

The Building of a Chinese Model New Town: Case Study of the Suzhou Industrial Park

China has been undergoing rapid urbanization in the last three decades, with the percentage of urban population surging from 20.4% in 1982 to 52.6% in 2013. The trend continues with more than sixteen million rural residents move to urban area each year in what geographer David Harvey regards as ‘the largest mass migration the world has ever seen.’¹

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The massive urbanization has resulted in unprecedented construction boom and generated numerous new towns across the country. At the beginning of the twenty-first century, Chinese government announced that they would build 20 new cities each year in the next 20 years; therefore approximately 400 new cities would emerge by 2020.² These ambitious new town projects were not only created to house the swelling population, but also to sustain economic growth in the major cities they serve. Recognizing its enormous impact on Chinese society both in terms of challenge and opportunity, Premier Keqiang Li highlighted ‘urbanization’ as the keyword of economic restructuring in his political agenda after he took the post in 2013, calling for a more sustainable approach to the country’s mass urbanization to create new venues for jobs, consumptions, and investments, to balance mega-cities with small towns, and to correct economic disequilibrium between coastal and inland regions.

The pursuit of a sustainable path of urbanization in China has actually accompanied the growth of urban population in the last two decades. Since the 1990s, the central and local governments in China have created a number of high-profiled model city projects, using them as experiments of urban planning and development as well as stimuli of economic growth and transformation, hoping they would generate duplicable experience for the rest of the country. The Suzhou Industrial Park was one of the early and successful comprehensive new town projects. It provides a remarkable example of how urban planning and design can trigger economic engine and transform a sleepy tourist destination into an economic juggernaut.

This paper will trace the development of SIP since its inauguration in 1994. Through analyzing the urban design and development strategies of this modern new town, the case study will cut a cross-section of the ongoing massive new town movement in China and examine the role of planning in urban



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THE CREATION OF SIP

The SIP started as top-level inter-governmental collaboration between China and Singapore. Such partnership was not only built on an economic foundation, but also based on a presumed cultural affinity as the majority of Singaporean residents are Chinese immigrants or descendants. Chinese government admired Singapore government's national economic development strategies and tried to imitate them. When he visited Shenzhen in 1992, Deng Xiaoping, the retired paramount leader of China Communist Party, famously said 'We can inspire ourselves using the Singaporean social model and then do better.'³ Deng was especially interested in how the Singapore government achieved rapid economic growth and industrial transformation and maintained its dominance in the social and political sphere in the meantime. Singapore's version of 'authoritarian capitalism' was perceived by Chinese political leaders as an alternative to Western 'free market capitalist' system. China's administration was also keen to learn from Singapore's policies and strategies to attract Foreign Direct Investments.

Meanwhile, seeking to expand its economic interest and political influence beyond the limited territory, Singapore government was also in search of investment and development opportunities oversea. Based on an overarching 'Regional Industrial Park' program, Singapore government created a few industrial parks in Vietnam, Indonesia, India, Thailand, and China. These industrial parks were modeled after Jurong Industrial Estate, which had achieved remarkable success in attracting Foreign Direct Investments since its inauguration in the 1960s and continued to build up Singapore's experience in housing and industrial development and management in the context of economic globalization.

In February 1994, China's Vice Premier Li Lanqing and Singapore's Senior Minister Lee Kuan Yew signed two highly publicized agreements, which aspired to build 'a world-class modern international industrial park modeled after Jurong Industrial Estate in Singapore.'⁴ With the location of operations by industrial transnational corporations in this new industrial park, Chinese government could benefit from development effects such as employment generation and technology transfer, while Singapore could financially benefit from sales or leases of the industrial units with profits eventually supplementing its domestic economy in the long term. For Singapore government, a joint new town project was also an opportunity to improve bilateral government-to-government diplomatic ties with Beijing.

Figure 1: First Phase of the Suzhou Industrial Park, 2005. (Photo courtesy: SIP Administrative Committee).

This ambitious 20-billion-dollar project, then known as Singapore Suzhou Industrial Park, is located in the east of the scenic historic city of Suzhou and only 80 kilometers west to Shanghai. It occupies an area of seventy square kilometers, originally marshy and agricultural land. The proximity to Shanghai, China's economic engine and financial center, was apparently one of the primary factor in the selection of site as it would provide competitive advantage in attracting industrial investments. When completed, the town was expected to house a population of 600,000.

