

# Bumper to bumper

What our cities must get right before jumping to future transport options



*“Why focus on urban transport?” asked a 2005 government presentation document, somewhat rhetorically. Public opinion overwhelmingly believes that transport is the most important sector in urban development that needs investment. According to a MoUD study, Rs 435,380 crore is required to augment urban transport in just 87 of our cities. How should our cities brace up to choose the right options and how to move forward? **Shashidhar Nanjundaiah** says the answers may lie with themselves.*

“We need to offer incentives for public transport. I would go a step further and say that we must organise disincentives for private transportation,” urban development minister Jaipal Reddy said last month. “I will write to the Finance Minister to urge him to reduce the excise duty on buses to zero per cent.”

The Ministry of Urban Development (MoUD)’s recent thrust on public transport is based on the fact that the contribution of urban sector to GDP is currently expected to be in the range of 50-60 per cent. With Bangalore Metro flagging off its maiden run next month and Mumbai Metro on the cards this year, it may seem redundant to bring up a debate on urban transport infrastructure and the pros and cons of the various transit systems. Yet, both those systems will be litmus tests of how transit systems and the overall urban transport infrastructure will perform. Additionally, they will also validate or contradict Delhi’s experience in Metro rail.

“The total requirement for urban transport as per various estimates is around Rs 36 lakh crore over the next 20 years,” says Sanjeev Lohia, Officer on Special Duty at MoUD and a subject expert on urban transport.

In the absence of guidelines, urban transport is languished as it was a state subject. Cities simply wouldn’t have enough spare change for urban transport, focusing instead on even more pressing lacunas in water, sewerage, etc. Every expert on urban transport agrees that a systematic integration of the transit systems is key to public access. Such integration is necessary in our biggest cities—Mumbai, Delhi, Bangalore, Kolkata, Chennai, Hyderabad and Ahmedabad. Some of these cities—Bangalore and Hyderabad—and many more smaller ones—have planned Metro rail alone. The question is not about whether a particular option of transport—Metro rail, monorail, BRTS, or other bus-based service—will work as the primary mode of urban transport.

The real question is whether our cities are investing prudently in their transport systems, both to make up for today’s chaos and to plan for tomorrow.

### THE MOVEMENT BEFORE THE ACTION

The National Urban Transport Policy 2006 outlines MoUD’s eagerness to encourage PPP and FDI in urban transport. Public participation may be thwarted by the fact that urban transport, because Urban Development and not recognised as infrastructure, does not attract tax benefits under Section 80 1A.

But although the Centre will fill the viability gap up to 40 per cent, neither PPP projects nor city municipalities and corporations seem to have reacted too enthusiastically to urban transport projects. Therefore, the Ministry’s intentions have not seen the kind of aggression we need in the sector to seep into cities and train Urban Local Bodies (ULBs) proactively in association with state governments. Preparing and mobilising cities into action will be one of the biggest challenges in urban transport, and because most of our cities are not exactly cash-rich, viability of urban transport should be supreme.

The choice of mode depends mainly on future demand level on a corridor, the proven capacity of the mode, speed of the mode, cost, engineering feasibility, commuter convenience and other externalities. Smaller cities such as Jaipur, with little or no pressing need for Metro Rail on those technical and financial grounds, have been pushing for it. “Ahmedabad and Jaipur are the only state capitals in India with a population of over three million, and without a Metro rail,” says RC Sharma, Officer on Special Duty—Land & Operations, Jaipur MetroRail, which has already awarded the first phase of

construction to Delhi Metro Rail Corporation (DMRC).

“Cost cannot be the only criterion in choosing a mode of mass transport,” says BI Singal, Director General of Delhi-based Institute of Urban Transport. “There are other factors such as comfort and convenience, benefits to the city, the need to conserve fossil fuel, control pollution and to improve safety that may necessitate the use of other mass transport modes.”

**Feasibility:** The conventional rule-of-thumb is that Bus Rapid Transit System (BRTS) will work best in cities with population less than 30 lakh, and Metro Rail Transport System (MRTS) is feasible for cities with more than 30 lakh people. As a senior government official, who wished to remain anonymous, contended, this norm should not be applied as a general rule since it depends on various other factors such as demographic, income, geographic spread and mobility, and so on.

Mumbai’s story of transport woes continues, although the Mumbai Metropolitan Region Development Authority’s (MMRDA) pioneering efforts will bear fruit later this decade. Much of it can be attributed to a somewhat scientific method of planning. MMRDA Commissioner Ratnakar Gaikwad wrote to us that the authority has “carefully studied” the travelling habits, and has prepared a Comprehensive Transport Study which will cater to Metropolitan Region till 2031. “The suggestion of multi-modal corridor was made in this report,” he said. “The study was completed after taking into consi-

### COST COMPARISON OF MODES

The capital cost of alternative mass transport modes varies widely from location to location depending on city features and engineering feasibility. As a broad guideline, the cost of alternative modes is as follows (2008 prices).

