

## Does India need a bullet train?



Prime Minister and his Japanese counterpart jointly laid the foundation stone of the country's first bullet train project using Japanese 'Shinkansen' technology between Ahmedabad and Mumbai which costs \$19 billion. The train will cover a distance of over 500 kilometres in around two hours. The project is expected to be completed by 2022. Japan has extended a soft loan for the project through Japan International Cooperation Agency (JICA).

The construction of the corridor will begin in 2018 and is expected to be completed by 2023. The 508 km long Mumbai-Ahmedabad high-speed rail corridor will cover 12 stations and will have a 21 km tunnel under the sea.

The 'Vision 2020' document presented by former Railway Minister to Parliament also speaks of HSR. In 2012, the High Speed Rail Corporation was set up. In May 2013, during former Prime Minister's visit to Japan, it was decided that the two countries would co-finance a joint feasibility study for the Mumbai-Ahmedabad high-speed corridor.

The general reaction has been: does India really need bullet trains that come at such an exorbitant cost, when the same money can be used more judiciously for improving the existing infrastructure?

Why do we need such a capital-intensive project when many other pressing issues need resources?

India's pioneering 500-km 'bullet' train corridor between Mumbai and Ahmedabad, being executed in collaboration with Gujarat and Maharashtra. Japan's offer of the \$12 billion assistance at highly concessional terms is not transferable to other rail projects.

- A few selected high-density HSR corridors are adequately justified for a mature mobility mix and for the country not to be left out of essential technology upgrade especially for vast country like India.
- As a McKinsey Global Institute report suggests, by 2025, the number of households earning ₹2,00,000-₹10,00,000 annually will have risen to 583 million from the current 50 million. More intensive urbanisation as well as rising incomes would lead to higher travel tendency.
- Energy-efficient HSR (High Speed Rail) technology could become an alternative to depleting fossil fuel reserves, climate change, overcrowded airports, delayed flights and congested roads.

- Massive saving of foreign exchange for the country as trains will use the electricity rather than the costly air-grade fossil fuel used in aircraft which has to be imported.
- Providing services from and to city centres, HSR serves important centres en route, providing value for time through express and easy access to tier-II and tier-III cities.
- In India, uproar constantly increases for passenger trains providing hassle-free, speedy, safe, reliable and comfortable travel. Providing high frequency, up to 14 trains per hour, the Shinkansen ever since its inception in 1964 has maintained a unique record of no fatal accident.
- Already, Indians are travelling more; they are travelling longer. By 2020-21, Indians will travel on average thrice as much as they travelled in 2000-01.
- There are a lot of commercial and industrial establishments in this region. As a result, this sector witnesses busy passenger traffic through the year.
- HSR could be used as de-congestion of metropolitan cities as traffic will be diverted from road to rail.

For high density routes of 200-800 km, airlines cannot match HSR in terms of total journey time inclusive of first/last-mile connectivity with airports/stations and ancillary security checks, etc; below 200 km, road transport has an edge; beyond 800 km, air option is better placed.

#### Other benefits of HSR

- It will increase investment in infrastructure, ignite the economy, and create jobs. The project will strengthen the Make in India initiative as large number of employment opportunities will be created in the country.
- Bring down the transportation time and cost to lowest in the world. It will bring-in massive efficiency in Indian economy.
- Build a local base for the next generation of the railway locomotives for export.
- Indian logistics cost will significantly come down, as of now it is thrice of China
- It will make Indian exports and manufacturing cost competitive. Indian Human Resource coupled with Japanese skill and technology, will make India a manufacturing hub of the world.
- Land requirements are small.
- Accelerate scientific research within the country in high-end material science and magnetic science.
- The bullet train will not only bring about economic transformation but will also lead to social transformation of the country.
- India will have strong integration across regions, bringing down the regional differences and increasing people-to-people contact.

There is no denying that the present infrastructure of the Railways should be strengthened to avert accidents. At the same time, we cannot ignore that India is a vast country and the need to travel faster has become a necessity. High speed rail corridor will give a new momentum to the development of New India.

What should government do to overcome the challenges to HSR in India?

- Transfer of Technology from Japan and Local manufacturing industrial base
- Perform more frequent inspection to ensure high confidence of safety at high-speed.
- Dual usage for both passenger and cargo.
- Manpower development.
- Avoid cost overruns in the future.
- Should take initiatives to garner more ridership into HSR.

Way ahead

Till now there are 15 countries worldwide in the exclusive high-speed rail fraternity. Calling Shinkansen bullet train as one of the safest train networks in the world, he said Japan will share with India the expertise of safe transport which will help the entire Indian rail network.

It is unfortunate that despite being the third largest railway network in the world, in terms of kilometres of track and the number of passengers who travel, India does not have a single high-speed corridor. Till now there are 15 countries worldwide in the exclusive high-speed rail fraternity.

While air transport can cater to such needs, the capacity that it offers simply cannot match that of the railways. While making incremental changes to improve existing infrastructure is desirable, it is equally important to adopt proven state-of-the-art technologies.

An elevated corridor that allows trains to run at three times the speed of existing trains will usher in a new era for the railways in India. The cost for laying this railway line may look excessive, but the benefits that are going to accrue from it are worth the cost. Apart from reducing the commuting time, it will also lead to an increase in the passenger-carrying capacity.

While any change which appears disruptive is likely to be opposed, it is more important to consider the overall long-term benefits, resulting from the high speed rail project