Establishing SIP at the current site also fulfilled the vision plan for Suzhou known as 'One Body and Two Wings' proposed a few years earlier. This comprehensive plan envisages two new towns (wings) flanking the center city (body), one to its west and the other east, forming a linear city. The old city of Suzhou, with a total area of 14.2 square kilometers, was first built in 514 BC and has always been a culturally significant city during its 2500 years of history. It is home of numerous Chinese Classical Gardens, some of which have been name UNESCO World Heritage. The city also features a traditional urban fabric known as a 'double-chessboard' structure defined by two overlapping grids, one consisting of streets and the other canals. The extensive canal network has led to the city's prosperity and brought the city's reputation as 'Venice of the East.' The continuing growth of urban population and the demand of economic development in the last few decades, however, posed a threat to the city's historic heritages and the urban pattern they rely on. The concept of 'One Body and Two Wings' was intended to preserve Suzhou's historic urban fabric by channeling industrial and housing development to the new towns yet still maintain continuity as a whole city. The SIP in the east and the Suzhou High-Tech District in the west -- established in 1990 -- constitute the two 'wings' of Suzhou.

Once it was established, the SIP was provided the status as one of China's Special Economic Zone (SEZ), which offers policies and incentives different from the rest of the country to encourage offshore production within self-contain industrial estates. Singapore and China each formed their economic consortiums as shareholders of this new town, consisting primarily of their respective state-owned corporations. The two consortiums then established a joint venture, China-Singapore Suzhou Industrial Park Development Corporation (CSSD), as the authorized land developer on January 10, 1995. Suzhou Industrial Park Administrative Committee was also formed serving as the local agency of governance.

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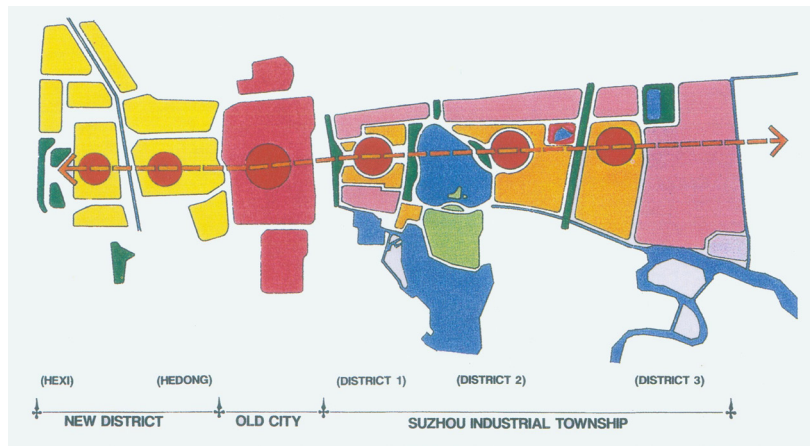


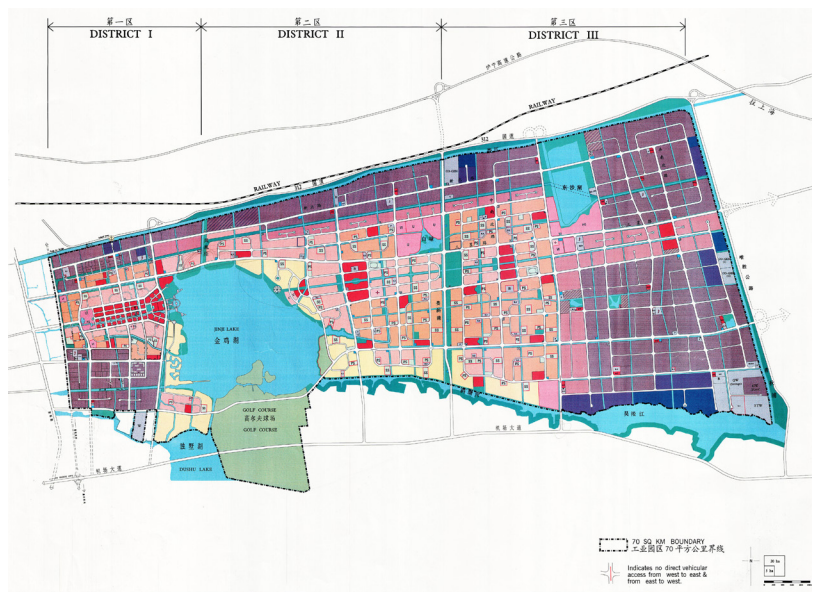
Figure 2: Diagram of 'One Body and Two Wings.'
(Image courtesy: SIP Administrative Committee.)

