

Metro mania

The success of Delhi Metro has triggered off a rush with many other cities, including Mumbai, Bangalore and Hyderabad clamouring for similar mass rapid transit systems.

A report by **Aradhana**



URBAN MIRACLE: Sreedharan executed the Delhi Metro project at top speed

Ferrying over 500,000 passengers daily the Delhi Metro rolls on quietly below the façade of the city on time every time, unrelentingly demonstrating to its customers that it is one of the few world class services that the city has to offer.

Called Delhi's urban miracle, the Metro never fails to surprise one with its clockwork efficiency, the cleanliness with which its stations are maintained and the sheer courtesy of its staff that greet passengers with a smile every time. With only the first phase operational, the service is changing the life of its passengers subtly.

Says Neeraj Bajaj, a regular passenger: "I live in Dwarka and used to commute to CP (Connaught Place) by car.

However, since the Metro has come up I use it and though my commuting time is the same I travel in a pollution free, air-conditioned environment and arrive at my destination on time, completely un-hassled and stress free. It is also a cheaper way to travel as I save on both fuel as well as parking costs."

Covering a distance of 65 kilometres the Metro today links Delhi University to the Central Secretariat, Shahadra to Rithala and Indraprastha Barakhamba to the Dwarka sub-city. The tickets too are modestly priced between \$0.14 and \$0.5 and give direct competition to both buses and three-wheeler auto-rickshaws.

While a mass rapid transit system (MRTS) would appear an obvious choice

for a city besieged with traffic problems, it was a challenge setting it up. The city planners deliberated between setting up a sky-train network or a mono rail before settling for the Metro.

Says Dr E Sreedharan, the architect of the project: "It took sometime to convince the authorities that the metro was the best option for the city." Once the go-ahead was received from the various authorities, Sreedharan set about executing his project at top speed.

Realising that there was a paucity of funds for infrastructure projects in the country, he signed up with the Japanese Government to supply the project with a soft loan covering about 60 per cent of the total project cost through the Japan Bank of International Cooperation. The



CLOCKWORK EFFICIENCY: The Metro provides an efficient service to the thousands of commuters who travel on it daily

SETTING NEW STANDARDS

Going about constructing the Metro, DMRC officials set standards with whatever they did. Be it the speed with which Phase 1 of the metro was completed, or the minimum disturbances that were there on the roads when the construction was being carried out.

Accustomed to having dirt marks on the roads when any kind of construction activity is being done, the Metro surprised all by washing the truck tyres whenever any truck was to leave the construction site. In addition the company exercised strict control over its expenses.

Officials point out that Sreedharan stipulated that the total manpower strength in the company shall never exceed 45 persons per kilometre of network. This is

close to the international norm. Which is also why Sreedharan is very keen on expanding the network as fast as possible.

For, longer the network's distance, one-third of the costs gets more evenly distributed and the burden is that much lower. The energy costs of the Delhi Metro have also been kept under tight control because of a special agreement it has signed with the Delhi government.

This ensures that the Delhi Transco charges the Delhi Metro only the cost it incurs while purchasing power from the generators. For the remaining one-third of its cost, the Delhi Metro management has put in place a system to monitor each cost item so that nothing goes out of control.

Central and State governments have jointly financed 28 per cent of the project cost through equity contributions in addition to providing a subordinate loan to cover the cost of land acquisition that roughly works out to 5 per cent of the project cost. The first phase of Delhi Metro cost around \$2.1 billion.

As it was the first major project of its kind in the country, the Delhi Metro Rail Corporation (DMRC) officials depended on international consultants to guide the development of the project. Thus, while Pacific Consultants International from Japan advised on engineering matters, Korea's Rotem and Japan's Mitsubishi supplied the initial shipment of coaches, and France's Alstom led the consortium responsible for the design of the automatic train control system.

In addition, various Indian government agencies were also working together with the DMRC. The contractors came up with a plan to assemble the metro carriages in Bangalore and roll them on Indian Railways track straight to the New Delhi Metro.

Another key issue was ensuring that the project gets completed on time. This would ensure that there were fewer cost over-runs. While phase I has been completed and 65 kilometres are operational it is pertinent to mention that all four lines of the phase got completed three

years ahead of schedule.

Says Sreedharan: "We finalise deals in 24 hours." He adds that on the metro project the average duration of major tenders was 19 days, compared with the three to nine months that is the norm. Kolkata was the first city in the country to have a metro system.

DMRC is now involved in the construction of the second phase of the project that is scheduled to be completed before the Commonwealth Games in 2010. The second phase has a total length of 121.11 kilometres and 79 stations and is set to be completed in a target time-frame of three-and-a-half years. It is a tough target and even globally no metro has been completed in that time-frame. Confesses Sreedharan: "It will

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be a tough challenge. I don't think any country has covered such a vast area in such a short time."

The financial success of the Metro also needs to be taken into account. Of the 135 Metros operational in various parts of the world only four make operational profits and the Delhi Metro is one of them. This is despite the fact that the tickets of the Metro are at lower prices than were previously envisaged.

Says Sreedharan: "The social benefits are seen to far outweigh the commercial loss that the operations entail." Learning from the Hong Kong experience the company has laid a lot of stress on non-operator revenue. Therefore, today as much as 20 per cent of the annual revenues of the Delhi Metro come from commercial property development in the Metro station complexes and advertisements.

The Metro has also spawned the success of properties where its stations are located. One of the biggest beneficiaries has undoubtedly been Dwarka, a small sub-city close to the Delhi Airport where land prices have spiralled ever since the Metro began its service there.

Retailers with shops close to the stations have benefitted with increasing footfalls and conversions. Adds Sreedharan: "We should develop the areas around Metros really well. There should be projects for this. Have property development and give the area an entirely new look. This is what we have been trying."

The success of Delhi's Metro has led to other cities clamouring for their own metros. There are 10 other cities – including Bangalore, Hyderabad, Ahmedabad, Mumbai, Kochi, Chennai and Kolkata – that are in process of setting up their own Metros. Mumbai will be the next city to have its own Metro and it is being planned by the Anil Dhirubhai Ambani (ADA) group. The DMRC is providing consultancy services for this venture.

In addition the organisation has also been roped in by the Karnataka government to provide consultancy services for its Metro. Metros are all set to transform urban India, bringing relief to millions of commuters and also ensuring a cleaner atmosphere in the cities. 