://www.kwm.com/~/media/library/Images/Knowledge/Insights/Global/2017/05/22/countries-under-belt-and-road.ashx?la=zh)

Figure 2 Six economic corridors of BRI

(Source:

https://www.kwm.com/~/media/library/Images/Knowledge/Insights/Global/2017/05/22/six-economic-corridors.ashx?la=zh)



3.3 Strategy

Take advantage of the strong momentum economic development of the Pearl River Delta, Yangtze River Delta, Bohai Sea Economic Circle, and the cities and regions along the eastern coast to accelerate the development of the pilot free trade zone and drive the economic development and urban construction of other cities along the Belt and Road. Take advantage of the high degree of openness and development momentum of the southeastern coastal cities to promote the development of Fujian as the core area of the 21st Century Maritime Silk Road. And strengthen the construction of ports in coastal cities to enhance their role as transportation hubs and connect the land and sea trade economies. Shenzhen has a great geographical location, which helps to have a deepen cooperation with Hong Kong and Macao. And Yunnan and Guangxi will become a core area for radiating into Southeast Asia, taking advantage of their geographical location on the border with Southeast Asia. The entire Xinjiang region, located inland and bordering Central Asia, has a unique geographical advantage and is an irreplaceable window for opening up to the west and will become the core development area of the land-based Silk Road.

4. Urban Construction in BRI

According to data released by the World Bank in 2017, the average urbanization rate of the 65 countries along the Belt and Road is 44.5%, which is a low level globally. The average urbanization rates in South Asia, Central Asia, and the ten ASEAN countries are 33.5%, 40.6%, and 48.4% respectively, all lower than China's 56.8%. Even in Central and Eastern Europe (62.7%) and West Asia (65.5%), where urbanization levels are high, there is still a significant gap between them and the 81.4% urbanization level of high-income countries. Studies have shown that countries whose urbanization rates are between 30% and 70% are in the rapid development stage of urbanization. Therefore, most of the countries along the "Belt and Road" have a vast scope for urbanization, and investment in urbanization will give a strong impetus to the economic growth of these countries (Liu & Liu, 2018)[1].

In the face of the development of the Belt and Road, the relevant provinces and cities along the Chinese territory have also increased their efforts to invest in the construction of large port buildings and airports, the development of the exhibition industry to attract and expand investment, and the optimization and construction of logistics parks and industrial parks. Facing different levels of development along the

[1] Liu, D., & Liu, P. (2018). The value, advantages and strategies of China's participation in the "Belt and Road" urbanization. *Tsinghua Financial Review*, pp. 51-53.

Belt and Road, the Chinese government has proposed different strategies for urbanization investment and construction and encouraged Chinese companies to participate in urbanization investment and construction along the Belt and Road.

For the third world countries on the Belt and Road where economic development is better, the focus is on improving the urban living environment equipped with housing, medical and educational resources related to urbanization. For example, the Chinese government has invested in the construction of a large hospital in Niamey, the capital of the African country Niger, to improve the medical conditions in Niamey. The development of transport and industrial parks in the countries and regions of the six economic corridors, such as the construction of the Monnet Railway and the construction of the Special Economic Zone "Khorgos east-gate" on the border between China and Kazakhstan. These initiatives have accelerated the urbanization of the countries concerned and contributed to their rapid economic development.

Chapter 2 The Architecture of BRI

1. Define the Architecture of BRI

The Belt and Road Initiative involves many countries and regions all over the world and aims to boost their economies and create development opportunities for local businesses and people. In the process, many buildings and facilities are being built as needed. These include investment in infrastructures such as roads, bridges, railways, and transport hubs; new construction parks such as industrial parks and logistics parks in response to expanding demand; investment in housing, education, and health care in urban areas where rapid economic development is required; and public buildings to promote local economic development. Most of these buildings are funded by the Chinese government or built by Chinese companies, while some are joint ventures between Chinese and foreign investors.

2. Relevant Architectures

Through preliminary data research, the author has identified several buildings that have been constructed related to the Belt and Road. These maybe not contain all the architectures that relevant to the Belt and Road, it is just typical success cases alone the Belt and Road. These buildings are mainly located within China and are projects that the Chinese government and local governments have invested in and focused on, supporting the construction and economic development of cities related to the Belt and Road and promoting the rapid development of several industries. There are also many buildings located outside of China, the majority of which are located in Asia and Europe.

Figure 3 shows the details about the architecture that relevant to the Belt and Road. In this figure we can find that the functions of these are Industrial Park, residential, convention and exhibition, logistic park, airport, port and special zone.

The buildings located in China are concentrated in municipalities and provincial capitals. Buildings with the function of airports, ports, and other transportation buildings strengthen the role of their cities as transportation hubs and better connect domestic and international cities and countries along the Belt and Road; buildings with the function of logistics parks are constructed and operated efficiently to promote

faster and better development of the regional economy, which is essential for improving the regional investment environment, enhancing the competitiveness of the regional economy and the market of industrial and commercial enterprises, and promoting the coordinated and sustainable development of the regional economy. Buildings that function as exhibition buildings can hold large international conferences and large-scale exhibition events, which can showcase the city's unique economy and attract and expand investment for the local area; buildings that function as industrial parks respond to the local economic development situation and expand industrial production areas to meet domestic and external trade.

The buildings located in other countries are predominantly residential buildings, with fewer buildings of any other functional type. The priority problem for the less developed regions and countries is to solve the basic living of the local people. Once the housing problem is solved there is the problem of resources such as education and healthcare. Especially in Africa, the poor living conditions make the local people suffer from illnesses. The investment and construction of hospitals is an important safeguard for the corresponding areas. The investment and establishment of industrial parks are conducive to the expansion and competitiveness of local industries and the development of local economies.

Figure 3　The Architecture of BRI (drawn by author)

	PROJECT	LOCATION	CITY	YEAR OF CONSTRUCTION	DESIGNERS (If applicable)	SCALE	FUNCTION
1	Suzhou Industrial Park - artificial intelligence	China（Jiangsu province）	Suzhou	2012-2016	FTA	428,400 ㎡	Industrial Park
2	Map Ta Phut Industrial Estate	Thailand (Rayong province)	Map Ta Phut	1990-2005	-	1.5 ㎢ Urban scale	Industrial Park
3	Great Stone Industrial Park	Belarus	Minsk	2015- in progress	-	112.km²	Industrial Park
4	Kunming International Health Industrial Park	China (Yunnan province)	Kunming	2019- in progress	-	Urban scale	Industrial Park
5	Long Jiang Industrial Park	Vietnam	Tien Giang	2007	-		Industrial Park
6	Zhongjian Building, Lanzhou New District	China(Gansu province)	Lanzhou	2019	-	22916.68 ㎡	Residensial
7	Hualing Tbilisi Sea New City	Georgia	Tbilisi	2015-in process	Hualing Group	2000，000 ㎡	Residensial
8	Kilamba city	Angola	Kilamba		-		Residensial
9	Xi 'an Silk Road International Conference Center	China（Shanxi province）	Xi'an	2020	GMP & TJAD	306700㎡	Convention & Exhibition
10	Xi 'an Silk Road International Exhibition Center	China（Shanxi province）	Xi'an	2020	GMP & TJAD	72000㎡	Convention & Exhibition
11	Lianyungang Industrial Exhibition Center	China（Jiangsu province）	Lianyungang	2017	GMP	77418㎡	Convention & Exhibition
12	Beijing Yanqi Lake International Conference	China (Beijing)	Beijing	2014	AECOM	180000㎡	Convention & Exhibition
13	Beijing Yanqi Hotel	China (Beijing)	Beijing	2014	AECOM	180000㎡	Hotel
14	General Hospital of Niger	Niger	Niamey	2016	CADI	34,000 ㎡	Hospital
15	Abu Dhabi International Airport	Abu Dhabi	Abu Dhabi	2019	KPF	700,000㎡	Airport
16	Lanzhou amusement park	China (Gansu province)	Lanzhou new area	2015- in progress	-	Urban scale	Airport
17	Gwadar port	Pakistan	Gwadar	2007-in progess	-	Urban scale	Port
18	Chongqing International Logistics Hub Park	China (Chongqing)	Chongqing	2007- in progress	-	Urban scale	Logistics Hub
19	Zhengzhou Xinzheng International Airport	China (Henan province)	Zhengzhou	2011	CNADRI	760000㎡	Airport
20	Shanghai Wusongkou International Cruise Terminal Building	China (Shanghai)	Shanghai	2018	TJAD	55400㎡	Port
21	Diwopu airport, terminal 14	China (Xinjiang province)	Urumqi	2016- in progress	ECADI	Urban scale	Airport
22	Special Economic Zone "Khorgos east-gate"	Kazakhstan (border)	Khorgos	from 2013 - in progress	-	Territorial Area	Special Zone
23	International Trade City and urban extesion - YIWU	China (Zhejiang province)	Yiwu	-	-	Urban scale	Special Zone

3. Typology and Families

Different functional types of buildings have their characteristics and contribute to the development of the Belt and Road in different directions. According to the content proposed by the Chinese government in the 13th Five-Year Plan (Page 16-17) mentioned above, and then combined these two characteristics of buildings, the Belt and Road-related architectures are divided into the following five families.

1. Super Gathering Places. Meeting in between architectures.

This family groups together a multitude of different spaces conceived for hosting meetings, exhibitions, and trades. Being the BRI primarily a strategy of relations, discourses, and diplomacy, these buildings are fundamental drivers of business opportunities and exchanges that arise on the ground and for this reason, they generate, through structural innovations and spatial grandeur, the spaces these require.

2. Gift Architectures. Hybridizing Extra-state Architectures.

The BRI is mainly narrated as an infrastructure for business growth. However, many other urban materials arise when business activities touch the ground and meet local communities. Leisure, commercial, medical spaces are usual indirect interventions in the geographies of the BRI, which through their eccentric, hybridize, mediatic architectural language aims at distracting both the local inhabitants and the global

audience from the program's political, financial and social controversial issues. Many times, donated by a state to another, these building features a hybridization of local and global, distant and near, architectural languages that reveals the transnational complexity of the BRI as geopolitical issue.

3. Mass Housing Enclaves. Living between standard forms and local conditions.

Featuring strongly variegated and sometimes extreme territories, which range from deserts to artificial islands, housing the geographies of the BRI is not always an easy task. However, most of the living spaces it provides are mass produced housing that rarely differs from one place to another in terms of forms, program and constructions techniques. However, their architectural features are important properly for this reason. They reveal the essence of a suburbanizing world, in which mass-produced mid to high rise buildings represent both the living solution for a larger part of the world urban population as well as how many others dream of living.

4. Spaces of Free Exchange. Architectures between humans and data-driven machines.

This family gives us the opportunity to treat automation as an architectural issue, or at least as a spatial one. Featuring the most innovative and surprising logistic system, free trade zones, logistic hubs, transform the ground of the BRI in a machinic landscape, in which flows of people and goods contribute to shaping the built environment,

proliferating typological inventions and generating dispositional modes of practice that see the political problems of logistics as fundamentally architectural.

5. Manufacturing Worlds. Unveiling the contemporary production.

When the production reaches the most remote space in the world, it cannot stay alone anymore, and this appears very clearly in the geographies of the BRI. In many of its high intensity productive spaces, comprehending industrial parks, business parks, extractive grounds, special zones, among the many definition, manufacturing buildings establish spatial relations with a whole series of facilities that are fundamental to support the modern production. Such intertwined relations between production, logistic, research and entertainment generate hybrid architectural typologies and complex structure of new urban areas that unveil the contemporary industrial enclave not only as a functional place but also as an infrastructural space generated though protocols and standards.

Figure 2 shows the relationship between families and the architectures relevant to the Belt and Road.

Figure 4 Relationship between architectures and the BRI (drawn by author)

	Family	PROJECT	LOCATION	CITY	YEAR OF CONSTRUCTION	DESIGNERS (If applicable)	SCALE	FUNCTION
	Manufacturing Worlds.							
1		Suzhou Industrial Park - artificial intelligence	China（Jiangsu province）	Suzhou	2012-2016	FTA	428,400 ㎡	Industrial Park
2		Map Ta Phut Industrial Estate	Thailand (Rayong province)	Map Ta Phut	1990-2005	-	1.5 ㎢ Urban scale	Industrial Park
3		Great Stone Industrial Park	Belarus	Minsk	2015- in progress	-	112.k㎡	Industrial Park
4		Kunming International Health Industrial Park	China (Yunnan province)	Kunming	2019- in progress	-	Urban scale	Industrial Park
5		Long Jiang Industrial Park	Vietnam	Tien Giang	2007	-		Industrial Park
	Mass Housing Enclaves							
6		Zhongjian Building, Lanzhou New District	China(Gansu province)	Lanzhou	2019	-	22916.68 ㎡	Residensial
7		Hualing Tbilisi Sea New City	Georgia	Tbilisi	2015-in process	Hualing Group	2000，000 ㎡	Residensial
8		Kilamba city	Angola	Kilamba		-		Residensial
	Super Gathering Places							
9		Xi 'an Silk Road International Conference Center	China（Shanxi province）	Xi'an	2020	GMP & TJAD	306700㎡	Convention & Exhibition
10		Xi 'an Silk Road International Exhibition Center	China（Shanxi province）	Xi'an	2020	GMP & TJAD	72000㎡	Convention & Exhibition
11		Lianyungang Industrial Exhibition Center	China（Jiangsu province）	Lianyungang	2017	GMP	77418㎡	Convention & Exhibition
12		Beijing Yanqi Lake International Conference	China (Beijing)	Beijing	2014	AECOM	180000㎡	Convention & Exhibition
13		Beijing Yanqi Hotel	China (Beijing)	Beijing	2014	AECOM	180000㎡	Hotel
	Gift Architectures							
14		General Hospital of Niger	Niger	Niamey	2016	CADI	34,000 ㎡	Hospital
15		Abu Dhabi International Airport	Abu Dhabi	Abu Dhabi	2019	KPF	700,000㎡	Airport
16		Lanzhou amusement park	China (Gansu province)	Lanzhou new area	2015- in progress	-	Urban scale	Airport
17		Gwadar port	Pakistan	Gwadar	2007-in progess	-	Urban scale	Port
	Spaces of Free Exchange							
18		Chongqing International Logistics Hub Park	China (Chongqing)	Chongqing	2007- in progress	-	Urban scale	Logistics Hub
19		Zhengzhou Xinzheng International Airport	China (Henan province)	Zhengzhou	2011	CNADRI	760000㎡	Airport
20		Shanghai Wusongkou International Cruise Terminal Building	China (Shanghai)	Shanghai	2018	TJAD	55400㎡	Port
21		Diwopu airport, terminal T4	China (Xinjiang province)	Urumqi	2016- in progress	ECADI	Urban scale	Airport
22		Special Economic Zone "Khorgos east-gate"	Kazakhstan (border)	Khorgos	from 2013 - in progress	-	Territorial Area	Special Zone
23		International Trade City and urban extesion - YIWU	China (Zhejiang province)	Yiwu	-	-	Urban scale	Special Zone

4. The Relationships between Sustainable Development and BRI

Sustainable development refers to the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In essence, the Belt and Road Initiative is inherently integrated with sustainable development.