SIP MASTER PLAN AND ITS DEVELOPMENT

The development of Suzhou Industrial Park has been influenced by three master plans. In 1994, the first master plan was drawn up by Singapore Urban Redevelopment Authority along with Jurong Environmental Engineering and SIP Planning and Construction Bureau. The area, sometimes known as China-Singapore Collaboration Area or ‘super-development’ zone, covers about 70 square kilometers – later expanded to 80 square kilometers – in which Singaporean institutions were the primary shareholder. In 2001, SIP Planning & Construction Bureau and Jiangsu Urban Planning & Design Institute prepared a revised plan after Chinese consortium became the primary shareholder. The plan area expanded to 288 square kilometers, with the China-Singapore Collaboration District surrounded by three townships: Loufeng, Weiting, and Shengpu. In 2006, a master plan for Eastern New City and a SIP Zoning Plan were prepared by China Urban Planning & Design Institute to consolidate the 2001 master plan.

The 1994 plan laid the foundation of SIP’s development. It focused on the core area to establish a ‘Multi-center Linear Structure’ that extended Suzhou’s urban axis eastward. The area was set to be developed in three phases, also in a linear form from west (adjacent to Suzhou Old City) to the east (bordered by a national highway to Shanghai), with all there district centers located on the axis. They constituted an urban and landscape axis, linking the city’s new Central Business District, governmental center, commercial center, high-density neighborhoods, and parks.

The plan also delineated a hierarchical organization of the city, following the planning concepts of ‘new town’ and ‘neighborhood unit’ in Singapore’s planning system to provide four levels of public facilities: region, district, neighborhood, and cluster. Each of the three districts, developed in the three phases respectively, would house 33,000-100,000 households. Each neighborhood would include 8500 households, laid out around the neighborhood center with public facilities serving a radius of 400 meters. Each cluster would have around 700 households, and is equipped with cluster-level public facility. The target population for the city was 600,000, supported by abundance of job opportunities supplied in the industrial zones.



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Figure 3: Master Plan for Suzhou Industrial Park, 1994. (Image courtesy: SIP Administrative Committee.).

In terms of the sequence of development, the 1994 plan introduced an approach suitable for a model giving priority to industries. It meant infrastructure should be built first, followed by industrial land; then with the flowing-in of workers, residential areas would be built, and finally commercial facilities once the influx population reached a certain level. For instance, because of the region's relatively low ground, the entire Collaboration Area had been raised by three feet through massive landfill before any construction began to protect the city from constant floods. Once the urban framework of a new city was laid out, construction began. The first phase of development focused on the area of about 2,000 acres between the old city and Jinji Lake. Jinji Lake, a four-square-mile lake, was completely redesigned to build state-of-the-art waterfront landscapes. It became a jewel of the entire city.⁵

At the turn of the 21st Century, SIP went through a significant transition. Despite the impressive accomplishment in attracting FDI since its inauguration, the project continued to report substantial financial losses, which worsened after 1997 when the Asian Financial Crisis impacted the economies across the Asian Pacific Rim. In the meantime, SIP faced escalated competitions of other special economic zones in China, particularly of another industrial estate in Suzhou, Suzhou High-Tech District—the other 'wing' of Suzhou. As a result, Singapore government decided to disengage itself from this project. Having held 65% of joint venture since the beginning, the Singapore consortium dropped its share to 35% in January 2000 while its Chinese partner picked up the difference to become the primary shareholder. Nevertheless, the inter-governmental collaboration continued, and soon SIP was able to extricate itself from the financial predicament and began to generate revenue.

SIP's transformation under the new management began with a new master plan. The 2001 plan covered an area of 288 square kilometers. It not only provided SIP with more developable land, but also addressed the connection of SIP with its regional context. SIP moved beyond a segregated industrial park to exercise greater influence on Suzhou's development at large. Among the new districts included in SIP, the area around Dushu Lake in the south was identified as a Higher Education District, and the area around Qingjian Lake in the North was slated for ecological development and leisure.

URBAN DESIGN IN SIP

Suzhou Industrial Park was arguable the first new town project in China that extensively use the tool of urban design in its developments. An elaborate review system was established to make sure all projects, from Central Business District to residential areas, and from infrastructure to landscape design, are regulated under the master plan, and each piece is a nice addition to the city. The urban designs also looked after building designs and suggested contemporary styles to maintain consistency in the urban landscape. The city is characterized by extensive network of landscape and public facilities, establishing a high standard in the built environment. All these measures have distinguished SIP from other new towns in China, and were lauded as the 'Suzhou model' and emulated by many new town projects.

