

BANGALORE, 27 JULY 2014

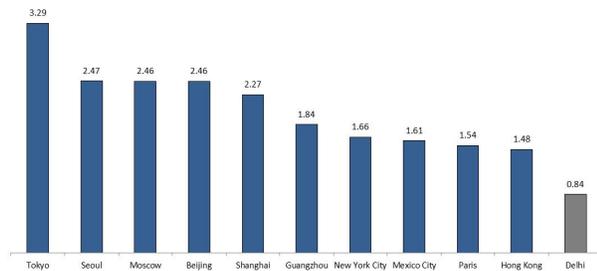
NEWS

METRO RAIL SYSTEM IN INDIA - GLIMPSES

“A metro is an urban guided transport system, mostly on rails, running on an exclusive right-of-way without any interference from other traffic or level crossings and mostly with some degree of drive automation and train protection. These design features allow high capacity trains to run with short headways and high commercial speed. Metros are therefore suitable for the carriage of high passenger flows.”

Metros are major capital assets of cities. Urban Metro Projects have proven to be very useful in decongesting large cities. There are around 148 cities around the world had a metro system with nearly 540 metro lines, 9,000 stations and 11,000 kilometres of line infrastructure by the end of 2013. The world's metro systems carry 150 million passengers per day, moving daily the rough equivalent of Bangladesh's entire population, the 8th most populated country in the world!

Busiest Metro System in the World – Annual passenger trip (Figures in Billion)



(Source: [World Metro Statistics 2013](#))

The earliest metro system, the London Underground, first electrified underground line opened in 1890, making the London Underground the world's first metro system. With more than 500 km of infrastructure, Shanghai has the world's longest network. London is the longest non-Asian network in the ranking, with New York, Moscow, Madrid and Paris.

The journey of [Metro System in India](#) was started with the creation of Delhi Metro Rail Corporation (DMRC). Kolkata Metro is the oldest metro system in the country, but the momentum to build metro network around the country.

Operational Metro Systems in India:

The metro system is currently operational in 5 cities across India. Delhi is leading with 190 kms of operational length and the construction for another 140 kms is in progress. Kolkata is the oldest system in India, whereas, Mumbai is the latest entrant in the league of Metro System in India. Gurgaon is the first metro project under Public-Private Partnership mode.

S. No.	State	Urban Area (UA) 2011	Extended UA 2011	Operational Length	Under ground	Elevated
1	Delhi	16,314,838	21,753,486	190.03 kms	48.06 kms	141.97 kms
2	Mumbai	18,414,288	20,748,395	11.40 kms	--	11.40 kms
3	Kolkata	14,112,536	14,617,882	25.55 kms	17.00 kms	8.55 kms
4	Bangalore	8,499,399	8,728,906	16.60 kms	--	16.60 kms
5	Gurgaon	876,824	(NCR)	5.10 kms	--	5.10 kms

(Source: Authorities Websites)



S. No.	State	Planned Length	Underground	Elevated	Completion by
1	Delhi (Phase III)	140.00 kms	55.00 kms	85.00 kms	2016
2	Mumbai (Phase II)	40.20 kms	--	40.20 kms	Planning
3	Bangalore (Phase II)	25.70 kms	8.88 kms	16.82 kms	2015
4	Gurgaon (Phase II)	7.40 kms	--	7.40 kms	2016
5	Kolkata Expansion	18.65 kms	9.12 kms	9.53 kms	2015

(Source: Authorities Websites)



Metro System Under Construction

Jaipur is in the advance stage and is currently running commercial trial. The system will be open for the public in the month of September/October 2014.

S. No.	State	Urban Area (UA) 2011	Extended UA 2011	Planned Length	Under ground	Elevated
1	Chennai	8,696,010	8,917,749	45.00 kms	24.00 kms	21.00 kms
2	Hyderabad	--	7,749,334	71.16 kms	--	71.16 kms
3	Jaipur	--	3,073,350	35.16 kms	7.88 kms	27.28 kms
4	Kochi	--	2,117,990	25.25 kms	--	25.25 kms



Chennai Metro

Hyderabad Metro

Jaipur Metro

Kochi Metro

Future Metro System

In the Union Budget 2014-15, the government has emphasised that for two million plus cities, planning of metro projects must begin now. The government of India has set aside a sum of INR One (1) Billion for Metro Projects in Lucknow and Ahmedabad.

S. No.	State	Urban Area (UA) 2011	Extended UA 2011	Planned Length	Under ground	Elevated
1	Ahmedabad	6,240,201	6,352,254	35.20 kms	7.00 kms	28.20 kms
2	Pune	--	5,049,968	60.52 kms	60.52 kms	--
3	Surat	--	4,585,367	100.00 kms	--	--
4	Kanpur	--	2,920,067	84.00 kms	--	--
5	Lucknow	--	2,901,474	34.10 kms	13.51 kms	20.59 kms
6	Nagpur	2,497,777	2,583,911	39.81 kms	3.30 kms	36.51 kms
7	Ghaziabad (NCR)	2,358,525	(NCR)	9.41 kms	--	9.41 kms
8	Indore	--	2,167,447	85.00 kms	--	85.00 kms
9	Coimbatore	--	2,151,466	--	--	--
10	Patna	--	2,046,652	60.00 kms	--	--
11	Kozhikode	--	2,030,519	44.00 kms	--	--

(Source: Authorities Websites)

Opportunities:

The government of India is looking to increase the participation of private players for the development of Mass Transit System in the country and is considering to provide VGF (Viability Gap Funding). Currently, Gurgaon and Hyderabad Metro are being developed on PPP mode by IL&FS and L&T respectively. In fact, Hyderabad Metro will be the world's largest metro rail project in a public-private partnership. It is expected that more projects will be bid out on PPP mode.

The metro rail transportation sector in India would see increasing competition as multinational companies vie for lucrative contracts and subcontracts to metro projects across the country. The transportation companies - Bombardier of Canada, Alstom of France, Siemens of Germany and Hyundai Rotem of South Korea, are investing big money in India's metro rail sector. Alstom has recently setup its manufacturing unit for rolling stock in Sricity, Andhra Pradesh.

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