The objective of BRI which aims to create a community with common interest, responsibility, and a shared future for mankind emphasis on win-win cooperation and mutual benefit is inherently consistent with the goal of promoting sustainable development that is harmonious between people and between people and nature. Furthermore, the specific objectives of the BRI, such as promoting economic growth and social progress, safeguarding fairness and justice, and strengthening environmental protection, are precisely the keystones of the United Nations' (UN')2030 Sustainable Development Agenda (Xiao, Cheng, & Wang, 2018)[1].

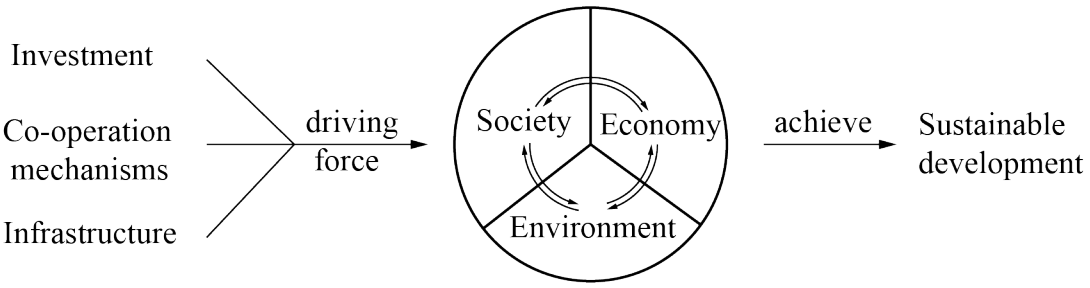
BRI also has the same principles as sustainable which are development fairness, sustainability, and commonality. Ecology (Environment), Economy, and Society are

[1] Xiao, H., Cheng, J., & Wang, X. (2018). Does the Belt and Road Initiative Promote Sustainable Development? Evidence from Countries along the Belt and Road. *Sustainability.*

the three main pilasters of the sustainable development. BRI also forces on these three aspects to achieve the final goals.

All development needs a source of motivation to drive it forward. In BRI, the sources to drive the development forward are the investment, the infrastructure and co-operation mechanisms. Then society, economy and environment impact on each other and promote the development of each other, and finally achieve the final goals of sustainable development (shows in figure 3).

Figure 5 Process for achieving sustainable development (draw by author)



Chapter 3 Case Studies of Super Gathering Places

1. The Reason of Choosing These Cases

The author is very interested in the theory of planetary urbanization mentioned in chapter 1. In the process of research and study, considering this theory, I tried to comprehend the whole Belt and Road map as a large city in the stage of urbanization and to conceive the cities and countries along the Belt and Road extension as important nodal territories for urban development. To mobilize the resources of an entire city in the face of a large geographical area, communication and exchange are required as the basic demand. In this consideration, space is needed to connect as the basic driver of business opportunities and exchanges that emerge in nodal territories. Based on the principles of classification in chapter 2, cases from family super gathering place are selected as study cases.

2. Method

First of all, through the analysis of the connection between the city where the building is located and the Belt and Road initiative, it is preliminarily determined that the city is related to the Belt and Road initiative, and the status, role, and influence of the city in the Belt and Road Initiative are clarified.

Secondly, the relationship between architecture and the Belt and Road is analysed, and the role it plays in the Belt and Road is clarified. Through the analysis of the relationships between cities and architecture and the Belt and Road, the inseparable relationship between cities and the Belt and Road is determined.

After determining the connection with the Belt and Road initiative, analysing the reasons for the site selection of buildings in the city and the influence of the site selection on the development direction of buildings and their functions. Finally, the design concept, architectural modelling and style, spatial layout, and structural design of architecture are analysed to learn how to express and spread culture and ideas through architectural language, how to coordinate functions and space so that architecture can play its maximum role, and how to influence the development of the city through architecture.

3. Case studies

1. Xi’an Silk Road International Conference and Exhibition Center

1.1 Relationship between Xi’an and BRI

Xi’an silk road conference and exhibition center located in Xi’an which is a historical city with a culture of thousands of years. Xi’an was one of the most important cities in ancient China because it had been the capital city of more than ten dynasties whose name was well known as Chang ’an. It is also one of the longest and most influential capital cities in Chinese history. It stands first place on the China six largest ancient capital cities. So far, Xi’an enjoys equal fame with Athens, Cairo, and Rome as one of the four major ancient civilization capitals. Now it is the provincial capital city of Shanxi province.

The traditional Silk Road originated in the Western Han Dynasty (before 202-8 years), which was blazed by the Wudi emperor Liu Che, who dispatched Zhang Qian to the western regions. Chang'an (now Xi 'an) is considered as a starting point of the Silk Road at that time. The Silk Road developed over several dynasties before it reached such a huge scale. Xi 'an also continued to develop when the Silk Road was developing. And now Xi’an is an integral important point city alone the “Belt and Road” Initiative

routes. This historical background is also the core advantage for Xi'an to have the culture communication with other countries. From the perspective of the construction content and route planning of the "Belt and Road", Xi 'an is located in the heart and belly of the New Eurasian Land Bridge Economic Corridor and the China-Central Asia-West Asia Economic Corridor, and is the core fulcrum city for the construction of two major international economic cooperation corridors and the development of international connectivity, which is the location and traffic advantage of Xi'an with the gradually improved of "meter-shaped" three-dimensional traffic network. In recent years, the construction of pilot free trade zones and international production capacity cooperation have enabled Xi'an to accumulate a relatively rich experience in opening up to the other countries and have the foundation for international economic and trade cooperation and exchanges with the Eurasian continent. (Wang & Fan, 2020)[1].

Under such an opportunity, it is believed that Xi'an will make a qualitative leap in all aspects of development by combining its own advantages and develop into an international metropolis in the near future.

1.2 Relationship between Architecture and BRI

Over the past few years, with the development of economy and the promotion of

[1] Wang, S., & Fan, R. (2020). The Present Situation and Ideas of Xi 'an Constructing an International Metropolis from the Perspective of the "Belt and Road". *New West China*, pp. 53-55

international status great efforts have been made by Chinese government in cultural export to promote economic development. With the new round of construction of conference and exhibition venues in major cities, the competition of conference and exhibition industry among major cities is increasingly fierce. Although Xi'an is the starting point of the ancient Silk Road and important node city of the national strategy of the “Belt and Road” Initiative, Xi'an was a city with total construction area of 220000 m^2 for exhibition venues whose interior using area for exhibition was 99000 m^2 before the year of 2020. Compared to other important cities in the Midwest such as Chongqing, Chengdu, Zhengzhou, there is still a certain gap due to the lack of large comprehensive exhibition venues which has had an impact on the development of its conference and exhibition industry (Weiss & Su, 2020)[1].

Before the Silk Road International Conference and Exhibition Center, Qujiang International Conference and Exhibition Center (shows in the picture 3) witnessed the development of Xi'an's Conference and exhibition economy and was the heart of Xi'an's Conference and exhibition economy in the past decades. The project covers an area of 130,000 square meters, with an interior exhibition area of 26,000 square meters, in which 1200 to 1400 international standard booths can be set up. In the decades after

[1] Weiss, M., & Su, W. (2020). A Crescent above New Chang'an City_On the Design of Xi'an Silk Road International Conference Center. *ARCHITECTURAL JOURNAL*

the completion of its construction, it hosted, undertook and co-organized various Chinese and foreign exhibitions, expositions and other large-scale exhibitions. By the end of 2019, Qujiang International Conference and Exhibition Center has a total visitor flow of 43 million which take a utilization rate of 59.81%, occupying more than 90% of the exhibition market in Xi'an (Souhu)[1]. But as time went by, the scale and reception capacity of Qujiang International Conference and Exhibition Center could no longer meet the development needs. The completed construction of the Silk Road International Conference and Exhibition center has made up for the lack of the exhibition venues in Xi'an. Among the complex, the Xi'an Silk Road International Conference center (hereinafter referred to as "the Conference center") as an important part, In the future, relying on the Eurasian Economic Forum, it will be used as the main venue or parallel sub-venue for Xi 'an Eurasian Economic Forum, as well as the venue for other important meetings such as the "Belt and Road" Initiative Summit Forum. This will help Xi'an to build an urban strategy of culture, commerce and science and technology exchange platform along the New Silk Road (Weiss & Su, 2020)[2]. Xi'an Silk Road International Exhibition Center (hereinafter referred to as "the Exhibition

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[1] Souhu. (n.d.). Attention! Qujiang Convention and Exhibition Center officially dismantled, Xi 'an International Conference and Exhibition Center take the baton! Retrieved from https://www.sohu.com/a/385228612_120411458.

[2] Weiss, M., & Su, W. (2020). A Crescent above New Chang'an City_On the Design of Xi'an Silk Road International Conference Center. *ARCHITECTURAL JOURNAL*

Center”) is a large exhibition center with cultural, commercial and scientific functions, which can hold summits, exhibitions, exchanges and transactions, and contribute to the rapid development of Xi 'an as a key city alone the "Belt and Road".

Figure 6 Qujiang International Conference and Exhibition Center

(Source: http://static.pinbang.cn/upload/201710/25/095915821.png)

1.3 Reasons for Site Selection

Xi’an Silk Road Conference and Exhibition Center located in Chanba Ecological Area (CBE) which is of the key development areas in Xi'an. The site of the building complex is a T-shaped site with an area of nearly 823,333 square meters. It is located on the shore of the Bahe River and is only separated from the Wetland Park alone the river which result in its superior ecological environment by a road. The site is adjacent to the

permanent site of the Eurasian Economic Forum and the site of the Xi 'an International Horticultural Exposition (shows as in drawing 7). This area where industry, foreign trade and other industries are developed, is a key financial business district that Xi'an focuses on. The project site is about 28.5 km from Xianyang International Airport and about 40 minutes' drive along the East Third Ring Road; about 9.8 km from Xi'an Railway Station, about 11 km from Xi'an High Speed Rail North Station and about 12.5 km from Xi'an Old Town (as shown in drawing 7). In 2017, the government issued the bidding task for this area of conference and exhibition project, and the final winning project (shown as in picture 8) was designed by the three consortiums of Tongji University Architectural Design and Research Institute, Shanghai Tongji Urban Planning and Design Research Institute, and German GMP International Design Co., Ltd. After the completed construction, the building complex and the Xi 'an Olympic Sports Center are collectively called the Three Centers of Xi 'an.

Figure 7 Map of Xi'an (drawn by author)

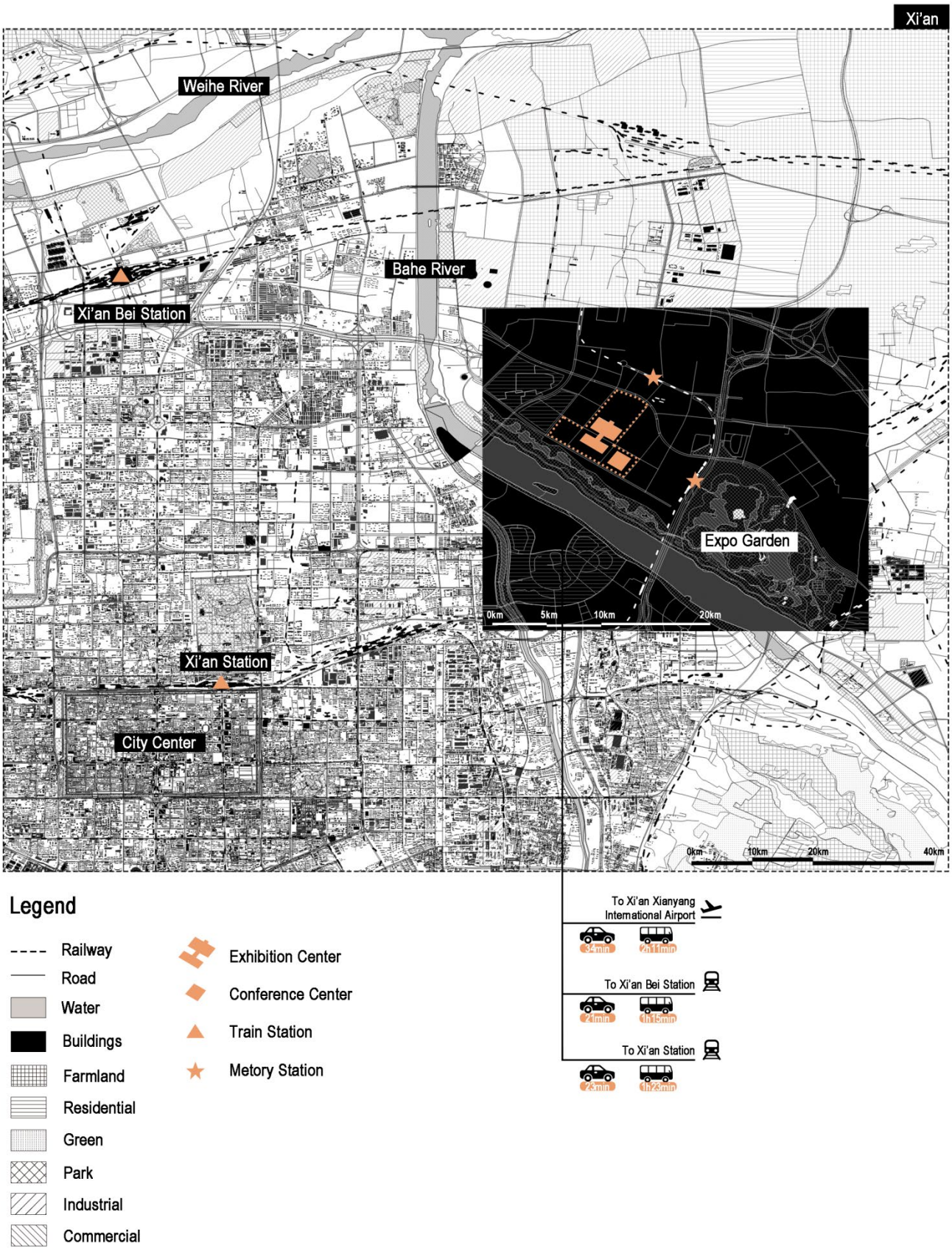


Figure 8 Bird's eye view of Xi’an Silk Road Conference and Exhibition Center

(Source: http://5b0988e595225.cdn.sohucs.com/images/20200130/569ce56fbbd04a96a0789e437c474035.jpeg)

1.4 About Architecture

1.4.1 Xi’an Silk Road International Conference Center

The construction site of the conference center is an approximately square land (346m×304m). How to create an impressive landmark building with strong local characteristics in Xi'an, a city with profound cultural heritage, is an ultimate test for the designers. According to this thinking GMP put forward the concept of “A Crescent Above New Chang 'an City.” for the conference center.