Two areas in SIP, the Central Business District and Jinji Lake, demonstrate its dedication to exemplary urban design. The CBD is located on the city's central spine and west of Jinji Lake with office towers lined up along a boulevard. A detailed urban design guideline was prepared prior to development, which defined the



parameters of the building on each parcel including height, setback, location of the tower, pedestrian and car entrances, and even colors and materials of the façades. Building heights were regulated in a way that they would form an impressive skyline with buildings escalating from the west (close to the historic city center) to the east (near Jinji Lake). A 900-foot tower, known as the ‘Oriental Gate’, terminates the axis at the lakefront. Most office buildings along the boulevard are completed. Constructions began recently on a large shopping mall and a cluster of office towers around the Oriental Gate, some of which would be even taller than the Gate, forming an impressive skyline along the lake. The urban spine extends across Jinji Lake to form a high-density retail and entertainment zone. The city’s newly completed metro line connects the SIP along this east-west axis and to the historic city center.

Jinji Lake itself is a showcase of landscape design. American firm EDAW’s award-winning landscape planning and design delineated a vision of developing this 11.5-square-kilometer area, including a lake of 7.4 square kilometers and its surrounding area, into one of China’s largest and finest urban lakefront, and made it the core of the SIP.⁶ The majority of lakeside area is reserved for public spaces, consisting of eight parks of different themes. The western side of the lake is bordered by a promenade and woods; the southern side features Li Gong Di, a beautiful causeway flanked by numerous restaurants, bars, and galleries; the northeastern side is dotted by a few large-scale public buildings including the Science and Cultural Center and the Convention Center; and the Eastern side is dominated by a children’s park with a Ferris wheel among others. Together these parks provide 17 kilometers of pedestrian paths and 25 kilometers of bike trails.⁷ Water plays a unique role in shaping the urban landscapes of this new town as in the historic center of Suzhou, yet taking different forms. In SIP, the ‘water-town’ tradition was re-interpreted with contemporary designs and larger-scale landscapes. Placing priority on landscape development as part of the city’s infrastructure has proved a successful strategy of SIP as landscape significantly increases the value of land, generating more revenue for ensuing projects.

The residential areas in the SIP are organized based on the principals of Clarence Perry’s concept of Neighborhood Unit.⁸ Perry’s idea represents an important principle of American community planning for median-density suburban neighborhoods organized around the school and bound by vehicular thoroughfares, with houses laid out within quarter-mile radius from the neighborhood center. When the concept of Neighborhood Unit was applied in the building of Jurong

Figure 4: Jinji Lake landscape plan. (Image courtesy: SIP Administrative Committee.).

Industrial Estate in Singapore, it was used for residential areas of 4000-7000 households, most residents living in public housing complexes. When this concept was further introduced to Suzhou, the density grew to 8500 households per neighborhood unit, each centered at a 'neighborhood center' with 400-meter service radius. The neighborhood centers house basic amenities like grocery stores, banks, pharmacies, and bookstores, as well as other services like barber shop and small clinic. Schools are located adjacent to the neighborhood centers. A regional shopping center is planned for each district serving multiple neighborhoods. Such hierarchical organization serves to allocate resources of public services efficiently in the residential districts.

The network of neighborhoods with their defined cores in the SIP, however, was not intended to encourage Transit-Oriented Developments, which is a missed opportunity particularly considering their densities. In fact, the SIP represents essentially a hybrid of Western suburban model and the density and building typology of Asian cities. The city is laid out on super-blocks occupied by gated communities or corporate campus. Uses are segregated, and retails are contained in neighborhood centers or regional shopping malls. Although not completely automobile-dependent, it is not easy to get around SIP without a car except in the Central Business District. Although the first metro line in Suzhou was completed in 2012, which runs along the city's East-West axis, traffic and parking remains an issue in SIP.

CONCLUSION: NEW TOWN AS ECONOMIC BUILDING

Suzhou Industrial Park became a 'model' in China's massive urbanization first and foremost because of its economic success. Its Gross Domestic Products has grown at an incredible annual rate of around 30% on average since its inauguration. Occupying only 3.4% of land in Suzhou and accounting for just 5.2% of its population, SIP contributes more than 15% of Suzhou's total GDP.⁹ In 2001, News Week named Suzhou as one of the nine emerging High-tech cities in the world, and stressed SIP's role in this endeavor.

