Hyderabad shows the way

The city's metro project demonstrates how private capital can be deployed in public projects in a transparent and efficient manner

POSTCARDS OF CHANGE

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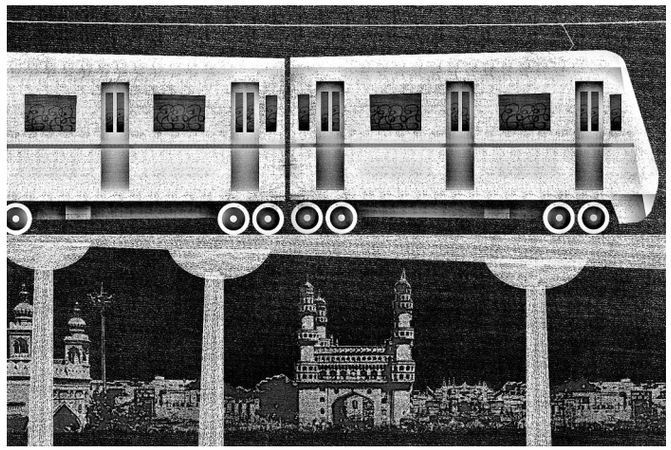
HYDERABAD, the capital city of Andhra Pradesh, located on the banks of the Musi river in the northern part of the Deccan Plateau, has again shown the way. In an earlier column, we reported on the Outer Ring Road in Hyderabad as one of the few examples of transit-oriented urban development in India, which has also unlocked land value to partially finance the new infrastructure needs of a growing city. Hyderabad has now come up with a metro rail project with multi-modal connectivity under public-private partnership (PPP). The project is being implemented not as a simple mass transit system, but as an urban redesign concept with emphasis on last-mile connectivity, room for cycling and other non-motorised transport, pedestrian facilities, green areas and public spaces with an eye for aesthetics.

Spread over 650 square kilometres, Hyderabad is one of the largest metropolitan areas in India. With a city population of 6.8 million and a metropolitan population of 7.8 million as of 2011, it is the fourth most populous city and the sixth most populous urban agglomeration in India. The metro rail project that spans over 72 km is a significant response to the growing transport demand from this rapidly growing urban region. As investments in manufacturing, R&D, IT and biotech industries have flocked to the area, this has strained the existing infrastructure of the city. Given the long time it takes to put transport infrastructure in place, the metro rail project, which was launched in May 2012 and is scheduled to be completed in May 2017, is not a day too early.

The project uses state-of-the-art technology with stringent technical specifications, performance criteria and safety standards. For example, a communication-based train control (CBTC) system is being introduced as a signalling system, which can accommodate much greater frequency of train traffic than the distance-to-go system that is in use at the Delhi Metro. The metro stations are being built with single-pier (pillar) supported cantilever structures rather than the three-tier supported portal structures that completely cover the road and create a tunnel effect.

There has been some dissatisfaction from some quarters about not going underground at least in some places in order to preserve the beautiful view of the ancient monuments, which, in Hyderabad, are many. N.V.S. Reddy, managing director, Hyderabad Metro Rail project, maintains that the metro rail has kept a safe distance of at least 500 feet from monuments such as the Charminar, Salar Jung Museum and other structures of archaeological importance. He also points out that "an elevated metro system is much more energy efficient than an underground system. Also, since underground metro stations need to be built in 'cut and cover' method, it is not technically and financially advisable to opt for an underground system in Hyderabad in view of its tough, rocky terrain."



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Most of the engineering design works have been completed and all procurement contracts have been finalised. Orders have been placed for coaches, signalling and telecommunications, rails and fasteners. Out of the total of 2,500 pillars, 450 pillars have been constructed. Works at both the major depots of Miyapur and Uppal, and at the casting yards at Uppal and Qutubullapur, are in full swing. The first stretch of 8 km is expected to be completed by December 2014.

Building a modern mass transit system in dense traffic corridors in Indian cities is an engineering feat. It is even more commendable when it uses an innovative financial design so as to require very little public funds. It offers new opportunities for developing urban infrastructure for cities when their urban local bodies are completely starved of financial resources.

The metro rail project was awarded through a transparent process of competitive bidding, based on a model concession agreement for urban transit prepared by the Planning Commission. Out of a total investment of Rs 14,132 crore ($2.6 billion), the Government of India has sanctioned Rs 1,458 crore as VGF (viability gap funding), amounting to 10 per cent of the project cost. The remaining Rs 12,674 crore is being invested by the private partner, L&T Metro Rail (Hyderabad) Ltd. The Government of Andhra Pradesh is spending Rs 1,980 crore on land acquisition, widening of roads, relief and rehabilitation (R&R), and shifting of utilities. There is no further financial support from the government during the entire concession period. The system comes back to the government after the concession period of 35 years (extendable by another 25 years). Hence the concessionaire is only licensed to use the land, while the government continues to be the owner.

A revenue model has been carefully worked out, with a mix of affordable and predictable passenger fares and lease rentals and real estate development at the metro stations. This business model based on transit-oriented development makes metro stations hubs of economic activity, increases metro ridership, reduces road congestion, and improves financial viability of the metro system. No metro system in the world is financially viable purely from passenger fares. The four profit-making metros in the world (Singapore, Hong Kong, Tokyo and Taipei) get a substantial part of their revenue from property development at metro stations. Following this model, Hyderabad Metro will derive 45 per cent of its revenue from lease rentals of the real estate developed at metro stations and depots and 5 per cent from advertisements, parking and other miscellaneous sources. The other half of its revenue will come from passenger fares.

The fares have been set keeping in mind considerations of affordability and compatibility with bus fares in Hyderabad. To protect the consumer from the private operator's over-charging and also to ring-fence the mega PPP project from possible political or bureaucratic interference, passenger fares and the fare-escalation formula have been frozen and notified in advance. The basic fares in 2014 will range from a minimum of Rs 8 (for up to a 2 km ride) to a maximum of Rs 19 (for a more than 18 km ride). The minimum fare in Hyderabad in 2014 is the same as in Delhi in 2011, and that projected for Mumbai in 2014 and for Chennai in 2015. The fare-escalation formula allows increase in fares by 5 per cent every year in the first 15 years, besides neutralising the inflation (WPI based) up to 60 per cent.

World over, there are about 200 rail-based urban mass transit systems. Most of them have been built by governments as they are capital intensive projects that typically make losses, but are essential for the liveability and competitiveness of large cities. Less than half-a-dozen systems have been built under public- private partnership.

The Hyderabad project is one of the largest metro rail projects built by a private entity anywhere in the world. It demonstrates how large volumes of private capital can be deployed in public projects in a transparent, efficient and competitive manner. It is not surprising that the project was selected for the Global Engineering Project of the Year Award earlier in 2013 by the sixth Global Infrastructure Leadership Forum in New York. India has been the top recipient of private participation in infrastructure activity since 2006, attracting a total investment of Rs 2,20,000 crore in 2011-12 alone. This should encourage other cities to follow the lead given by Hyderabad Metro to plan ahead by attracting private investment in transport infrastructure.

The writer is chairperson of ICRIER and former chairperson of the high-powered expert committee on urban infrastructure services