

After Decades of Booming Growth, Where is China Going Now?

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Photos: ITDP China

China's population is increasingly urban with over half of the population living in cities. In the next two decades, World Bank figures estimate that roughly 1 billion people will live in Chinese cities. Car ownership is exploding and China is no longer a "Bicycle Kingdom." It has become the world's largest car market—the first nation to buy more cars than the United States.

According to the China Association of Automobile Manufacturers, the annual sales of Chinese cars increased from 2.37 million in 2001 to a whopping 28.88 million in 2017. Traffic jams, dangerous roads, carbon dioxide levels, and air pollution concern the people and government. These issues threaten the country's travel capacity, energy security, ecosystem, and economic sufficiency.

Today, facing these challenges is a priority for China. The government speaks favorably of people-oriented development and has committed to lowering greenhouse gas emissions by 65 percent by 2030. This means it must build for how people travel and encourage a major transition from cars to transit and non-motorized transport. The questions remain: Will China prioritize development over growth? And will that development be people-oriented and sustainable?

THE CHINA ADVANTAGE

Despite a focus on cars, China has built more mass transit and transit ridership than any other nation. As of September 2019, 36 mainland Chinese cities are moving 67 million passengers per day on 187 urban rail transit lines covering 5,608 kilometers. Another 2,000 kilometers are in planning or construction stages. Thanks to this investment in urban rail, about half of China's urban residents have access to rail systems; the nation is a global leader in bus rapid transit (BRT). Inspired by ITDP projects in the region, as of 2018, 32 cities in China opened BRT systems, and at least 10 more cities are planning or constructing them. This investment, perhaps more than any other, has enabled the growth of Chinese cities and puts the nation in an advantageous position for people-centered development.

People-oriented development is an important step in supporting China's urbanization while mitigating many of the negative outcomes of the massive car infrastructure. In 2016, the city of Shanghai published the Shanghai Street Design Guide, which signaled a shift in core urban design values. Rather than focusing on car access, the guide emphasizes walking and cycling, reducing space for vehicles, and prioritizing active transport with public spaces for pedestrians and



Top: China is positioned to move back to its place as Bicycle Kingdom. In the past ten years, China has become a pioneer in bike share by launching some of the world's largest sharing systems.

Middle and Bottom: Pedestrian spaces created in Guangzhou are an important step in supporting China's urbanization.



bicycles. In 2017, Guangzhou’s municipal government implemented a street renaissance program in consultation with ITDP China. This project created an intense interest among municipal governments. Now there are over 100 street projects in process with people-centered designs that prioritize cycling and walking.

Top: Despite a focus on cars, China has built more mass transit than any other nation.

Middle: E-bikes have risen in popularity as traffic has worsened.

Bottom: China leads the world in electric buses and Shenzhen alone has a fleet of 16,539.

A RETURN TO THE BICYCLE KINGDOM, WITH A BOOST

Over the past decade, Chinese cities became pioneers in bike share, launching the world’s largest systems, and inspiring cities around the world. Today, China is well-positioned to take advantage of electrification of all vehicles, including bicycles, building on its long history of cycling, and early investments in cycling infrastructure. Millions of people now use shared e-bikes, contributing to the over one billion bike-share subscribers in the country.

E-bikes have risen in popularity as traffic congestion has worsened. They offer faster trips with less physical exertion than regular bikes and encourage transit use. Many bike-sharing services are close to transit hubs, making them a better solution for last-mile service. China’s adoption of electric bicycles is a return to the “bicycle kingdom” with a modern and efficient electric boost.



BUS ELECTRIFICATION

China’s leadership in electric buses is well known. As the world’s largest manufacturer, China has built and implemented e-bus fleets with remarkable speed. In 2017, Shenzhen became



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Children were encouraged to express, in their terms, their experiences walking to and from school. For that purpose, they used magnifying glasses in cardboard to observe street elements that they liked (dogs and ice cream vendors) and those they disliked (holes in sidewalks and cars parked on the sidewalks), and got adults or older students to take pictures of them. At the end of the day, all the children shared their experience of walking or biking, and parents took advantage of the presence of local authorities to demand safer street environments for children.

Today, these experiences are being implemented in three mid-sized cities in central and northern Mexico whose governments show a strong commitment to the road safety agenda: Puebla, Hermosillo, and San Pedro Garza García. With these tools and technical visits of the ITDP team to the sites, school communities in these cities have collaborated with authorities to organize their own Walk and Bike to School Day. The act of providing space for children to express their ideas about how to use street space and enlisting parents to advocate for road safety was key to the project's success. Vision Zero for Youth is about saving children's lives and creating a sustainable future for everyone.

Bike-Friendly Quiz Answers

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residents cannot afford a car, the roads in the city are built for cars, and many are unpaved.

However, community-driven critical mass rides have brought awareness to the growing number of cyclists in the city and their calls for safety and improved conditions. Advocacy groups like the Johannesburg Urban Cyclists Association, which developed a bicycle map for the city that identifies preferred commuting routes and continues to pressure the city government to implement its bicycle strategy, are working to change the perception of cycling in Johannesburg.

China

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the first city in the world with a fully electric bus fleet. The city has 16,359 electric buses that travel a daily average of 2.85 million kilometers. It has built 510 bus charging stations and approximately 5,000 charging piles, a form of charging station.

Pure electric buses have replaced traditional diesel buses and have made progress in mitigating air pollution. Even with an imperfect grid, e-buses are huge energy savers, consuming roughly one-third of the energy of diesel buses, and helping to lower fuel consumption. Electric buses also reduce harmful carbon emissions and particulate matter by over 400 tons and are less expensive to operate. Electrification still has challenges as battery life can be difficult to maintain and capital costs are high, but China is positioned to take full advantage of new technology.

There are many unanswered questions about China's future, but all signs point to electrified transport that is people-centered and bicycle-forward. If China continues on its current trajectory, it will be a highly competitive economic force and an example of sustainability to other high-polluting nations. This shift will require cities to reorient away from growth and investment patterns and priorities from the past 30 years and focus on sustainable and low polluting practices. If successful, China's cities can become examples for previously high polluting cities all over the world.

Back to the Future: Our World's Cities in 1985, and Today

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