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A tale of two new cities

As China plans to ease the capital's pressures through the Xiongan area, much can be learned from Tsukuba in Japan

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In Asia, large cities are morphing into mega regions where people are moving from towns and villages for a better life. These metropolises share similar problems in many social and economic areas, such as overcrowding.

And Beijing is no exception, with a population in excess of 21 million in 2015. The city aims to cap its population at 23 million by 2020.

As one solution to overcrowding, China announced on April 1 that it will build the Xiongan New Area, located about 100 km south of Beijing. The capital city's "non-capital" functions, including some administrative and public institutions, company headquarters, financial institutions, colleges and research institutes, will be moved there.

President Xi Jinping plans to turn the new area into a green, livable and modern zone, which is expected to serve as a trailblazer in addressing the problems of big cities, a new engine for innovation and growth, and a bridge between Beijing, Tianjin and Hebei province.

Japan had a similar plan last century, which may be a salutary lesson for China's Xiongan plans, said Zhou Muzhi, a professor at Tokyo Keizai University.

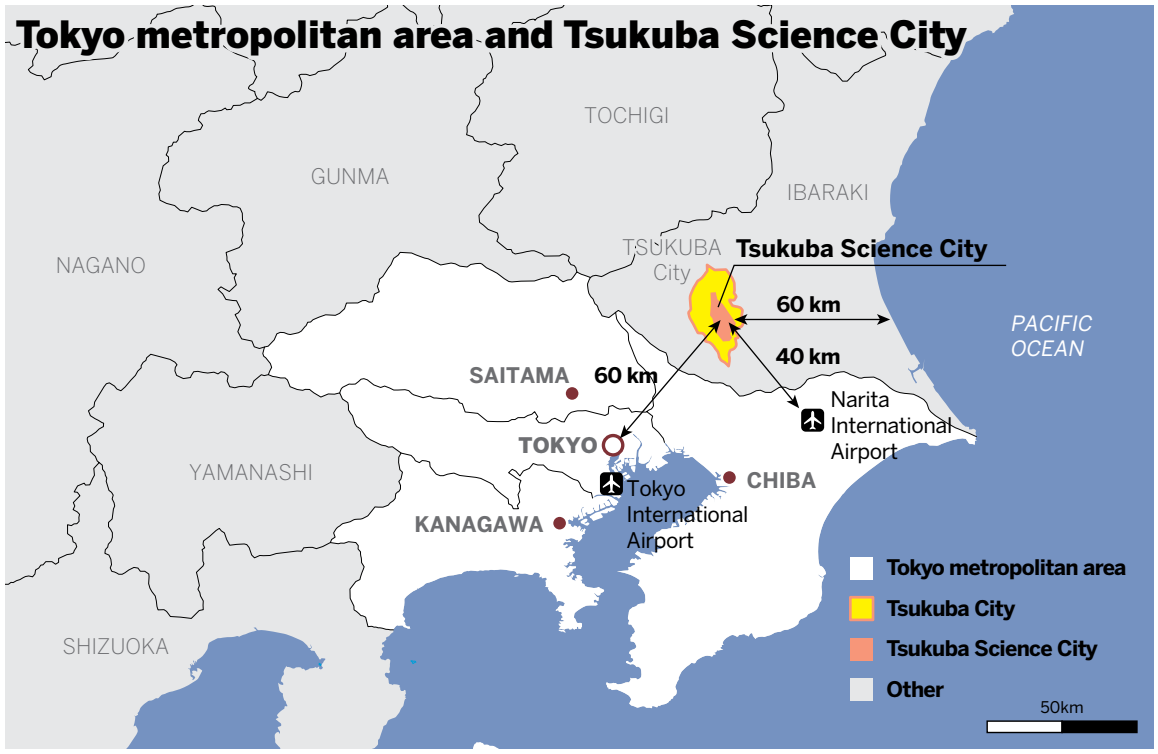
Tokyo grew into the world's largest city in 1955 due to Japan's rapid economic takeoff after World War II. The Japanese government then worked to relieve the densely populated capital through the relocation of 43 prominent national research and educational facilities to less congested regions.

Tsukuba, a rural area 60 km northwest of Tokyo, was selected in 1963 as the site for Japan's first science city to host those institutes. A year later, the prime minister's office set up the Academic New Town Construction Promotion Headquarters.

The Tsukuba Academic New Town Construction Act came into force in 1970, setting the goal of "establishing a science city appropriate for conducting experimental research and education while at the same time developing a well-balanced rural city, and contributing to the ease of the excessive population concentration in the existing Tokyo metropolitan area".

Tsukuba Science City, which covers 284 square kilometers in Ibaraki prefecture, is projected to have 350,000 residents by 2030.

In the 1970s, those who moved to Tsukuba were said to need three things: High boots for the mud, a flashlight (as there were few streetlights) and a stick to beat away the wild dogs.



Source: Cloud River Urban Research Insititue, Asia Integrated City Index 2016

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ZHOU MUZHI, professor, Tokyo Keizai University.

