

CITYSPACE by Christopher Choa

beam me up, scotty

how to deal with Shanghai's transport system

In spite of all the new highway and road-building projects, the roads are jammed. In 2004, Shanghai residents made 27 million commuting trips, averaging more than one hour each. And that figure doesn't include walking time. Sydney commuters, in contrast, spent around 33 minutes per trip on average.

By 2020, it is estimated that the total number of trips in Shanghai will rise to 50 million and the average trip time will rise accordingly. One reason for this is the growth and displacement of the city's population to areas further away from the city's core. Another is the disappointingly low investment in mass transit and the tragic overinvestment in automobile culture – manufacturing cars, building cross-town expressways, and widening the city's intimately-scaled streets. Perhaps this is inevitable in a developing economy. But it comes at a price: Shanghai suffers eight times the number of vehicular fatalities as London. Why? Poor traffic conditions, driver inexperience, and a dangerous mix of transportation modes.

And of course, too many cars. The number of private license plate auctions in Shanghai is supposed to be capped at around 4,000 per month – that figure is now well over 8,000, and doesn't include 'visitors' from Suzhou and Hangzhou. The road network just can't expand at a rate fast enough to accommodate all these cars.

What's more, no city in the world can

build its way out of gridlock. 'Induced traffic' is a well-known city planning paradox: every effort to increase vehicular capacity ultimately creates more congestion – on a larger scale. Most of the congestion can be attributed to increased traffic volume and the limited capacity of exits, secondary roads and intersections.

The solution to almost all of these problems is, of course, mass transit. A first rate mass transit system is egalitarian and economically productive. It also reduces the need for private transportation, thereby relieving congestion on the streets. Moreover, a comprehensive mass transit network is almost always faster than private transportation, and drastically reduces per-capita energy consumption. Lastly, mass transit encourages the development of dense, multi-functional neighborhoods that sustain their value in the property market. In short, it is the true measure of any great city.

It seems obvious, then, that Shanghai's transportation planners should be doing everything in their power to develop mass transit. But much like the traffic these days, the city hasn't been moving fast enough. The Shanghai mass transit network, with just four metro lines serving a population of about 18 million, is far behind other world cities. By comparison, Paris has 16; London, 12; and New York has 26. The bus system, on the other hand, does stretch across the city, but the

passenger capacity and travel speeds are insufficient. Clearly, in the race to become a great city, Shanghai has a lot of catching up to do.

First, city planners need to look at the numbers. And one of the most important figures is the value commuters assign to time. In other words: How much are people willing to spend to shorten their commute? Currently, that number is approximately RMB 7 per hour/person. Take the average middle-income Shanghainese couple, for example. If they can save an hour by spending RMB 14, they'll jump off the bus and into a taxi (or drive their own car). Transport officials should be discouraging this sort of behavior. Instead, they've done the opposite.

At a time when the city's surface traffic is really starting to jam up, bus and train fares have been increased substantially across the board. Why? To alleviate overcrowding. But higher fares have resulted in more people taking taxis or private transport adding to overcrowding on the roads.

A better solution would be to increase the standard length of metro trains from 8 to 10 cars, or increase the frequency of trains per hour. Bus services could have been improved by giving them strictly enforced road priority and assigning dedicated lanes.

There will have to be some tough-love as well. Transport officials should introduce a congestion pricing scheme, wherein cars entering the city center during peak periods are charged tolls for the privilege. This revenue should be used to help offset the cost of developing mass-transit. Congestion pricing has worked in Singapore and London, by the way, and can be just as successful here.

Shanghai is marketing itself as a Green City, which is fantastic. But the best way to become 'green' is to reduce energy and resource consumption. The most effective way to do that is to develop a world-beating mass-transit system as a powerful and attractive alternative to private cars and taxis. With creative thinking and good planning Shanghai has a unique chance to impress the world in a truly meaningful way. In the meantime, you can ring Scotty, or follow my example and stick with the bike. ■

Christopher Choa,
Managing Director,
BluBox Group,
Architecture and Development



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