Urban planning and design played a significant role in SIP's economic accomplishments. Moving away from traditional types of economic development zones or high-tech industrial parks in China, SIP was designed as a balanced and self-contained city from the beginning. The plan referred back to Ebenezer Howard's

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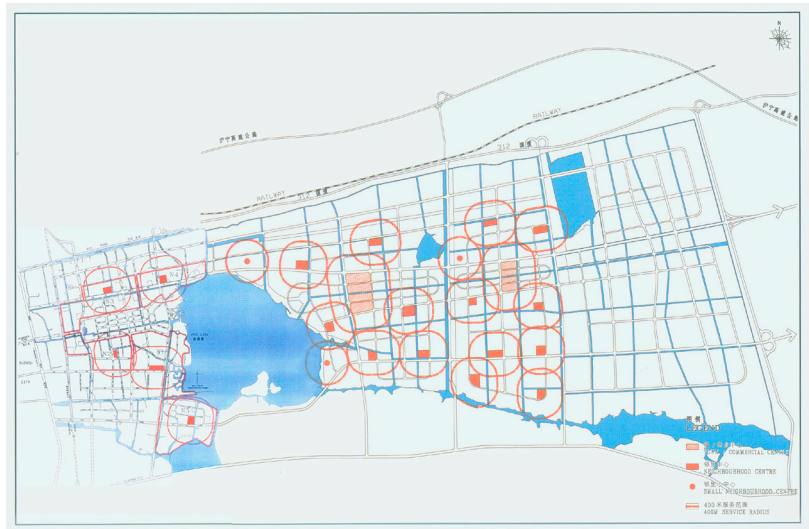


Figure 5: Caption: Diagram of neighborhood units in SIP. (Image courtesy: SIP Administrative Committee.)

Garden City concept, yet addressed new context of globalization. Therefore, housing, commercial, and public services are developing in parallel to industrial and business with the rapid influx of Foreign Direct Investments. The series of master plans laid out the blueprints for urbanization, prioritized infrastructure and allocated resources logically to support the city's continuing growth. Numerous urban and landscape designs provided further guidance for the city's development, enhanced its environments, and boosted land values. In this case, economic development and city building reinforce each other and work together to make SIP China's 'model new town.'

The systematic planning and design distinguish SIP from many other new towns in China, which are often segregated from the old city. In Suzhou, the preservation of the historic city center and the development of the new town are inseparable, and the placement of SIP adjacent the historic center has played a positive role in the development of both and effectively curb sprawl. The economic vitality and financial success of the new town rejuvenate the old city while protecting its historic legacies. In turn, the old city supports SIP's gradual and continuous growth by providing necessary infrastructure and urban amenities, which was particularly important in the early phase of the new town's development. Such mutual enriching relationship is among other strengths of Suzhou that won the city the 2014 Lee Kuan Yew World City Prize.

However, SIP is not immune to the common flaws of suburbanization characteristic of China's new town movement. The underdeveloped public transportation limits the options in urban development and leads to a dispersed, though high-density, urban pattern. The planning model based on superblocks segregates uses as well as neighborhoods. The emphasis on economic development celebrates a pro-business culture and prioritizes middle-class life style, but comprises diversity of the society to a certain extent. Nevertheless, the SIP just turns 20. As the city continues to evolve and blend itself into the greater metropolitan area, there are signs that the rigid planning starts to be eroded by dynamics of urban life and the social issues are being addressed. For both its success and the characteristics and issues exposed, the twenty years of development of Suzhou Industrial Park represents a remarkable sample in China's ongoing urbanization and a valuable experiment of new towns building in the greater context of globalization.

ENDNOTES

1. David Harvey, *A Brief History of Neoliberalism* (New York: Oxford University Press, 2005), 127.
2. Jean-Pierre Langellier and Brice Pedroletti, 'China to Build First Eco-City,' *The Guardian*, May 7, 2006. <http://english.cri.cn/811/2006/05/07/301@85444.htm>. Accessed 7/12/2012.
3. P. J. Bolt, 'The New Economic Partnership between China and Singapore,' *Asian Affairs, an American Review*, 23 (2): 93.
4. Two agreements were signed between Chinese government and Singapore government on February 26, 1994: 'Agreement of the Collaborative Development of Suzhou Industrial Park' and 'Agreement on the Usage as Reference of Singapore's Experience of Economic and Public Administration.' Kuang Shi et al, *The Building a Chinese Model New Town: Planning and Development of Suzhou Industrial Park* (Beijing: China Architecture & Building Press, 2012), 31.
5. For details of the planning and development of Suzhou Industrial Park, see Kuang Shi, 'Building Orderly Urban Spaces: Singapore Suzhou Industrial Park,' in *Jian Zhu Xue Bao* (1997, n.1): 18-20.
6. EDAW's Jinji Lake landscape design project won 2003's American Society of Landscape Architecture award.
7. Shi, 127.
8. Clarence A. Perry, 'The Neighborhood Unit,' in *National Municipal Review* 7 (1929): 636-637.
9. Shi, 39.