1) Exterior design analysis

The exterior of the building inherits the traditional Chinese architectural culture of building squareness, symmetry, and solemn layout. The conference center is based on a square of 207m×207m, supplemented by a facade with a horizontal proportion of height to width ratio of 1:4, forming a balanced and extended volume and a grand and solemn sense of place (Weiss & Su, 2020)[1]. In traditional Chinese architecture, the roof is often the most brilliant and distinctive part of the building, which results in that modern speculation about the year of construction of traditional buildings often begins with the roof. The roof of the convention center differs from traditional flat roofs or spires in that it is a large curved surface which has overhangs on all sides, forming a

[1] Weiss, M., & Su, W. (2020). A Crescent above New Chang'an City_On the Design of Xi'an Silk Road International Conference Center. *ARCHITECTURAL JOURNAL*

curved crescent from the elevation perspective (as shown in drawing 10). The unique 'crescent' shape is extracted from the historic landmark clock tower of Xi'an. The lower part of the building is also set in a symmetrical trend by a large curved surface suspended and projecting outwards in opposition to the roof. The lower crescent is recessed at the bottom to create an open grey space, while the first floor is entirely glazed with a large curtain wall, making the whole building seems like a crescent floating in the air. The part of the building between the two crescents is entirely enclosed by a large glass curtain wall, and the exterior is accompanied by the columns which is one of the Chinese traditional timber frame construction system. The two prominent crescents at the top and bottom give the building a concise and spacious appearance. The negative space between the upper and lower crescents and the rational and regular columns make combination of the actual and visual conditions without losing its dignity and orderliness (as shown in drawing 11). The masterplan of the conference center learn from Chinese traditional layout that important buildings were surrounded by a moat in ancient China. A water system, as square as the building, surrounds by the front site of the conference center, guarding it and giving it a sense of progression (masterplan shows as in picture 12). When night comes, the whole building is lit up as if it were a crescent reflected in the water.

Figure 9 Technical data of Xi'an Silk Road International Conference Center

(Source: https://mp.weixin.qq.com/s/4-xAYDXWPgvzvokrhjjyCw)

Technical Data of Xi'an Silk Road International Conference Center	
Architect	gmp
Year:	2020
Location	Xi'an, Shanxi Province
Site Area	105,000 m²
GFA Above Ground	128.000 m²
GFA Under Ground	78,000 m²

Figure 10 Bird's eye view drawing of Xi'an Silk Road International Conference Center (drawn by author)

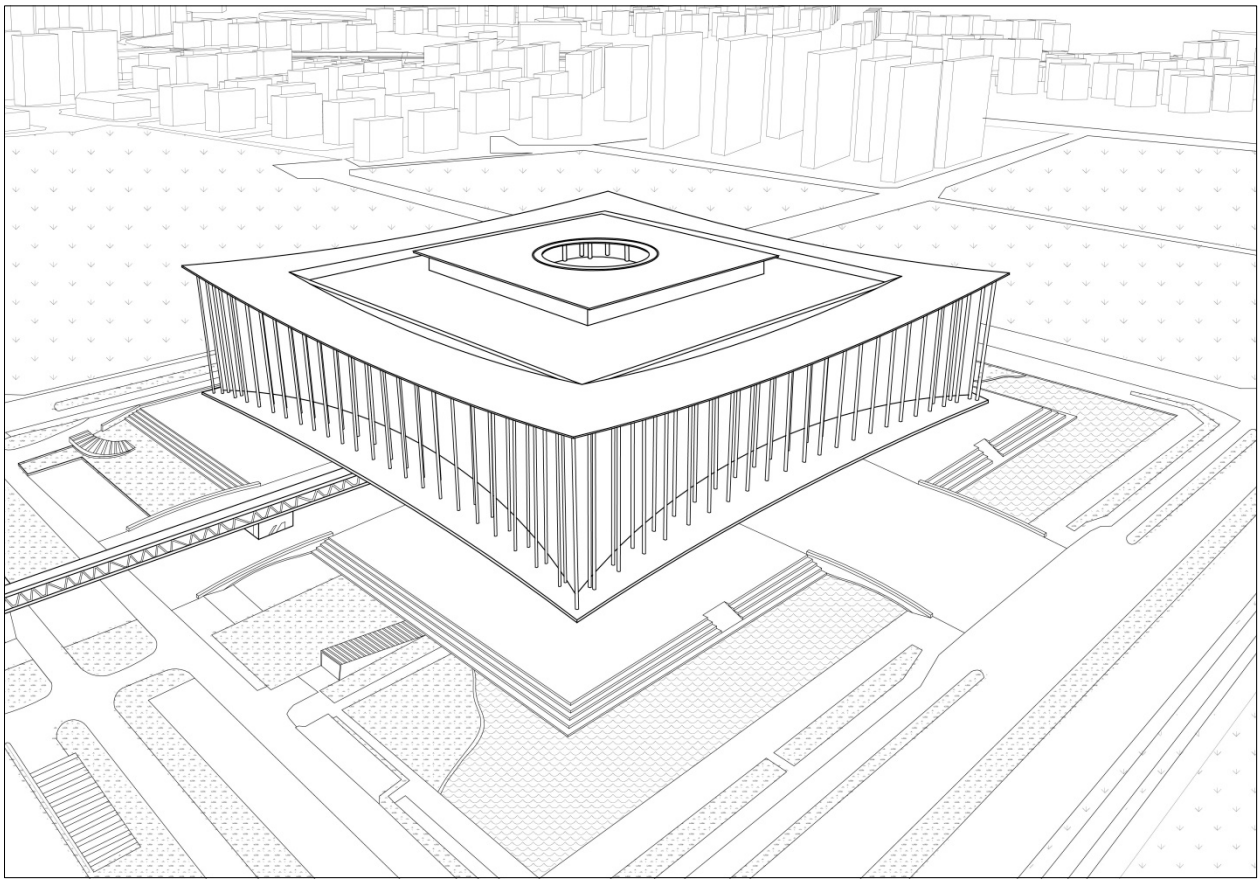


Figure 11 Perspective drawing of Xi'an Silk Road International Conference Center (drawn by author)

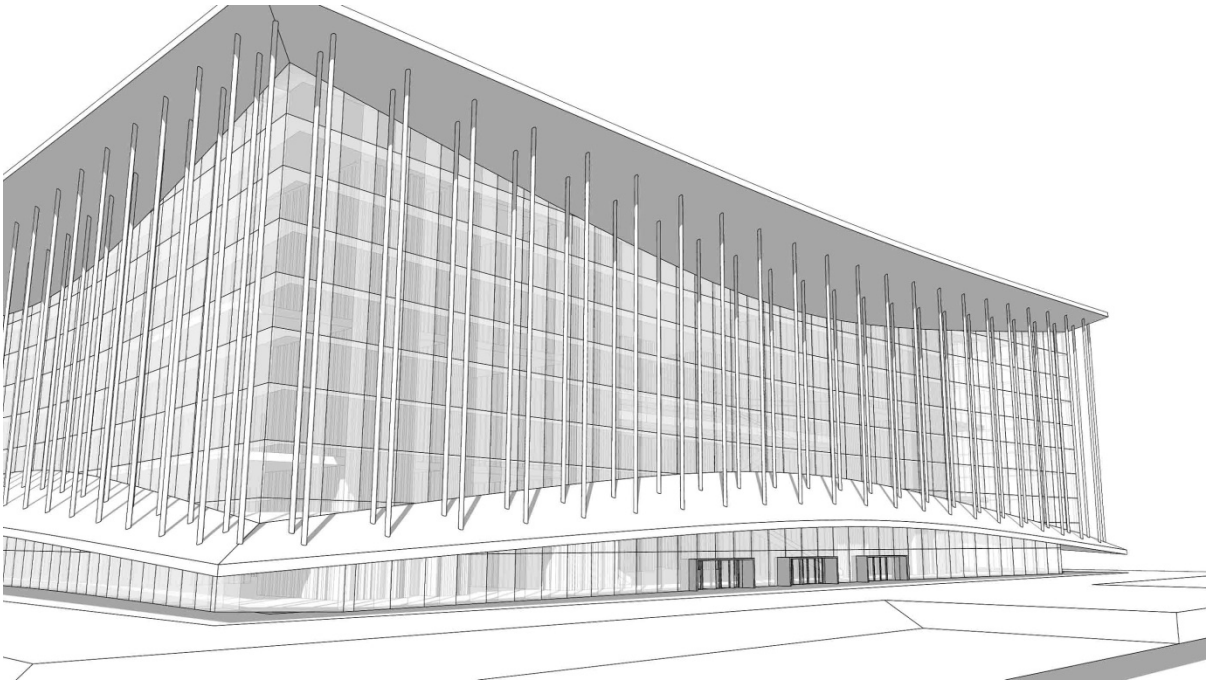


Figure 12 Masterplan of Xi'an Silk Road International Conference Center

(Source: https://www.gmp.de/cn/projects/9488/silk-road-international-conference-center)

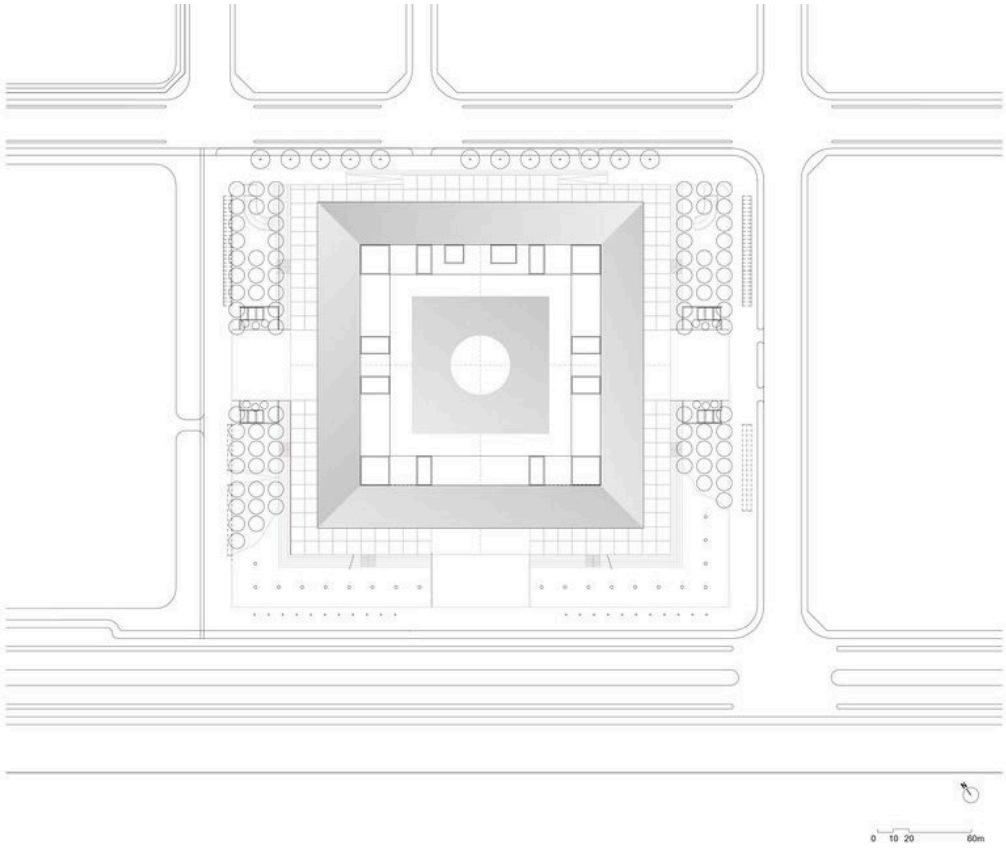
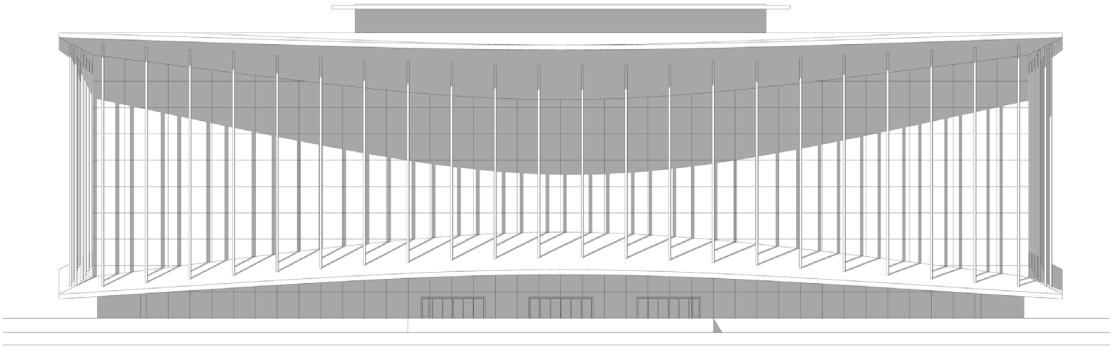


Figure 13 South façade of Xi'an Silk Road International Conference Center (drawn by author)



2) Interior design analysis

The convention center has three floors above ground, with a total floor area of 207,000 square meters, of which 128,000 square meters is above ground and only one floor below. The scale and structural approach of the conference center is generally limited by the scale and functional requirements of the banqueting hall. The basic functional requirement of a large banqueting hall is the absence of columns in the space. Therefore, the scale and structure of the conference center are designed from the banqueting hall, the multi-function hall and the main conference hall, which are centrally located on the first, second and third floors respectively (plans show as in picture 14-16). As can be seen from the plans, these large halls are located in the center of the building. Then small and medium-sized conference halls are arranged on the east and west sides of the main halls, and the entrance exhibition hall and logistics area are arranged on the north and south sides.

Figure 14 Ground floor plan & Third Floor Plan of Xi'an Silk Road International Conference Center

(Source: gmp. (2020). Xi'an Silk Road International ConferenceCenter. ARCHITECTURAL JOURNAL, 66-72.)

