

“Metro rail is democratisation of urban transport”

**NVS Reddy, Managing Director, Hyderabad Metro Rail**, speaks to Shashidhar Nanjundaiah at a time when Delhi Metro’s Airport Express, the lone PPP case in Metro rail in India, abruptly shut down at least until August reportedly for “technical and financial” reasons. He is a firm believer in the success of PPP for Hyderabad Metro, and explains how.

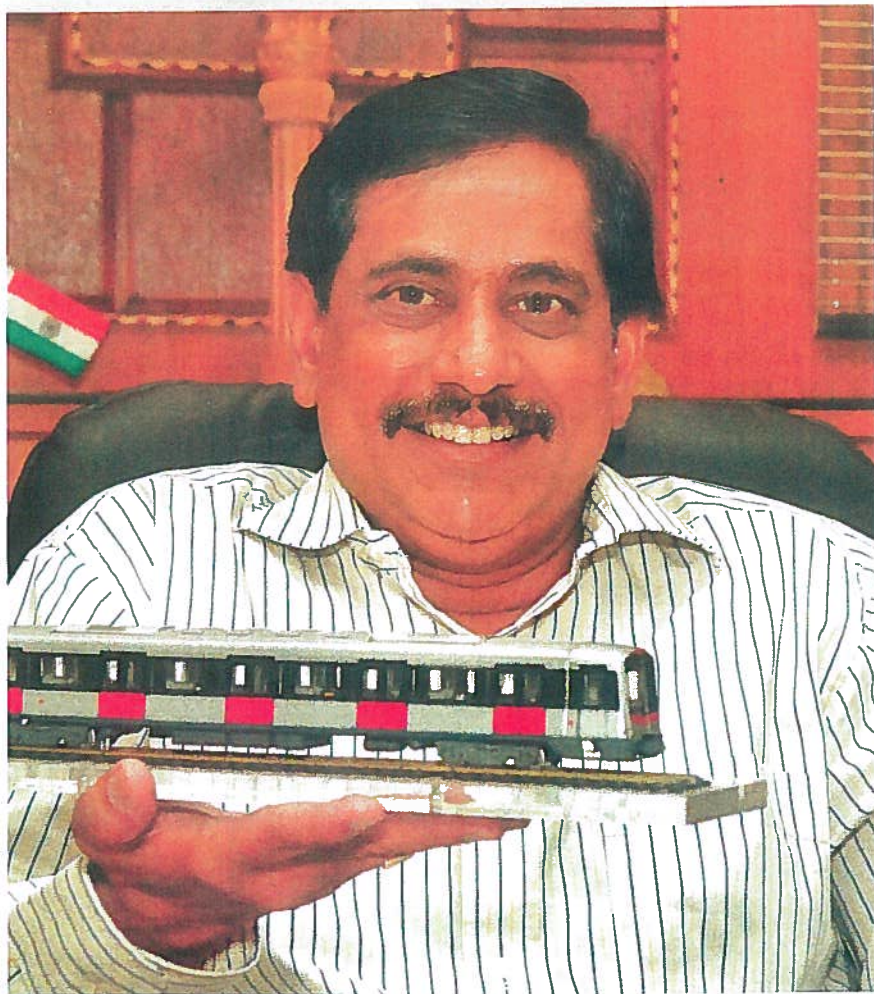
**Let me begin by asking you why you opted for Public-Private Partnership (PPP) and not Engineering, Procurement, Construction (EPC).**

Three major reasons for the PPP model are *resource mobilisation, private sector flexibility and design innovation.*

Our state is short of resources. Hyderabad was the first Metro system in India to go the PPP route (bidding was completed in 2007), but our first experiment failed owing to the failure of Satyam, so Mumbai ended up being first. Documents were prepared by Hyderabad and it was followed verbatim by Mumbai.

The two influencing factors have been my own experience with the model and the Planning Commission’s and Government of India’s support. As the Additional Commissioner in Municipal Corporation of Hyderabad, I experimented with PPP on a smaller scale, creating public assets like skywalks, parks, and toilets, without spending government money. We were exploiting advertising rights on these assets.

In Metro rail, however, a project of much greater magnitude, the experience around the world has been different. Among PPP projects, mass transit systems are the toughest. There were 130 mass transit systems in the world, but only four or five are on PPP. Not many are making money, so it is a huge challenge. Hyderabad Metro’s funding includes the Government of India’s 20 per cent and Andhra Pradesh government’s 20 per cent Viability Gap Funding (VGF). The second problem [in the lack of precedence] is that standard docu-



ments were not available when we started, so Mr Gajendra Haldea and I created the agreement, while we created technical documents using my background with the Railways: About 15 retired chief engineers of different disciplines—civil engineering, mechanical, signalling, telecommunication—became board members.

**So you created the documents yourselves rather than outsourcing to transaction consultants?**

The consultant's role is limited, because they do not have expertise in this domain. We have prepared the Manual of Specifications and Standards (MSS), perhaps one of the few documents in this world of this type. If we are executing a government project, we can keep making changes along the way. In this case, however, the bidders should understand what standards they should build to—performance criteria, safety standards, and technical specifications. We have referred to American, European, Japanese and Indian railway standards.

In building this manual, we have converted input-oriented specification to output-oriented performance.

