

THE TIMES OF INDIA

Japan cites Shinkansen's safety record as it eyes high-speed rail contract

Indrani Bagchi, TNN | Feb 6, 2015, 05.09 AM IST



<p>India's quest for bullet trains has brought Japan and China as competitors for the India market. </p>

NEW DELHI: With the feasibility study for the country's first high-speed railway in its final stages, Japan expects India to make a "big, clear decision" on the Shinkansen. Japan is also pushing for a 360-degree project rather than a piecemeal one.

Speaking exclusively to TOI, Masafumi Shukuri, chairman of the International High-Speed Rail Association (IHRA) which owns the famed Shinkansen bullet trains, said, "Rather than saying India only requires economic or financial cooperation, or that finance and technology should be considered separate from developing human resources, they cannot be separated and should be an integrated decision. If India is getting financial assistance from one country, the technology of that country, wisdom, experience and human resources of that country should be utilized as well."

[India's quest for bullet trains has brought Japan and China as competitors for the India market.](#) While Japan, in its 51 years of operating the Shinkansen, has reported 100% safety and delays of "under one minute", China's high-speed rail system, which covers more kilometres, has had at least one well known accident killing many people. On the other hand, China's system has a definite price advantage.

Shukuri hotly contested it. "There has been no instance when Japan's cost is higher. There is no proven instance when the initial cost by Japan's Shinkansen has been higher."

The evolution of Shinkansen was made keeping passenger safety and minimum environmental impact in mind, Shukuri said. "We have been doing that for decades. From that perspective, our costs are extremely competitive. Japan has continued to make efforts to reduce the cost. It's not just the initial cost that you should look at. You need to look at lifestyle cost, over three to five decades. We need to be able to use these systems properly, and therefore we need inspections, training etc. We put a great deal of effort into various aspects of the system. It's because of this we have been

able to achieve the record of no fatalities or injuries in Japan. If you don't have those systems in place, you could end up with accidents, which add to the cost," he added.

A question that Indians will be asking when the project is unveiled is whether high-speed railway is really necessary? Does it justify the cost? Shukuri said high-speed railway had transformed Japan's economy, society and lifestyle. He believes they will perform the same "decisive role" in India's transformation.

"Japan introduced the Shinkansen in 1964, when it still wasn't an economically rich country. In these 51 years, we have polished the project, expanded the network. As a result of that, we have seen a clear change. I believe that one of the roles high-speed rail will play in India is to bring about that decisive change," he said.

Building the Shinkansen in India will be no easy task, particularly because the train requires a dedicated rail track, unlike some others. Defending it, Shukuri said, "The most important principle of success of Shinkansen in Japan is in fact the dedicated track, and the ATC (automatic train control) which controls the system that maintains safety and speed, prevents collision. If we shared tracks with the conventional network, it might have been cheaper, but we would not have been able to achieve absolute safety. The capacity would be limited as well, as would future development. In 1964, there were two trains per hour. Now there are 30 trains per hour both ways. The dedicated line is indispensable for high speed railways."

The feasibility report will be ready in June, in time for the Modi government to take a decision on it before the visit of Japanese Prime Minister Shinzo Abe.

THE TIMES OF INDIA (Full Interview)

'Shinkansen will transform India the way it transformed Japan'

Indrani Bagchi, TNN | Feb 6, 2015, 05.02 AM IST

*The Shinkansen will transform India the way it transformed Japan, says **Masafumi Shukuri**, chairman of the International High Speed Rail Association in an exclusive conversation with **Indrani Bagchi**.*

The story of high speed trains in India appears to have become a competition between Japan and China?

I don't know whether its a battle between Japan and China. I have no idea which countries India is comparing Japan with. No matter which country we are compared with, if the assessment is done properly on a range of parameters choosing Japanese system is a better decision.

Why is the Japanese system better?

First, it's important when looking at high speed rail projects to see why it's being made, why its necessary to make so much investment, why it should be introduced in the country. Japan introduced the Shinkansen in 1964, when it still wasn't an economically rich country. In these 51 years, we have polished the project, put in a lot of hard work into expanding the network. As a result of that we have seen a clear change. Shinkansen brought about a transformation in the economy, society and lifestyle of the people of Japan. I believe that in relation to high speed rail in India, one of the roles high speed rail will play in India is to bring about that decisive change. That should be one of the targets for any decision.

Building Shinkansen and bringing about social economic change, one needs an excellent system. Without that there can be no decisive transformation of social-economic environment of the country. We have had 50 years of absolute safety in operation of our high speed railway system, To make that possible we have built highly trained human resources. No other country has that sort of experience. Japan is the only country that has demonstrated experience of transforming socio-economic environment through such railway system.

How do you justify the higher cost?

There are people who say Shinkansen is good, high quality, but cost is high as well. We are clear that is not the case. When you look at building high speed rail with the same parameters, there has been no instance when Japan's cost is higher. There is no proven instance when the initial cost by Japan's Shinkansen has been higher.

Japan land mass is small and a high concentration of population. We need to be cautious of preventing environmental impact as well. We needed to make sure we didn't spend too much money on the system,, and build a solid infrastructure. We have been doing that for decades. From that perspective, our costs are extremely competitive.

Japan has continued to make efforts to reduce the cost. Its not just the initial cost that you should look at. You need to look at lifestyle cost, over three to five decades. Japan has been operating the system for over five decades and brought about social change.