Figure 15 Section AA' of Xi’an Silk Road International Conference Center

(Source: https://www.gmp.de/images/3540_200109_Section_AA.jpg?w=1024)

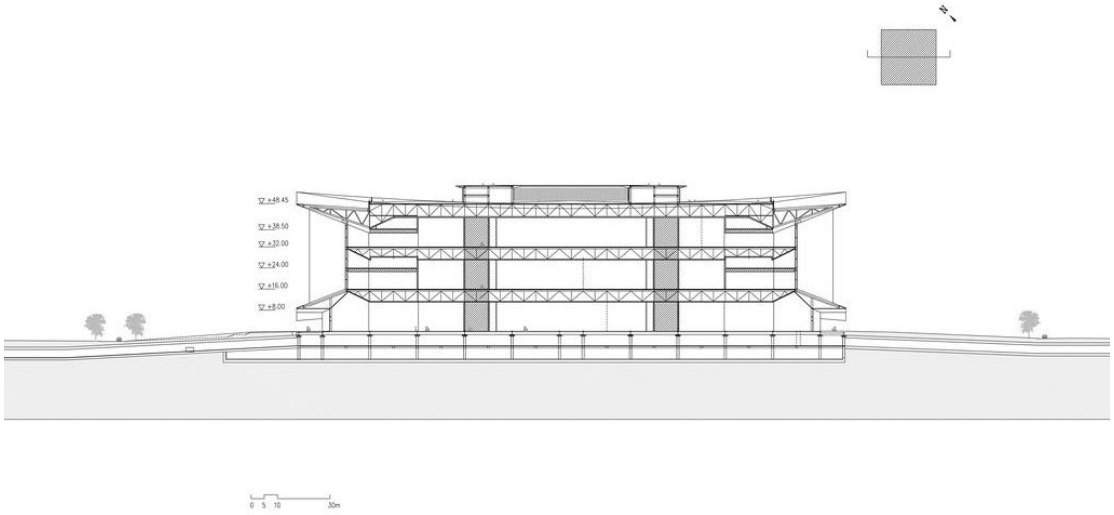
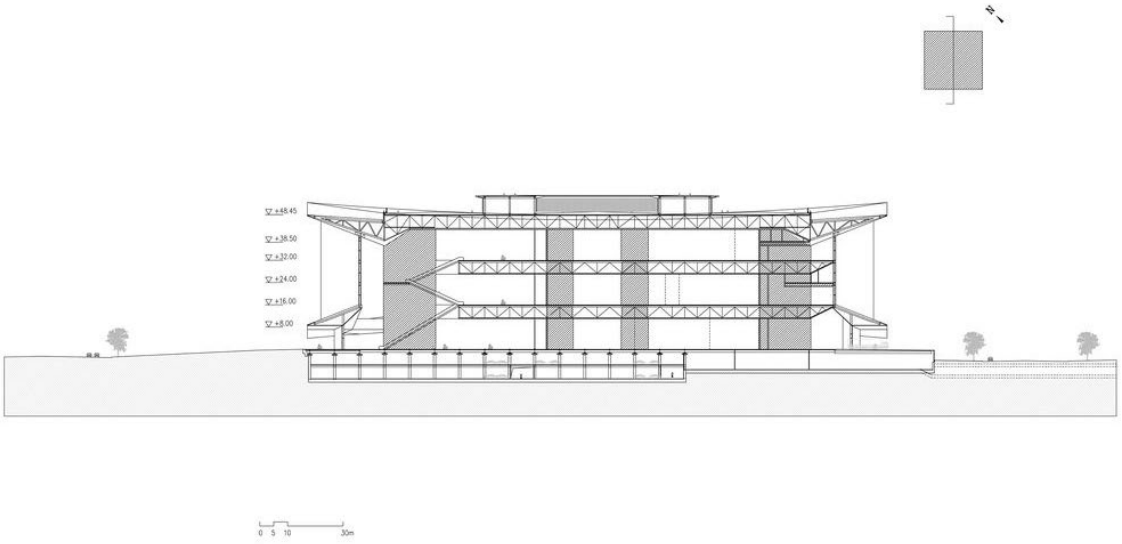


Figure 16 Section BB' of Xi’an Silk Road International Conference Center

(Source: https://www.gmp.de/images/3540_200109_Section_BB.jpg?w=1024)



3) Structure design analysis

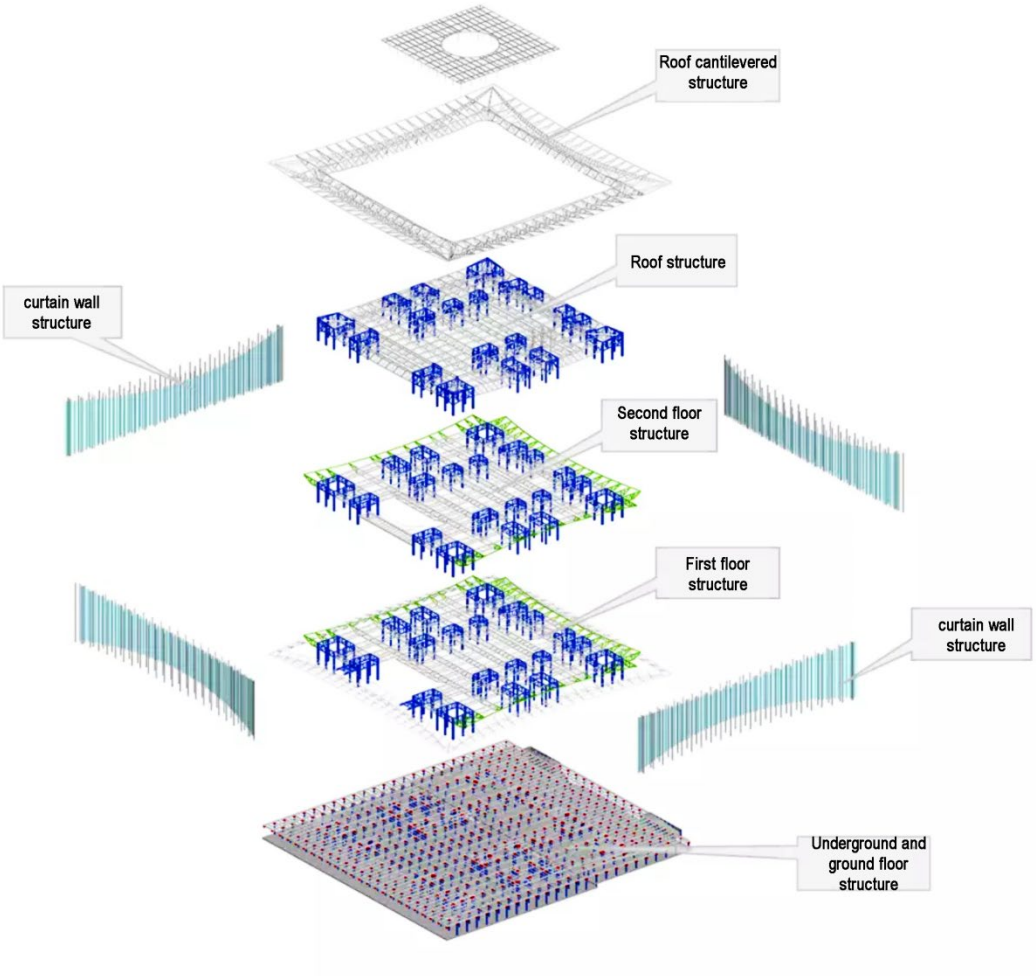
The structure of the conference center was a major challenge for this program. The first floor is composed entirely of glass curtain walls and the main body of the building is suspended. The structural requirements of such a building are extremely high, which is really a great challenge for the structural designers of the team. Due to the original requirement of column-free space in the main hall and each conference hall, the architect thought that why do not they go further and then proposed the concept of column-free public space for the whole building. Based on this space concept, the structural engineers proposed a giant steel frame structure system with 16 steel frame cores as columns and 4m~7m high giant orthogonal trusses as beams. The roof cantilever is 27m, and the maximum cantilever at the corner reaches 38m, while the outer enclosure curtain wall structures are all suspended under the roof cantilever (as shown in picture 17 & 18). Firstly, the architects determined the location of the core walls within the 9m axis network space by laying out the vertical traffic core and combining it with the structural engineers' control of the span. However, a problem was encountered when dealing with the south side glass curtain wall and the structure. If the south curtain wall was suspended from the structure in the traditional way, its supporting columns would destroy the space of the entrance hall and affect the sense of suspension of the whole building. Through continuous trial and error, the engineers finally came up with a solution: the south curtain wall was divided into two systems, the

upper and lower (as shown in picture 19) (Weiss & Su, 2020)[1].

Figure 17 Structure design of Xi'an Silk Road International Conference Center

(Source:

https://mmbiz.qpic.cn/mmbiz_png/xkuBXnj3PmrkFLrAONibicAO6Uqcgag8BibZzJtT40RkUHLBnDdKthuZuicN9gtCbBTlNGXyO2TzjLOqF6Pw971cyw/640?wx_fmt=png&tp=webp&wxfrom=5&wx_lazy=1&wx_co=1)



[1] Weiss, M., & Su, W. (2020). A Crescent above New Chang'an City_On the Design of Xi'an Silk Road International Conference Center. *ARCHITECTURAL JOURNAL*

Figure 18 Structure design of Xi'an Silk Road International Conference Center (base map from the website, analysis by author)

(Source: https://mmbiz.qpic.cn/mmbiz_png/xkuBXnj3PmrkFLrAONibicAO6Uqcgag8BibxJ82FOHOXmWUo410Qiaujrqw OG2Zj8aYzNE3cWBcw67lic5gUibbqdIicg/640?wx_fmt=png&tp=webp&wxfrom=5&wx_lazy=1&wx_co=1)

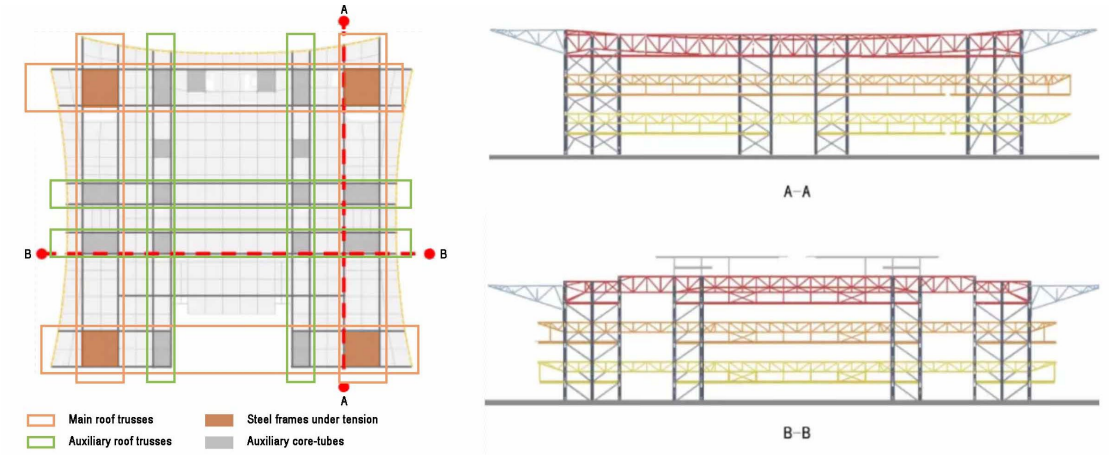
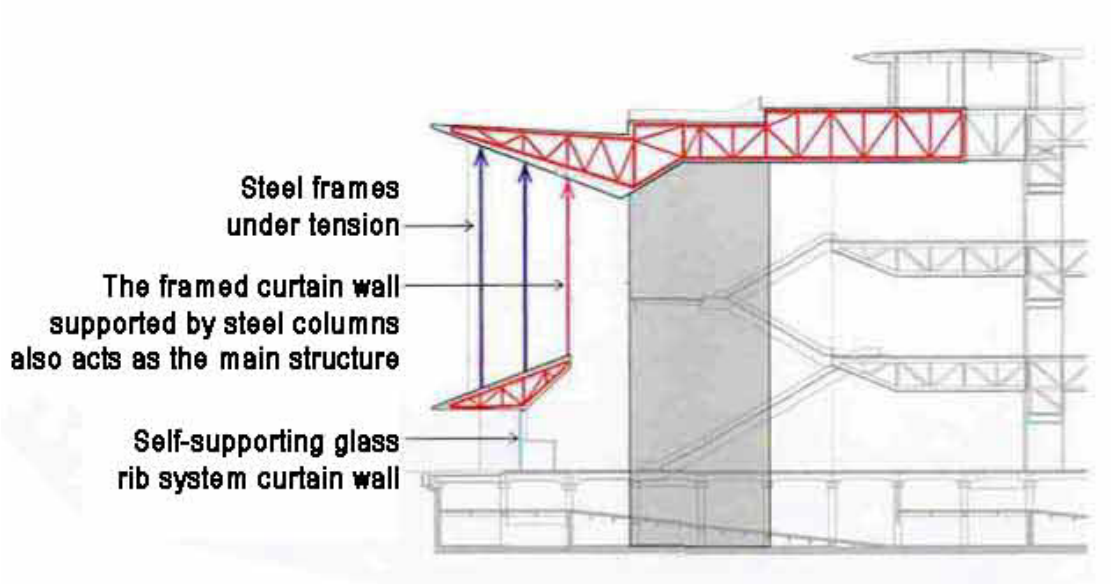


Figure 19 Curtain wall system concept

(Source: Retrieved from Weiss, M., & Su, W. (2020). A Crescent above New Chang'an City_On the Design of Xi'an Silk Road International Conference Center. *ARCHITECTURAL JOURNAL)*



1.4.2 Xi’an Silk Road International Exhibition Center

The Exhibition Center is located at the core of the entire complex, with a floor area of 910,000 square meters of which 164,000 square meters is above ground. As one of the important cornerstones of the development of the New Silk Road in Xi'an, the Exhibition Center has become a new landmark building in Xi'an with its unique architectural vocabulary interpreting the ancient city walls and urban fabric of Xi'an. (as shown in picture 21)

Figure 20 Technical data of Xi’an Silk Road International Exhibition Center

(Source: https://mp.weixin.qq.com/s/4-xAYDXWPgvzvokrhjjyCw)

Technical Data of Xi’an Silk Road International Exhibition Center	
Architect	gmp
Year:	2020
Location	Xi’an, Shanxi Province
Site Area	437,000 m²
GFA Above Ground (plan)	304.000 m²
GFA Under Ground (plan)	428,000 m²
GFA Above Ground (existing)	164,000 m²

Figure 21 Rendering of Xi'an Silk Road International Exhibition Center

(Source: https://www.gmp.de/images/3232_191218_DSCF_6081.jpg?w=1125)

1) Exterior design analysis

The project site is long from north to south and narrow from east to west, in the shape of a long strip. On the one hand, considering the large scale of this project requires a large area, on the other hand, in order to adapt to the topography of the site and facilitate the internal and external flow of the exhibition, finally the pavilions are lined up side by side in order, extending the long north-south. The building layout is arranged along the long north-south axis formed by green, symmetrical from east to west, which is the traditional Chinese layout. Two large entrance buildings are located at the north and south ends of the axis, which is fronted by a wide public square, and twelve exhibition halls will be arranged on both sides of the 900-meter-long axis (as shown in drawing

22). Visitors will enter the building foyer through an open public plaza. The first phase of the exhibition center, which has been completed, includes the south log-in hall and six exhibition halls (two exhibition halls and multi-purpose hall, four standard exhibition halls). In the second phase, the exhibition center complex will be expanded to the north, adding six new exhibition hall units along the main axis and supplementing with a large entrance building, doubling the overall exhibition hall scale (Souhu)[1].

The architectural appearance of the exhibition center is designed with a high degree of recognition. The exterior façade of the exhibition hall is made of natural stone, and the stone walls with a certain inclination adopt the formal language of the ancient city wall of Xi'an. In contrast to the solid base, the light and streamlined roof design, with undulating and cascading curved roofs, evokes the distant memory of the flowing sand dunes along the Silk Road. The loggia juts out above the exhibition hall in an imposing manner. The extra tall gate reproduces the cultural symbol of the city gate. The façade features a transparent glass curtain wall that allows visitors to locate the entrance from a distance. The staggered roofs gradually protrude from the interior to the exterior, supported by massive cross columns. The cross pillars are tapered and taper towards the top (as shown in drawing 23).

[1] Souhu. (n.d.). Attention! Qujiang Convention and Exhibition Center officially dismantled, Xi 'an International Conference and Exhibition Center take the baton! Retrieved from https://www.sohu.com/a/385228612_120411458.