BRT	Rs 15 crore per km excluding cost of buses, depots
LRT	Rs 100 crore per km including land rolling stock and depots
Monorail	Rs 130 crore per km including land rolling stock and depots
Metro rail (Elevated)	Rs 150 crore per km including land rolling stock and depots
Metro rail (U/G)	Rs 300 crore per km including land rolling stock and depots

The initial cost of rail based modes is basically high because unlike buses that use the available road infrastructure, the rail based modes have to bear the cost of its own dedicated infrastructure.

*Also see capacity and speed comparisons in Stats, p 81.*

deration the travelling habits of 996 villages which included few of the premier areas around the city. The study also suggested that along with the local trains, Metro and Mono rail and water transport this area also requires other basic infrastructure facilities for its complete development. To rid Mumbai and its metropolitan region of the traffic woes more and more such projects are required." The city has also tied up with the US Department of Transportation for training and planning purposes (see page 31).

Planning, of course, must also include tricky land acquisition processes, and while greenfield projects such as the Metro rail have their own land acquisition blues, issues come in a different form in the case of bus transit. Because many existing main roads are beehives of commercial activity, widening them is met with harshness. In Pune, land acquisition through negotiations fell through in 2010 on much of the BRTS stretch, leading the Pune Municipal Corporation to resort to forcible acquisition and demolition.

Bangalore Metro is showing the way on how to overcome litigations and trader protests, which have incessantly marred the process. According to senior Bangalore Metro Rail Corporation (BMRC) officials, the alignment for Namma Metro has been planned to cover a bare minimum proportion of private property and plies more on vacant government lands. The compensation for government land was as per the guidance value notified by the government and that for private land was as per the market price. This process has helped the city with the quickest implementation so far among Metro rail systems.

Although the project cost has escalated more than 80 per cent since it was approved in 2005, and the Centre is chipping in with the gap, government land acquisition has meant a huge saving for the corporation. BMRC has spent only Rs 987.58 crore out of the total Rs 1,408 crore earmarked for the entire acquisition exercise. About 33.63 per cent of the money went as compensation to the major chunk of government lands taken. The remaining 66.37 per cent went in compensating the few private properties.

## RIDERSHIP

According to independent information, Guangzhou's new BRTS launched in February became "a system of firsts": the first BRTS to directly connect to a metro system, the first BRTS in China to include bike parking in its station design, the world's highest number of passenger boardings at BRTS stations, highest BRT bus frequency, and longest BRT stations. Current ridership is about 800,000 daily passengers—more than triple the number of passengers of any other BRT line in Asia.

Even our largest cities' dependence on public transport is under 58 per cent (Mumbai), but with the advent of new and comfortable transit systems, that proportion could go up if public communication is effective. At four per cent of the population riding Delhi Metro, the system has not picked up on its ridership, as many experts worry. Government officials worry whether it will turn out to be a white elephant. "A 100 per cent capacity ridership at least during peak hours is essential," says a government official, "for the Metro rail to make financial sense." In Jaipur, public transport ridership is at a mere 19 per cent, lower than that in the bigger cities. As a major tourist centre, Jaipur may dwell on Metro's revenue multiplier effect on tourist traffic, but cities need to do much more to create awareness—hygienic and comfortable—public transit systems that will encourage private vehicles off the roads.

## PPP IN URBAN TRANSPORT

The prospect of long term viability is why corporations with deep pockets, such as Reliance, have even ventured into

Metro rail projects. Recently, Delhi Metro architect E Sreedharan sparked off a controversy by stating on record (at the India Metro Rail 2010 conference) what he has been saying for a while: "With the kind of investments required for a project like the metro, no private player should ideally come forward to construct it. The world over, metros are run by governments as a public service. Private players cannot expect a return on investment, as perhaps they are in the case of Mumbai." The remark drew flak from MMRDA chief Ratnakar Gaikwad. However, the fact remains that Metro rail may not be immediately viable, given astronomical and increasing costs of land and material.

**NVS Reddy, Managing Director, Hyderabad Metro Rail, says he is drawing examples from Far Eastern countries experiences on risk mitigation strategies for successful Metro on PPP. Integrated multimodal transit system was the key, he stated. "Government officers should not delve into business areas but involve in framing regulatory measures. I whole heartedly support the PPP model."**

The MoUD has been keen to promote public-private partnership in urban transport. While private operators have been running public transport in Delhi and Kolkata for a long time on government-built roads and infrastructure, PPP in a definite form is new. Indeed, it is BRTS that may be much more feasible in a PPP form. Unfortunately, the government seems to be lackadaisical about bus systems in PPP because the investments are relatively low.

It is a Catch 22 situation. IT

## BOTTOMLINE

**1** Metro rail may be the transport of the future, but devoting energies, land, lanes and infrastructure to a more efficient bus transit system is a much more immediate need and more viable option for most of our cities. Smaller-value PPP with higher viability must be encouraged.

**2** Most cities are not doing their planning and projections scientifically before embarking on capital-intensive urban transport projects. MoUD should push its training programmes and toolkits on implementation of urban transport solutions to as many cities as it can. Cities are a national problem, not just state issues, and central intervention will also act as a checks-and-balances mechanism.

**3** Most of our cities are accustomed to apologising for their city transit systems. Cities must aggressively promote their public transport in its new, more usable forms (the successful "Bus Day" campaign in Bangalore is a case to be studied). Where needed, private sector can be made to chip in on building the communication network with the public.