**Please explain.**

There is much scope for innovation in contracts, which we typically do not exploit. You provide a broad indication of the scope of the project, leaving scope for flexibility and efficiency. For example, we would indicate a certain number of people must be transported and indicate performance requirements. That converts input orientation into output orientation.

**What was the allocation for Hyderabad Metro?**

The allocation was not enough. The project cost is Rs 14,132 crore. Apart from that the state government is spending another Rs 2,000 crore for land acquisition and shifting of utility, etc but that is not a part of the project cost.

We selected the bidder on the basis of the lowest VGF required, and in the second round, Larsen & Toubro (L&T) has asked for only Rs 1,458 crore—10 per cent of project cost—and bearing responsibility of Rs 12,674 crore on their own. They have approached a consortium of 10 banks. For all the big talk of private sector banks, not a single private bank has come forward! There was a stiff competi-

tion between State Bank of India (SBI) and Canara Bank, but eventually SBI became the lead banker.

**That done, how did you tap into private sector flexibility and efficiency?**

Let me give you an example of lifecycle costing. While finalising tenders in government, we are bound by the lowest bid. Let us say we need rails. We have two options—ordinary rails or longer-lifetime head hardened ones, which cost 20 per cent more. But with a lifecycle period of 60 years, they give you a better advantage. The lifecycle costing gets cheaper.

Under our model, L&T can take that decision and import high cost rails.

**What about innovation?**

The third advantage with PPP is design innovation. Design innovation in government is very difficult.

What happens is design innovation in private sector is possible in government you have set codes and procedures. Whether it is the latest technology or technology absorption, it is easier in private sector. If I have to send my chief engineers abroad, it is a hell of a task [convincing the] government. L&T's engineers go abroad routinely just to see which best practice they can follow in our Metro system. This concept is getting vindicated because of those three major reasons.

**While everything you've said is valid and practical, how will you now translate the model into a viable one—perhaps the million-dollar question in urban transport?**

In the project cost of Rs 14,132 crore, there is a straight saving of Rs 2,000 crore borne by the government because the VGF is over and above the project cost figure. Our breakeven will be in the fifth year of operation. Project Internal Rate of Return (IRR) is 14 per cent and Equity IRR 17 per cent.

**How did you compute capacities?**

Between fare-based and non-fare revenues, it is 50:50, with 45 per cent from real estate development and 5 per cent from miscellaneous like advertisement and parking fee.

**So what are the challenges you encounter?**

We have two major challenges. One is

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government interference, so we have kept this project at arm’s length from government interference, be it political, bureaucratic or even judicial.

But by far the most challenging financial aspect of a Metro rail is we have to design metro rail for peak hour peak density traffic (PHPDT). Designing the specs around peak hours is the reason most Metro rail projects incur losses, due to “off-peak idling”. We stand to gain in the peak hours and lose in off-peak hours. So there is some price variation, whereby the peak-hour commuter may be paying more than—double—the off-peak passenger.

**How did you manage that legally?**

We have frozen the fare and fare escalation formula so that because the bidders can compute their returns for the next 100 years if they want. Delhi Metro adopted a different model, because of which they are perhaps suffering: They went in for a Fare Succession Committee. This is fraught with resistance and then interference.

We have designed an initial fare of minimum Rs 8 and maximum Rs 19 with six slabs, with allowance for a 5 per cent increase each year for the first 15 years plus 60 per cent of WPI-based inflation (normally, this figure is 50 per cent, so L&T is happy with our figure). After 15 years, we allow only for inflation.

The Metro system should be competitive, so if we allowed more than what we have, we

become uncompetitive with the other mass transit modes.

**Is there a Power Purchase Agreement (PPA) that perhaps permits you to maintain those tariffs with certainty?**

Yes. Ours is considered as a railway track, and power has been made available.

**How have you integrated the Metro system with the remaining urban infrastructure?**

We have declared that up to 300 m alongside the Metro rail system on both sides a mixed land use zone with special incentives for transit-oriented development. Only 20 per cent of the commercial area can be used for kiosks, etc. Adjacent to our 66 stations, we have acquired 269 acres of government land over 25 locations, where we have developed parking and circulation ground floor.

Revenue generation by converting stations into hubs of activities is the way we can make off-peak transit profitable. There is scope for mega malls, multiplexes, offices, restaurants, convention centres, service apartments and educational institutions, we call it A to Z shops. We are trying to make Hyderabad an eco-friendly city and at the same time make this project financially viable. We will encourage bicycling from ground level to interval. Free bicycles will be available at the metro stations.

Metro systems across the world are an engineer’s paradise. They are happy giving structural solutions, whereas the technology should be made use of because ultimately it is for commuters and the city.

**So what has been your lesson in PPP?**

It is very difficult to build a Metro system on PPP. We have taken so many proactive measures at several points of time when L&T was thinking twice whether to go ahead with the project. There are so many hurdles and we faced court cases and NGO movements. It was a struggle and negative media reports were all over. Getting the project going was the only way we proved them all wrong.

**What is the main contention?**

The main attack is that it is a real estate project. In reality, it is a democratisation of transport—nothing elite about it. The present road structure is not democratic, as 80 per cent of the roads is used by car owners. IT