Figure 22 Axis of Xi’an Silk Road International Exhibition Center (drawn by author)

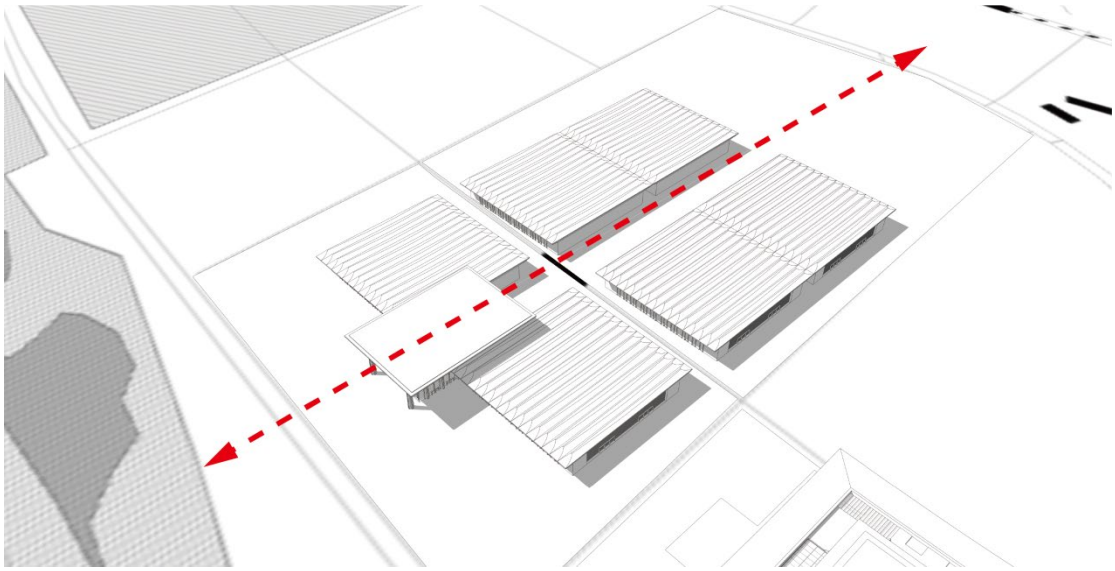
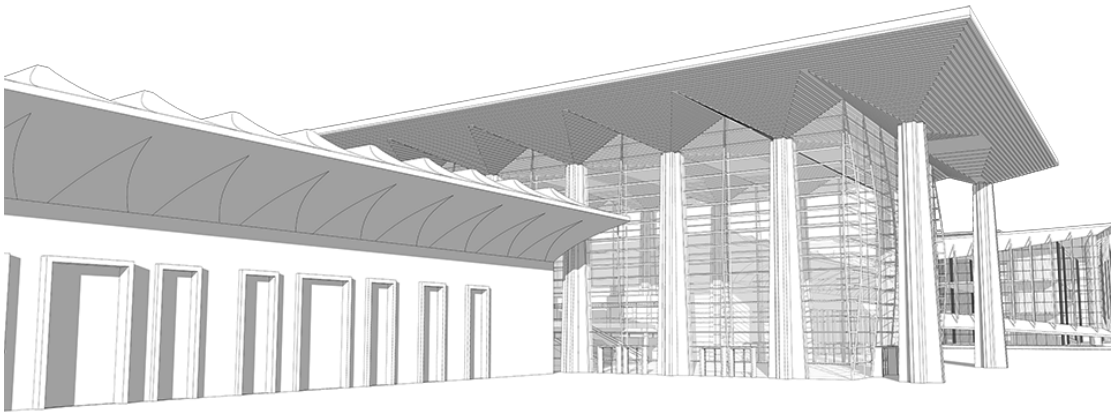


Figure 23 Design detail of Xi’an Silk Road International Exhibition Center (drawn by author)



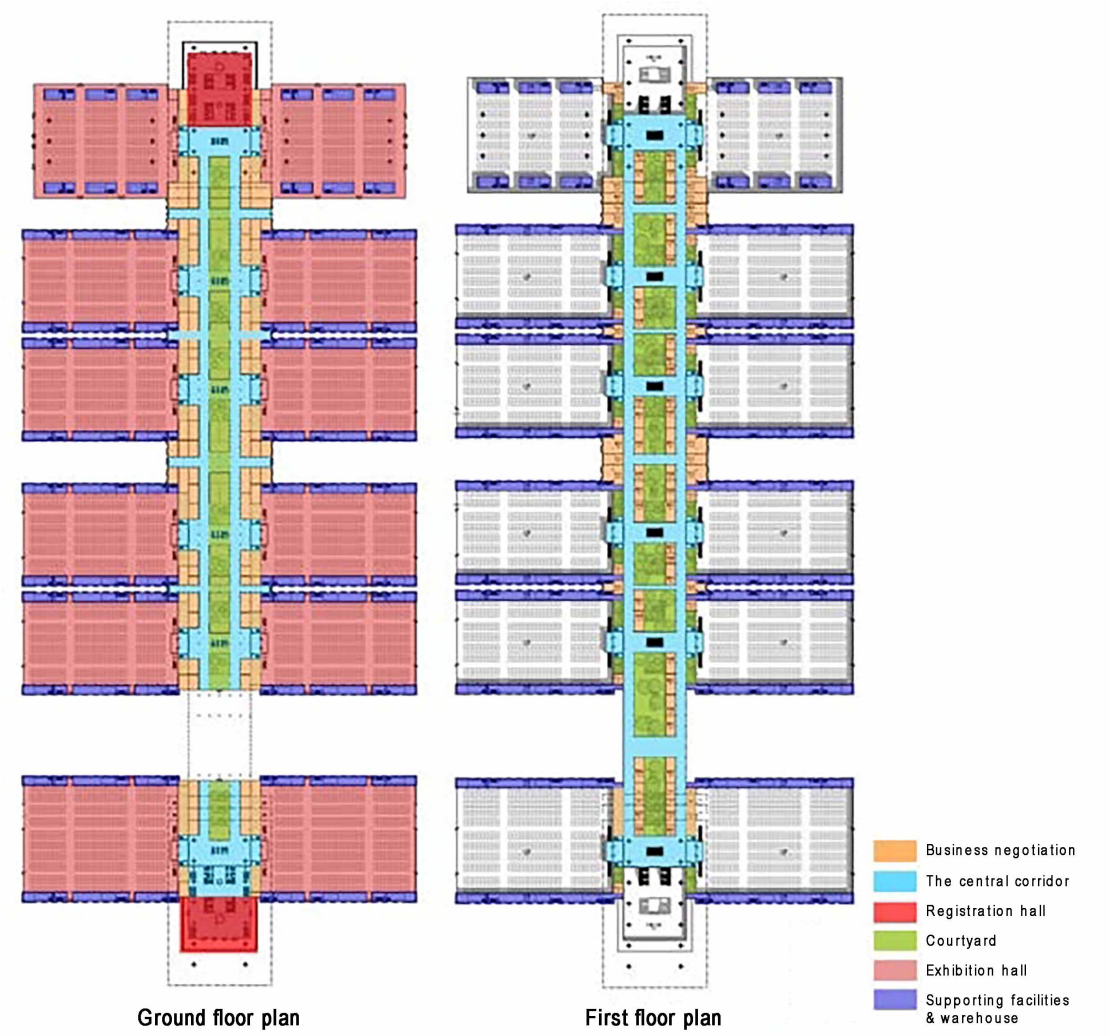
2) Interior design analysis

The exhibition center has two floors above ground. The first floor is the main functional area of the venue, mainly the exhibition hall, the landing hall and the central corridor, and these three functions constitute the main part of the building. Visitors enter the landing hall directly from the first floor. It is easy for the audiences who have the purpose for a particular exhibition hall to reach the target place quickly and avoid the long walking distance because of traffic flow's simplicity. In addition, small reception rooms and shops are arranged around the central corridor where near the entrance of the exhibition hall, which is convenient to use. On the premise of satisfying the function for using, considering that the north-south corridor of the building is too long, the corridor is divided into east and west with the exhibition hall, and the outdoor courtyard is enclosed in the middle where can use as public leisure space and fire fighting lane. The central corridor on the second floor serves as the main traffic hub between different exhibition halls. When there is a demand for quick access across the venue, the escalator on the first floor can be used to reach the central corridor on the second floor as a fast channel to each exhibition hall. Due to the special characteristics of the site, for ensuring the accessibility and safety of the corridor, the project is divided into two blocks by the municipal road in the middle. The second floor is mainly designed for stores, which are arranged on the east and west sides of the central corridor (as shown in

picture 24) (Ou, 2019)[1].

Figure 24 Plans of Xi'an Silk Road International Exhibition Center

(Source: Ou, y. (2019). Research on the design strategy of traffic space of contemporary exhibition buildings in China. Retrieved from https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202001&filename=1020803305.nh.)



[1] Ou, y. (2019). Research on the design strategy of traffic space of contemporary exhibition buildings in China. Retrieved from https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202001&filename=1020803305.nh.

1.5 Subjective Assessment

The completion of Xi'an Silk Road International Conference and Exhibition Center has accelerated the development of Xi'an's conference and exhibition industry. At the same time, the convention center provides opportunities for the development of Xi'an as one of the key strategic cities of the “Belt and Road”. The building complex provides a wider and more independent use of space, with only one function access to one space, which allows different activities of all parties to be carried out simultaneously and increases efficiency. In terms of the buildings that have been built, this complex has one blemish. Since Chanba district is a major financial development area that is located far from the city, the accessibility and the convenience of the complex are compromised by the lack of a hotel for those who come here for the conference and exhibition. This will reduce and slow down the value created by the complex to some extent. Secondly, the Chanba District does not have a corresponding hotel, and it relies on trade in many aspects of economic development. On this occasion, the addition of the new architecture that has been designed by gmp with the function of hotel within the complex would have a catalytic effect on the development of the Convention Center and the Chanba District in which it is located, and would even promote the development of the Xi'an Convention Industry and Silk Road-related industries.

2. Beijing Yanqi Lake International Conference Center & Hotel

2.1 Relationship between Beijing and BRI

As the political center, cultural center, international communication center, and science and technology innovation center of China, Beijing has always been concerned about what role it should play in the construction of "One Belt, One Road" beyond its own functions (People's Daily Online, 2020)[1]. In my point of view, Beijing plays its role as a leading goose in various fields using its unique resources. Beijing as a key strategic city along the Belt and Road has advantages in science and technology innovation resources, international contacts, capital, information and talents, which helps Beijing connecting internally to all relevant strategic cities in China and externally to important cities in countries along the Belt and Road. The development of Beijing in various fields of the Belt and Road will promote a speedy development of other cities and countries.

2.2 Relationship between Architecture and BRI

The "Belt and Road" Summit Meeting in 2017 and the APEC Summit Meeting in 2014

[1] People's Daily Online (PD Online). (2020). *Beijing's position in the "Belt and Road"*. Retrieved from https://baijiahao.baidu.com/s?id=1671687930513188260&wfr=spider&for=pc.

are the two world class events held in China in recent years, which also brought the Beijing Yanqi Lake International Conference to the world's attention. Beijing Yanqi Lake International Conference has served as a major venue for major summits meetings in the past decade which has helped to develop Beijing and China. The successful hosting of the Belt and Road Summit has expanded the influence of the Belt and Road Initiative and connected more countries and regions, playing an indispensable role in promoting the process of the Belt and Road Initiative. This also makes Beijing Yanqi Lake International Conference become one of the landmark buildings along the Belt and Road. This project is also an important initiative to enhance Beijing's status as a "world city".

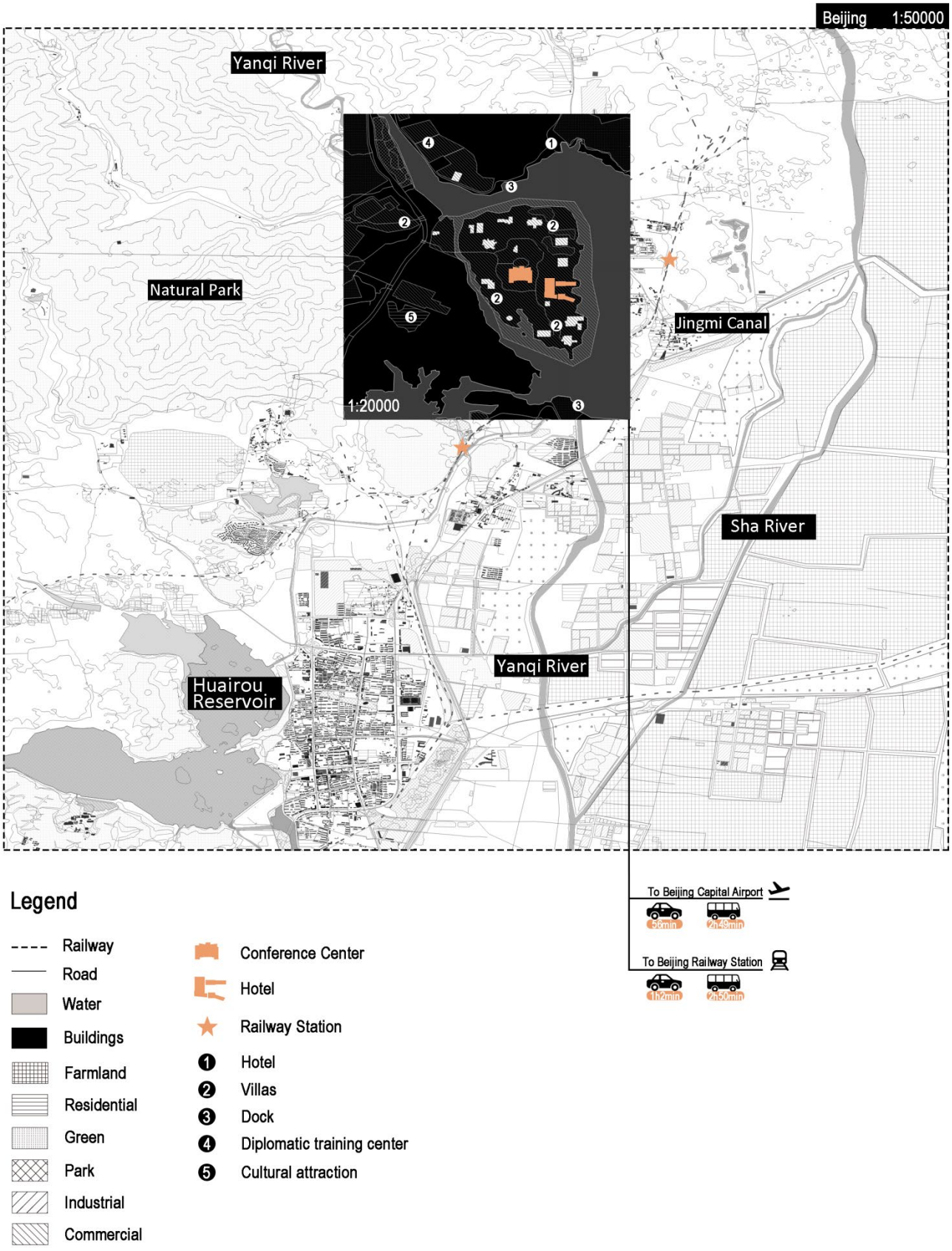
2.3 Reasons for Site Selection

As a national conference reception center, its location needs to consider various factors to ensure the successful hosting of important international conferences. Yanqi Lake International Conference and Hotel are located in Yanqi Peninsula, Huairou District, Beijing for the following two reasons. Firstly, it has fast traffic support and safety and security conditions. The site of the Conference and Hotel is about 30 minutes' drive from the capital airport and 40 minutes' drive from the central city, and it is close to the peninsula area liaison line, Beijing - Chengde Expressway and Beijing - Miyun Expressway, which is convenient for external contact (shown as drawing 25). The

topography and traffic liaison are also conducive to site closure and security. At the same time, it is located at the periphery of the centralized construction area of the city, which can effectively reduce the disturbance to the daily order of the Beijing city and reduce the traffic pressure during the meeting of the central city. This measure meets the basic requirements of the venue for international high-end conferences. Secondly, it has superior natural landscape and supporting facilities. Yanqi Lake is surrounded by mountains on three sides, with excellent ecological background, whose forest vegetation coverage of more than 85% (Zhang & Zhang, 2016)[1].It has an extensive water area with good water quality. The surrounding resources about culture and tourism are abundant. In terms of the natural landscape environment, conference reception base, and tourism service resources, the peninsula area is an ideal site for hosting international high-end conferences in Beijing. The excellent natural and human environment makes this area a perfect choice for high-end international conferences.