The University of Tsukuba was established in 1973, due to the relocation of the Tokyo University of Education, which was founded in 1949. And by 1980, all 43 national institutes selected to move from Tokyo were established in Tsukuba.

The city has grown tremendously and currently has 147 research institutes and a population of 227,000, according to Zhou.

Today, Tsukuba is Japan's cutting-edge science city, with its research covering a wide range of areas, including electronics, biotechnology, agriculture, new materials, space development, civil engineering and construction.

Four Japanese Nobel laureates are associated with Tsukuba. Sin-Itiro Tomonaga, professor emeritus of the Tokyo University of Education, received the Nobel Prize in Physics in 1965; Leo Esaki, former president of the University of Tsukuba, was awarded the 1973 physics prize; Hideki Shirakawa, professor emeritus of the University of Tsukuba, won the chemistry prize in 2000; and Makoto Kobayashi, professor emeritus at the High Energy Accelerator Research Organization in Tsukuba, received the physics prize in 2008.

"The Japanese government has had a very clear idea of what kind of city Tsukuba should be. That is an international science city," Zhou said. "Japan has made it."

A large community of international scholars and researchers also give the city a unique cosmopolitan quality. Tsukuba has achieved worldwide recognition as a major scientific and technology center.

According to *The Japan Times*, as of October 2014, Tsukuba had about 7,400 foreign residents from a whopping 132 countries, accounting for around 3 percent of the city's population.

Tsukuba has rolled out initiatives to appeal to foreign citizens. To that end, the city pursues multilingual programs, which include issuing public relations publications in six foreign languages — English, Chinese, Korean, Thai, Portuguese and Spanish — and a website offering information in English and Chinese.

The city hosted the International Exposition in 1985, with the theme of Dwellings and Surroundings — Science and Technology for Man at Home. The fair put Tsukuba on the global map. The science-driven city also hosted the G7 Science and Technology Ministers' Meeting in 2016.

The city was designated as the Tsukuba International Strategic Zone by the Japanese government. Through deregulation and tax incentives, the designation aims to promote "life innovation" for achieving a healthy aging society and "green innovation" for realizing a low-carbon society.

More than 200 venture companies have been spawned in Tsukuba. They have produced such inventions as the tunneling magnetoresistance (TMR) element now used in 98 percent of hard disks in PCs, and the world's first cyborg-type robot, Robot Suit HAL.

A good living environment is essential to succeed in research and development. Tsukuba now offers quality facilities for raising children, medical clinics, public cultural and education facilities, as well as parks and sports facilities.

Tsukuba's success story shows that it is important to clarify the new city's role and remain patient, Zhou said. "It took Japan's government 20 years to move those institutes to Tsukuba."

However, he pointed out that Tsukuba had not helped to relieve Tokyo's population density. The population of the Tokyo metropolitan area, which includes Chiba, Kanagawa, Saitama and Tokyo prefectures, increased from 11.28 million in 1950 to around 38 million today.

Statistics show that the influx of people into Tokyo and its environs continues unabated despite regional revitalization efforts to halt the trend. The government is focused on balancing the Tokyo metropolitan area's population influx and outflow by 2020.

Of the country's 47 prefectures, only the Tokyo metropolitan area, as well as Aichi, Osaka and Fukuoka, had net population gains in 2015.

Japan's Prime Minister Shinzo Abe seeks to create 300,000 jobs outside of the Tokyo metropolitan area by 2020 in a move to halt population outflow from other parts of the country and to encourage people and businesses to set up away from the capital.

The Abe administration has also introduced tax incentives for businesses moving their headquarters out of central Tokyo.

Only 12 firms had been awarded the tax incentive for relocating as of the end of 2016. Companies that moved their headquarters into the Tokyo metropolitan area in 2015 outnumbered those moving out, according to the private research firm Teikoku Databank.

Japan's local authorities have been calling to reverse the population exodus to Tokyo while the capital seems to be comfortable with the steady inflow of people, most of whom are young, from other parts of the country.

Still, the rise of Tsukuba as one of the world's foremost science and technology cities has not dwarfed Tokyo's towering position as a research center. Tokyo has 44.6 percent of the country's research professionals.

China's Xiongan New Area and Japan's Tsukuba Science City have major common traits. Both are located close to their country's overcrowded capitals, and both have major fresh water lakes — Baiyangdian in Xiongan and Kasumigaura in Tsukuba.

Xiongan New Area, if executed well, will become a bright spot in the Beijing-Tianjin-Hebei region. But Zhou said that Beijing will continue to be the engine driving the growth of the region.

The professor recommended that Beijing sharpen its capabilities to manage its dense population as people continue to move there.

Xiongan New Area will eventually cover 2,000 sq km. A major transportation network and basic infrastructure is set to be in place by 2020. The area will be well connected to Beijing, Tianjin and Hebei by 2022 when the Winter Olympics take place, according to Xinhua.