[1] Zhang, E., & Zhang, C. (2016). Touchmedia - Metamorphosis - Integration - APEC is not the end. Beijing Planning and Construction, pp. 147-152.

Figure 25 Map of Beijing Yanqi Lake (drawn by author)



2.4 About Architecture

The project's masterplan (shown as in picture 26) was designed by AECOM who decided to dredge the west side of Yanqi Peninsula to form a separate island to ensure privacy and enhance dignity, while creating a richer waterfront interface and the whole project covers 65,000 square meters. The planning and design concept is "to explore the harmonious symbiosis between architecture and nature, to inherit traditional culture and to create heirloom classic architecture to meet the needs of modern conferences" (DR Design & Research, 2014)[1]. Relying on the landscape features and ecological resources of the region and optimizing the visual connection between the site and the Great Wall to the west, AECOM has refined a cross-axis layout of the north hill and south shore, west into east: the main conference venue is located in the core area, the main ceremonial spaces are arranged along the north-south axis, forming a series of communication platforms integrated into with the natural texture, two natural landscape gardens are planned between the north and south sequences, and two waterfront nodes are created at the end of each axis according to the Chinese landscape camping technique (Zhang & Wang, 2015)[2]. The

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[1] DR Design & Research. (2014). *APEC State Guest Accommodation: Yanqi Lake International Huidu Boutique Hotel*. Retrieved from https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw.

[2] Zhang, A., & Wang, X. (2015). Yanqi Lake International Convention Center, Beijing. Landscape Architecture, pp.

boutique hotel is adjacent to the convention center, and the natural water bay around the eastern shore of the island is spaced out into a central water courtyard. The meandering lines of the island echo the axial layout, creating a rich and orderly sense of place and spatial experience, with the ring road around the core venue as the active line and creating a landscape inner corridor, and linking the core area and surrounding buildings (Zhang & Wang, 2015)[1].

38-47.

Figure 26　Masterplan of Yanqi Island

(Source: Retrieved from: Zhang, A., & Wang, X. (2015). Yanqi Lake International Convention Center, Beijing. *Landscape Architecture*, pp. 38-47)

2.4.1 Beijing Yanqi Lake International Conference Center

As a national conference reception center, the Yanqi Lake International Conference is a profound proposition to convey China's new vision of modern international and future world to the world through the planning and design of the building and the reception space with Chinese culture as a carrier. This project is designed by the other company named BIAD which is not included in AECOM’s design. The main architect Liu Fanglei gave his own unique insight into the design: the architectural style emphasizes the "Chinese traditional but new" style characteristics, the communication of the oriental aesthetic mood, and the characteristics of the times. The design of the conference center should show the awakening and tribute to the local culture, reflect a new perspective on the traditional Chinese culture, and reflect the nirvana of the traditional culture, and at the same time is the appropriate response to the characteristics of the times of industrial and information civilization (Pan & Yang, 2015)[1]. It is reported that the designer often goes to see the corners of various ancient buildings to figure out the cultural symbols to have the inspiration for creating. Finally he came up with the concept of “like swan goose spreading its wings, Inheriting and carrying forward the upturned eaves of Chinese traditional architectural culture in Han and Tang dynasties” for this design.

[1] Pan, Q., & Yang, X. (2015). High integration of tradition and modernity--An appreciation of the planning and consulting design concept of APEC site project in Yanqi Lake, Beijing. China. Engineering Consulting, pp. 6-9.

1) Exterior design analysis

This conference center is located in the center of Yanqi Island and consists of the main building and annexes on the east and west sides. The square origami (shown as in picture 28) is used to develop the concept for the overall layout design which has a simple logic and contributes to a clear structure. (Pan & Yang, 2015)[1]. As a significant component of traditional Chinese architecture, the eaves are also the most characteristic component of the building. Taking the corner of the traditional Chinese eaves as the mother theme, and blending the traditional Chinese building construction technique of "upturned eaves", which originated in the Han Dynasty and reached its peak in the Tang Dynasty, is extracted and simplified to form cornices (shown as picture 29), and the modern construction techniques are used, which all together make the whole building embody the grand atmosphere and classical beauty of traditional Chinese architecture, but also reflect the contemporary characteristics of modern Chinese architecture.

The natural topography of Yanqi Island is low in the south and high in the north, and there is a 6m height difference between the north and south of the site where the conference center is located. Because of this, the architects combined the form of mountain architecture and broke the pattern of traditional Chinese architecture. The north side of the building is laid into the earth, which not only reduces the amount of

earthwork and respects the ecology, but also makes the façades and the functional layout plan of the building more abundant. The building also looks like it is growing out of the ground. This initiative allows both the north and south sides to become the main entrance and gives a different feeling. The north side is designed as the main entrance to match the site, integrating the traditional porch and modern glass curtain wall to appear simple, generous, and light, giving the impression that the building is winging (as shown in picture 30). The south side as the main entrance of the monolithic building is equipped with a central symmetrical entrance plaza, adopting a traditional three-part façade pattern. The lower level is the rocky base, the middle level is the space for living supported by columns, and the upper level is the cornices roof. This design reflects the solemn grandeur and elegance of traditional Chinese architecture (as shown in picture 31).

Figure 27 Technical data of Yanqi Lake Conference Center

(Source: http://www.biad.com.cn/projectpost.php?id=222)

Technical Data of Yanqi Lake Conference Center	
Architect	BIAD
Year:	2013
Location	Beijing
GFA	44.000 m^2

Figure 28 Design concept of Yanqi Lake Conference Center: Origami

(Source: Retrieved from http://blog.sina.com.cn/s/blog_5ffe30210102v5xs.html)

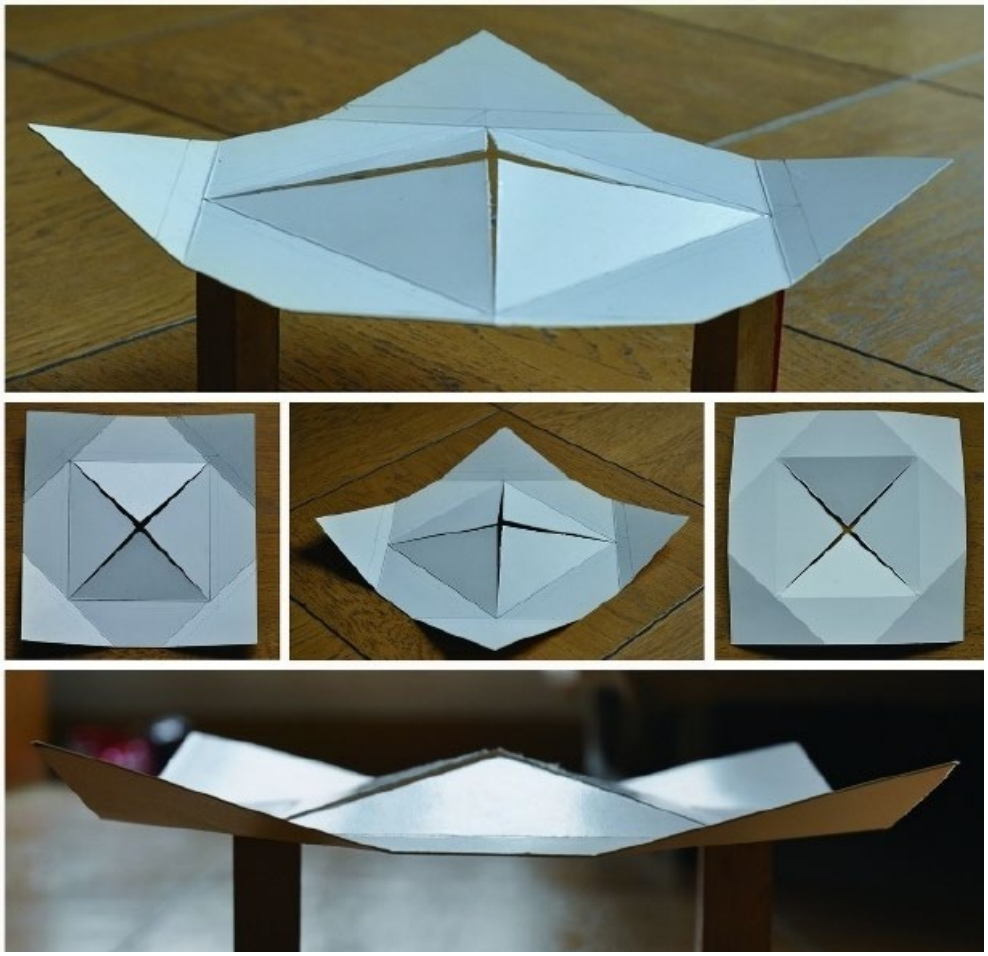

Figure 29 Model of cornices concept of Yanqi Lake Conference Center

(Source: Retrieved from: Liu, F. (2017). Yanqi Lake International Conference Center, Beijing, China. *World Architecture*, pp. 128-129.)

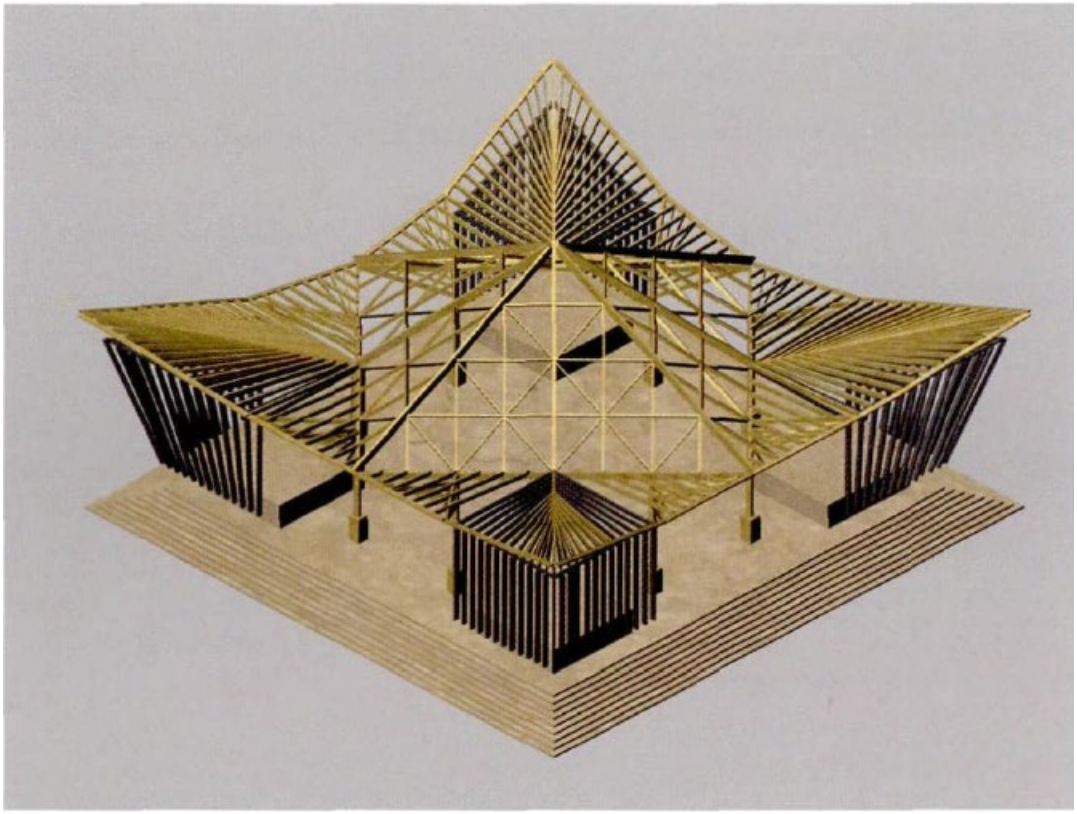

Figure 30 North façade of Yanqi Lake Conference Center

(Source: Retrieved from: Liu, F. (2017). Yanqi Lake International Conference Center, Beijing, China. *World Architecture*, pp. 128-129.)

Figure 31 South façade of Yanqi Lake Conference Center

(Source: Photo by Xinhua News Agency)

2) Interior design analysis

The plan is based on Chinese traditional tern "Jiugongge" which is a nine-square layout meaning multiple symbiosis harmoniously. Inspired by the Temple of Haven and the Forbidden City, the layout of the project emphasizes Chinese national ritual (Liu F. , 2017)[1].

[1] Liu, F. (2017). Yanqi Lake International Conference Center, Beijing, China. *World Architecture*, pp. 128-129.

2.4.2 Beijing Yanqi Lake Hotel

As the most important reception space on the Yanqi island, Yanqi Hotel enjoys the best view of the lake. It is a difficult test for the architects to design a lake-view building which could dialogue with nature, without destroying it and making use of it to form a unique architectural landscape. The perfect view is also a gift for architects to do this design.

1) Exterior design analysis

The site of Yanqi hotel is on the eastern shore of the lake, and the designer designed the hotel as a u-shaped building facing Yanqi Lake to the east of Yanqi Island (as shown in picture 32 & 33). Using the original natural water bay on the east side, which is extended into the island to form a courtyard-like water system, inheriting Chinese ancient traditional architectural thought of "the front of the building is a water system as a mask and the rear is a mountain system as a backer". A boat dock is formed at the eastern end of the site to provide a new sensation for the whole island. The layout adopts the courtyard enclosure style. Taking advantage of the difference in height between the east and west sites (as shown in picture 34), dividing the entire u-shaped building into seven parts, connected by a corridor in the middle to weaken the sense of oppression of the building on the lake, so that the building group presents both scattered and relatively concentrated, with an order in the staggered form, reflecting the essence

of the layout of the traditional Chinese courtyard from space (DR Design & Research, 2014)[1]. All the buildings are two to three stories so that the buildings can be hidden among the tall vegetation and live in harmony with nature.

The main entrance on the west side of the hotel adopts and improves the traditional Chinese architectural "baosha" in which back adopts a wooden openwork façade treatment with a traditional Chinese sloping roof (as shown in picture 35), reflecting the temperament of traditional Chinese architecture. The designer embraced the treasures of both tradition and modernity when they design the facade design of the hotel. The public space uses glass facades with a strong sense of permeability, and the guest room area is designed with a reasonable combination of glass and stone curtain wall by unit, which meets the landscape requirements and ensures the privacy of the guest rooms (DR Design & Research, 2014)[2]. Guests will have an excellent experience of staying in the hotel (as shown in picture 36).

[1] DR Design & Research. (2014). *APEC State Guest Accommodation: Yanqi Lake International Huidu Boutique Hotel*. Retrieved from https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw.

[2] DR Design & Research. (2014). *APEC State Guest Accommodation: Yanqi Lake International Huidu Boutique Hotel*. Retrieved from https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw.

Figure 32 Masterplan of Beijing Yanqi Hotel

(Source: : https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw)

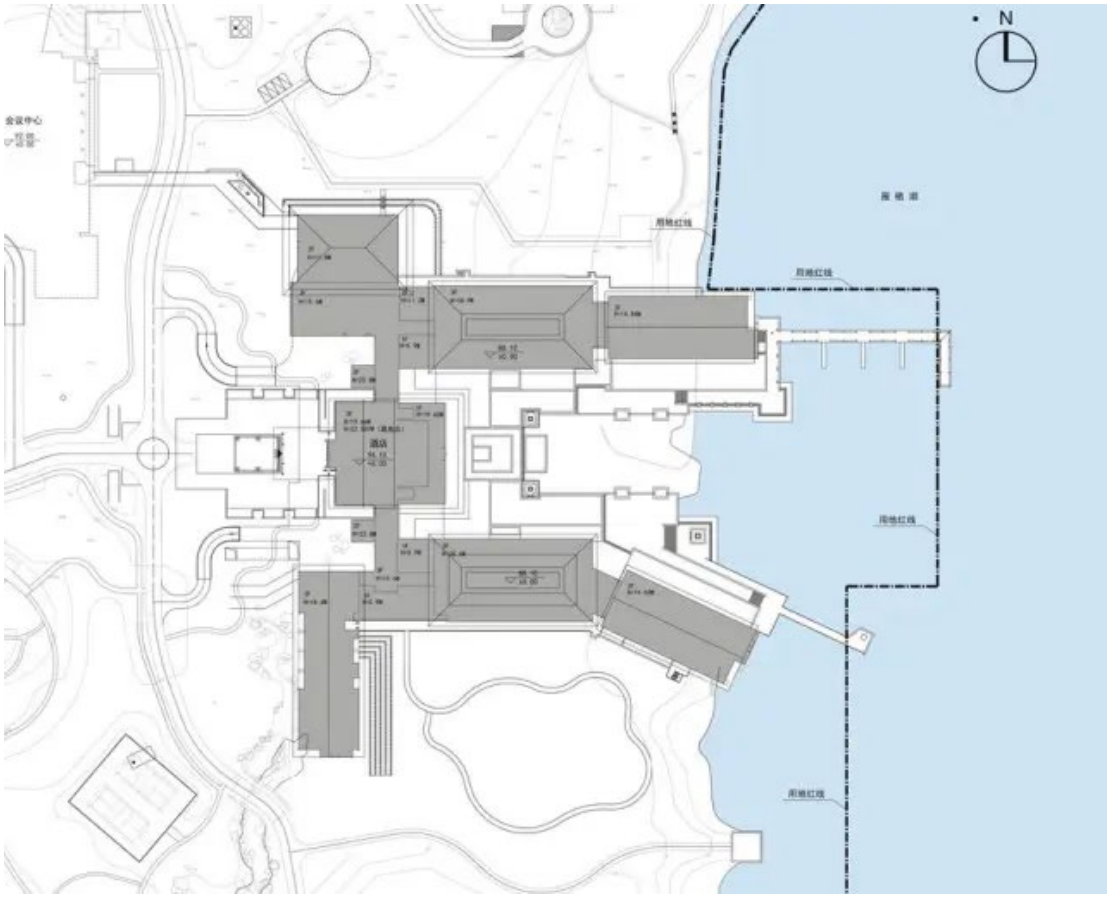

Figure 33 Bird's eye view rendering of Beijing Yanqi Hotel

(Source: Retrieved from: Zhong, B. (2015). Global Context Local Thinking - Design of Beijing Yanqi Lake International Capital Core Island (APEC Site). *Urban Housing*, pp. 51-63.)

Figure 34 Section of Beijing Yanqi Hotel

(Source: Retrieved from: https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw.)

Figure 35 The main entrance of Beijing Yanqi Hotel

(Source: Retrieved from: https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw

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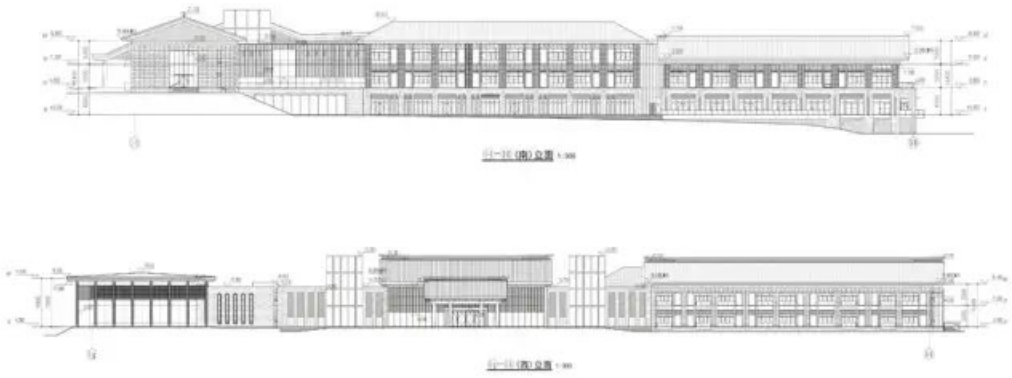
Figure 36 South & West facades of Beijing Yanqi Hotel

(Source: Retrieved from: https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw)



2) Interior design analysis

The hotel has three floors above ground and one underground, with a total construction area of 43,126 square meters, including 34,550 square meters above ground and 8,576 square meters underground. It consists of four parts: public area,

guest room area, parking garage, and logistics. There are 108 guest rooms, including two presidential suites and two barrier-free rooms. The hotel makes full use of the advantage of the U-shaped water bay on the eastern shore of the peninsula by combining the units in such a way that the courtyard unfolds towards the lake so that all rooms have a good view of the lake while retaining a certain level of privacy (DR Design & Research, 2014)[1].

Figure 37 Technical data of Beijing Yanqi Hotel

(Source:

https://card.weibo.com/article/h5/s#cid=1001603777106709478151&vid=0&extparam=&from=1110005030&wm

=&ip=10.168.255.168)

Technical Data data of Beijing Yanqi Hotel	
Architect	AECOM
Year:	2013
Location	Beijing
GFA	43,126 m²
GFA Above Ground	34,550 m²
GFA Under Ground	8,576 m²

[1] DR Design & Research. (2014). *APEC State Guest Accommodation: Yanqi Lake International Huidu Boutique Hotel*. Retrieved from https://mp.weixin.qq.com/s/gjiwopCCnIsGlmd_EGwPGw.

Figure 38 First floor plan of Beijing Yanqi Hotel

(Source: Retrieved from Zhong, B. (2015). Global Context Local Thinking - Design of Beijing Yanqi Lake International Capital Core Island (APEC Site). *Urban Housing*, pp. 51-63.)

2.5 Subjective Assessment

Beijing, as the capital of China and the core of the country's political, economic, and cultural development, has played a leading role in the Belt and Road Initiative. As the main venue of the Belt and Road Summit, Yanqi Conference Center has witnessed the growth of the Belt and Road Initiative. The Yanqi Conference Center and the boutique hotel are not only to help the development of the Belt and Road but also to transmit the Chinese culture to the world in the process while the development of the Belt and

Road Initiative is based on the spread of culture.

The general layout of Yanqi Island, the landscape design, and the exterior design of the buildings are very characteristic of ancient Chinese royal gardens and have inherited the architectural language of traditional Chinese architecture to some extent. Buildings are arranged around the main building on the central axis, and they are symmetrical with the central axis as the baseline. The design of the main building, the Conference Center, best reflects the traditional Chinese architectural vocabulary. It also draws on and utilizes the expressive language and techniques of modern architecture, makes full use of the existing excellent natural landscape conditions of Yanqi Lake, and creates a garden landscape based on full respect for nature, making the greening rate as high as 65% and the architecture are integrated into the landscape. The conference center is built on a separate island from the boutique hotel to provide convenience and privacy for attendees, which also guarantees the success of national conferences.

If there was only a conference center on Yanqi Island, I guess Yanqi Island would not be the venue for the Belt and Road Summit, nor would it host so many important national conferences and meetings. In my point of view, if the conference center, exhibition center, and other important exhibition buildings can be planned together with the hotel buildings, it will bring more far-reaching influence than the separate exhibition buildings, both economically and culturally. The overall design of Yanqi

Island confirms this view.

3. Lianyungang International Industrial Exhibition Center

3.1 Relationship between Lianyungang and BRI

Lianyungang is a famous seaport tourist city on the coast of the Yellow Sea in China, located in Jiangsu Province on the eastern coast of China and it is the largest port city in Jiangsu Province, as well as a major industrial and commercial seaport on the east coast of China. Lianyungang is in an important strategic location that connects to the Yangtze River Delta in the south, Bohai Bay in the north, Japan and Korea in the east, and Central Asia, West Asia, and Europe in the west through the New Asia-Europe Continental Bridge as a bridgehead. Lianyungang is in the intersection of the Silk Road Economic Belt and the 21st Century Maritime Silk Road, is connected to the new Asia-Europe Continental Bridge Industrial Belt / Asia-Pacific Economic Circle, the Bohai Sea Economic Circle and the Yangtze River Delta Economic Circle crossroads (Yang, 2014)[1]. This makes Lianyungang become a core and pioneer area of the "Belt and Road" intersection. At the same time, Lianyungang is also the logistics transit base of China and Kazakhstan and the SCO sea base.

The Belt and Road Initiative has brought new development opportunities to Lianyungang, and the flourishing development of Lianyungang has helped the Belt

[1] Yang, J. (2014). Lianyungang: Play a unique advantage in the "One Belt, One Road" strategy. *Macroeconomic Management*, pp. 83-84

and Road to promote its economic and cultural prosperity.

3.2 Relationship between Architecture and BRI

In 2013, the Jiangsu Provincial Government and Lianyungang Municipal Government responded to the Belt and Road policy to develop many key projects, Lianyungang International Industrial Exhibition Center is one of them. 2017 completed the annual China (Lianyungang) Silk Road International Logistics Expo are all held in Lianyungang International Industrial Exhibition Center. Lianyungang Silk Road International Logistics Expo, to promote the expansion of Jiangsu's opening to the outside world, accelerate the construction of the New Asia-Europe Continental Bridge economic corridor, and promote the "Belt and Road" along the countries and regions to deepen cooperation and high-quality development, has a very important significance. It builds more effective platforms for Chinese and foreign enterprises, creates more opportunities for trade and investment cooperation, and makes positive contributions to the win-win cooperation between China and other countries and the prosperity of the world economy (Zhong & Xu, 2016)[1]. Lianyungang International Industry Exhibition Center, as one of the three major exhibition centers in Jiangsu

[1] Zhong, Q., & Xu, R. (2016). Opening of the Sixth China (Lianyungang) Silk Road International Logistics Expo. *Continental Bridge Vision*, pp. 16-19.

Province, is also a modern international exhibition center with large scale, the most advanced functions and facilities in Jiangsu Province, and will host more large-scale exhibitions to promote the development of Lianyungang in the Belt and Road extension.

3.3 Reasons for Site Selection

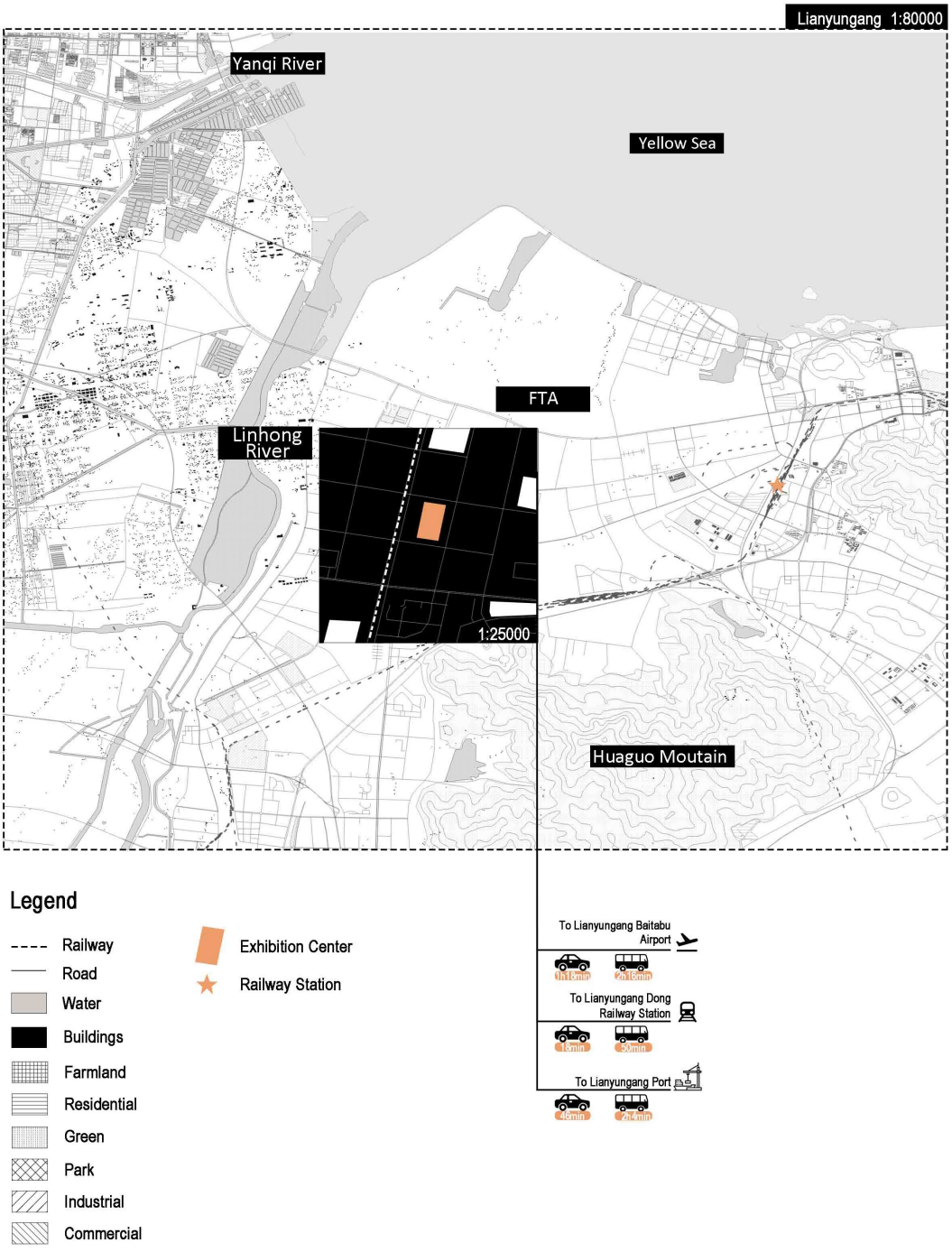
The site of Lianyungang International Industrial Exhibition Center is in Lianyun District, which is included in China (Jiangsu) Pilot Free Trade Zone. Compared with other open coastal cities, Lianyungang's total open economy is low, the overall scale of international trade in services is small, and the scale of overseas investment and the level of industrial utilization of foreign investment are to be improved. The FTZ is a product of economic globalization and expansion of opening up to the outside world, which represents a higher level of open economies. By virtue of Lianyungang's unique location advantage and comprehensive transportation network with access to the sea, the FTZ can dovetail with the "Belt and Road" and the international logistics corridor of the New Asia-Europe Continental Bridge, forming a two-way east-west, land and sea linkage pattern, thus promoting Lianyungang to establish closer economic ties with important international regions and hub cities (Wang T. , 2019)[1].

[1] Wang, T. (2019). Based on the free trade zone, relying on the continental bridge to promote the construction of Lianyungang's pivot point in the Belt and Road. *Continental Bridge Vision*, pp. 37-39.

The establishment of Lianyungang International Industrial Exhibition Center here is conducive to making full use of and amplifying the role and influence of the FTA, showcasing Lianyungang's advantageous projects externally to attract investment and providing more opportunities internally.

Lianyungang International Industrial Exhibition Center is located on the east side of Huaguoshan Avenue (the main road of the development zone) on where the south side of Yantuo West Road, adjacent to the beautiful Cao Wei River. And the surrounding areas of this project are to be developed. The new high-speed railway station called Lianyungang Dong has been built to the east of this project also provides better conditions for the development of the exhibition center.

Figure 39 Map of Lianyungang (drawn by author)



3.4 About Architecture

The scheme designed by architects von Gerkan, Marg, and Partners (gmp) won the bid in the international design competition held in 2013 and the building was completed in 2017. The building consists of four 200m × 320m exhibition halls enclosing a centrally located conference center. It covers 152,937 square meters, with an above-ground construction area of 77,418 square meters and an underground construction area of 11,179 square meters. The vertical stripe texture on the curtain wall (as shown in picture 41), which is based on the barcode of commodity identification, is a symbol of industrial production and trade logistics. It is also a distinctive feature of the exhibition center and distinguishes it from other types of exhibition centers.

Figure 40 Technical data of Lianyungang International Industrial Exhibition Center

(Source: https://www.gmp.de/cn/projects/675/industrial-exhibition-center-lianyungang)

Technical Data of Lianyungang International Industrial Exhibition Center	
Architect	AECOM
Year:	2017
Location	Lianyungang, Jiangsu Province
GFA Above Ground	77,418 m²,
GFA Under Ground	11,179 m²

1) Exterior design analysis

The exhibition center facing Huaguoshan Avenue, and the main entrance is on the east side of the building facing the main road. The main entrance and the west entrance are both inwardly retreating terraced, by which are recognizable in the building structure using the "Dougong" principle of traditional Chinese roof construction for reference, presenting an open and welcoming posture (gmp, 2017)[1] (shown as in picture 42). It is reported that the Lianyungang government will build a light rail station and a new bus station on Huaguoshan Avenue, which will bring more traffic to the exhibition center. The front side of the building has a wide entrance plaza with water features, which could be used to hold various open-air events and exhibitions.

The facade of the exhibition center adopts light-colored granite stone panels, and the surface texture of the closed part of the curtain wall is carved through vertical joints, using stone panels of different widths and curtain walls of varying widths to create a facade texture similar to a barcode.

2) Interior design analysis

The entrance hall, which runs through the entire building, connects the four exhibition

[1] gmp. (2017). LIANYUNGANG DEVELOPMENT ZONE INDUSTRIAL EXHIBITION CENTER, CHINA. *URBANISM AND ARCHITECTURE*, pp. 86-93.

halls most conveniently. The entrance hall has two levels, with the conference center on the east and west sides of the second level, and is connected to the other spaces by the second level platform in the middle (as shown in picture 43 & 44). The exhibition halls, on the other hand, have only one floor due to the need for sufficient height and are at the same height as the entrance hall in the middle (as shown in picture 45).

Figure 41 External View of Lianyungang International Industrial Exhibition Center

(Source: https://www.gmp.de/cn/projects/675/industrial-exhibition-center-lianyungang)

Figure 42 Entrance of Lianyungang International Industrial Exhibition Center with an inviting architectural gesture

(Source: https://www.gmp.de/cn/projects/675/industrial-exhibition-center-lianyungang)

Figure 43 Ground floor plan of Lianyungang International Industrial Exhibition Center

(Source:

https://oss.gooood.cn/uploads/2017/01/9-Completion-of-Lianyungang-Industrial-Exhibition-Center-by-gmp-960x612.jpg)

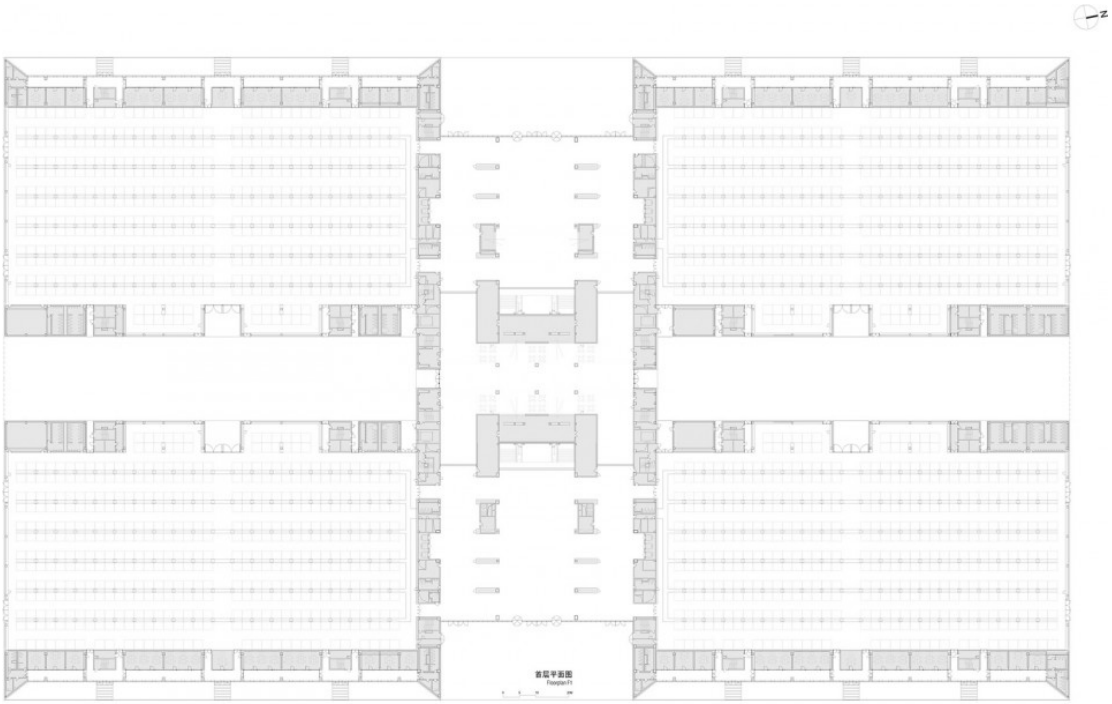


Figure 44 Second floor plan of Lianyungang International Industrial Exhibition Center

(Source:

https://oss.gooood.cn/uploads/2017/01/10-Completion-of-Lianyungang-Industrial-Exhibition-Center-by-gmp-960x581.jpg)

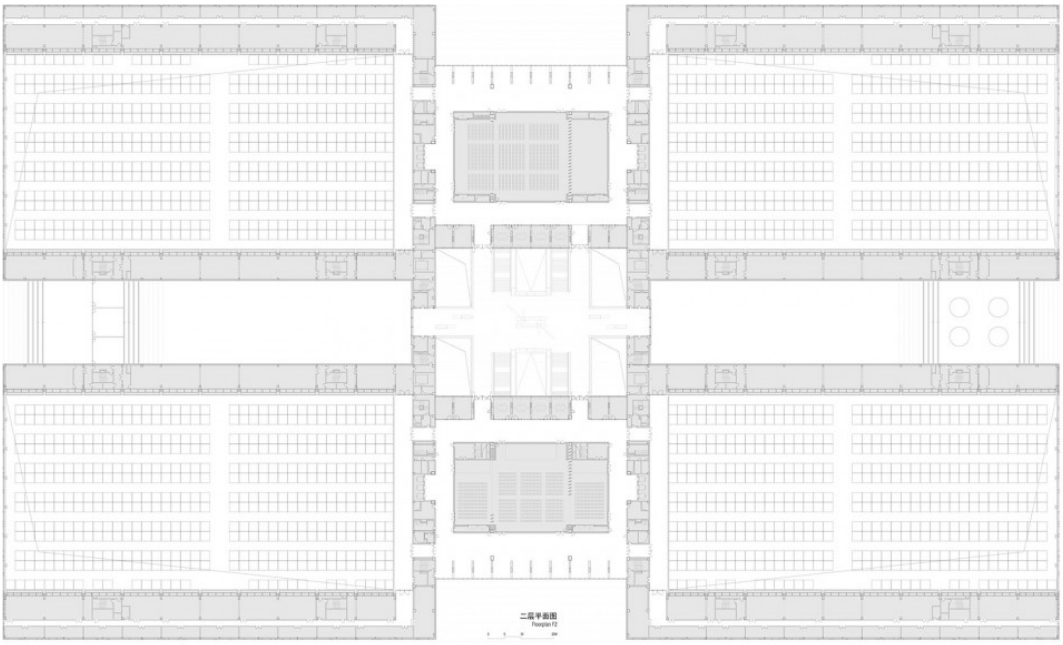
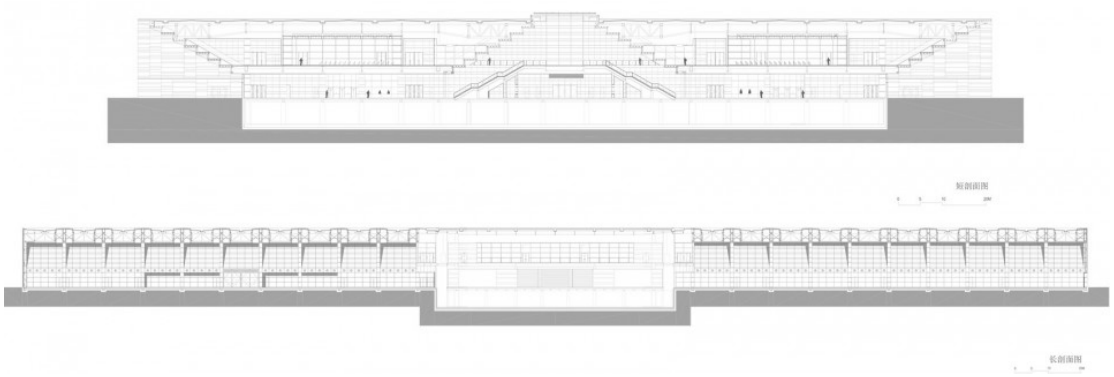


Figure 45 Sections of Lianyungang International Industrial Exhibition Center

(Source:

https://oss.gooood.cn/uploads/2017/01/11-Completion-of-Lianyungang-Industrial-Exhibition-Center-by-gmp-960x

323.jpg)



3.5 Subjective Assessment

The construction and development of Lianyungang International Industrial Exhibition Center is a testimony to the vigorous development of Lianyungang City under the Belt and Road Policy. The construction background and location of the exhibition center have unique advantages. It is located in the Free Trade Zone and a key development area for coastal industry and commerce, in which conferences, exhibitions, and events related to the Belt and Road are held. All these have promoted the prosperity of the exhibition center. The development of the exhibition center bears the burden and expectation of the development of the Belt and Road, and it also

contributes an irreplaceable role for Lianyungang City as the bridgehead of the Belt and Road, connecting the Maritime Silk Road and Land Silk Road. However, Lianyungang Industrial Exhibition Center, as a single building, is located in an area with a large area of undeveloped land, which has great development defects. Without the support of related industries, it cannot win the greatest economic development benefits by attracting and stabilizing the passenger flow only by itself, which is also an important factor hindering its drive for the development of related industries and the economy of the Belt and Road. Of course, there are still great potential opportunities for the development of the exhibition center, and it is believed that the complete and perfect construction of the future free trade zone will provide greater possibilities for it.

Chapter 4 Conclusion

Since the Belt and Road Initiative was proposed, cities along the Belt and Road have been developed to different degrees, accelerating the process of urban modernization and promoting the economic development and cultural dissemination of the cities.

The Beijing Yanqi Lake International Conference complex is a leading event in China's exhibition industry with its unique location and complete support services and facilities. it is leading the rapid development of China's exhibition industry along the Belt and Road. In the past decade, the development of the Yanqi Lake International Conference has had a positive impact on the political, economic, and cultural development of Beijing. Xi'an, as the city with the most historical background along the Belt and Road, is a window open to the outside world for strengthening and expanding communication between the East and West. The development of the convention and exhibition industry has provided important support for its role as a 'window open to the outside world'. The design and planning of the Xi'an Silk Road International Convention Centre complex tread on the heels of Beijing's convention and exhibition industry design, which is expected to make Xi'an an international metropolis with the same political, cultural, and economic influence as Beijing alone the Belt and Road. Lianyungang has a predominant geographical advantage, but the development of the exhibition industry is still at an early stage. If the free trade zone

where the exhibition center is located flourishes and drives the development of the exhibition industry, it will have a profound impact on the development of Lianyungang as a bridgehead.

Looking at the development of the Belt and Road Initiative in the theoretical context of planetary urbanization, the Belt and Road Initiative has become a ribbon connecting the huge "city" in the region of the world. The development of three different types of convention buildings belonging to the Super Gathering Places family in Xi'an, Beijing, and Lianyungang, as communication tools linking the huge 'city', is also strong evidence out of the ordinary and assertive support for the prosperity and development of these three cities as 'nodes'. The prosperous development of exhibition and conference architectures have expanded the influence of the Belt and Road Initiative and brought more development opportunities to cities. Different types of exhibition conference architectures play a role in promoting the development and dissemination of urban politics, economy, and culture to different degrees, and also promote the implementation of the Belt and Road Initiative. At the same time, the Belt and Road Initiative also promotes the prosperity of Super Gathering Places.

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