We need to be able to use these systems properly, and therefore we need inspections, training etc. We put a great deal of effort into various aspects of the system. Its because of this we have been able to achieve the record of no fatalities or injuries in Japan. If you don't have those systems in place, you could end up with accidents, which add to the cost. Japan makes efforts to keep cost down. to do that we have revised and renewed our system consistently. Japan is absolutely competitive on that front. Our lifecycle costs are lower, more efficient, and safer.

Despite 51 years, people say the Shinkansen network is not very long. Is that correct? If so, why?

The total length is 2400 km. It will extend further next month, and will extend again next year. We are covering the whole of Japan. We are doing this little by little, not by building the entire network all at once. We started off in the areas with large population density and main economic centres. Then we moved to other areas — from Tokyo-Osaka to Morioka, and elsewhere.

The areas that are not covered by the Shinkansen, we have a network of highways and conventional rail network. These are ares with much fewer people or economic activity. Rather than waste money building high speed railway in such areas, we felt it to be better to concentrate on the more economically active areas.

The Shinkansen needs a dedicated rail track. Is that efficient?

The most important principle of success of Shinkansen in Japan is in fact the dedicated track, and the (automated train control) ATC which controls the system that maintains safety and speed, prevents collision. In 1964, Tokaido Shinkansen started operation in Japan running at 200 km an hour. We started discussions in 1957-58 regarding the options at the time. There were four options presented. First was a dedicated standard gauge track of 1435 mm, second was have another track next to conventional Tokaido line, third was the 1057 mm narrow gauge track which was in use in Japan, and fourth option was to do nothing. Ultimately, decision was to go for a dedicated standard gauge track including automatic train controls even though it would be the most expensive.

Without that Shinkansen would not have developed the way it has. If we shared tracks with the conventional network, it might have been cheaper, but we would not have been able to achieve absolute safety. The capacity would be limited as well, as would future development.

In 1964, there were two trains per hour. Now there are 15 trains per hour. This was possible because of the dedicated line.

We have followed the philosophy of crash avoidance, of absolute safety, on time, no delay. The delay of "under one minute" is actually caused by natural factors. We are achieving that with 30 trains an hour (travelling both directions).

It is because of this that we have been able to bring about transformation for Japanese society. Dedicated line is indispensable for high speed rail.

What is the status of the Mumbai-Ahmedabad feasibility study?

A joint study is being carried out by the governments of India and Japan. This has progressed and the study is in its final stages. The Indian government says final report due in June. I think that is achievable. Both countries working together. Its important to move to the next step smoothly. To do that, the Indian government would have to make some decision on its policies about the project.

Japanese government is fully prepared to respond to India's decision and work with India to take this to the next step. In Japan people are getting ready for the next stage.

What policies does India have to decide on?

Indian and Japanese governments are carrying out a joint study. Report would cover methods, specifications and rough costs of high speed railway, when construction would start, period of construction, project scheme, etc. The Indian government will have to decide on its policy of whether they will respect results of the report. In respect of the project, and matters of finance, development of human of resources, schemes for these, next stages of design, construction, etc. will need to be looked at.

it will be India's project, they have to make those decisions, whether they decide to work with Japan etc. We hope they do.



Masafumi Shukuri | Indian market extremely important for Japan

IHRA chairman says the renewed energy in relations between India and Japan may open the way for more opportunities for economic cooperation, especially in infrastructure



Masafumi Shukuri, chairman of the International High-speed Rail Association, a Japanese industry association.

The renewed energy in relations between India and Japan may open the way for more opportunities for economic cooperation, especially in infrastructure, says **Masafumi Shukuri**, chairman of the International High-speed Rail Association (IHRA). The Japanese industry association of 26 railway companies includes major railway makers such as **Mitsubishi Heavy Industries Ltd** and **Toshiba Corp.**

Shukuri was in India recently to pitch the Shinkansen (modern high speed railway, or bullet train) technology. The Indian government has said it is keen to build 4,600km of high speed rail corridors. In an interview, Shukuri speaks of his interaction with **Suresh Prabhu**, the Union railway minister, Japanese industry's interest in providing technology and expertise in the high speed railway segment and the importance of the Indian market to Japan. Edited excerpts:

You met the Indian railway minister Suresh Prabhu to discuss high speed rail projects. Could you share some details and key takeaways from the meeting?

We had a friendly and substantive discussion. Mr Prabhu said that India strongly recognizes the friendship and partnership between the two countries. He also said that it would be beneficial to establish a cooperative relationship between India and Japan in the railway sector. Mr Prabhu

particularly mentioned the Indian Railways is a huge organization with a vast network and large number of staff that plays a very important role in the country's economy.

It is in this context that it is important to organize the rail service and the rail organization in India. The minister also said that it was important for high speed rail to be established and introduced, the process for which needs to be accelerated for the development of the nation. He said that he would like to work with Japan to help India progress.

In response to the minister's comments, I made a few points too. First, Japan went through the process of modernization of its railway system and we experienced the hardship (that comes with) that kind of reform. I said that we are very keen to share that experience and information with India. Second, I emphasized that we need to look at what other impact the high speed rail was able to bring in Japan. Apart from just records or achievements, it has impacted the Japanese economy and society. It brought decisive change in the lifestyle of the people of Japan. So it isn't just transportation, but it is transformation for the nation.

I also had a meeting with chairman Debroy (**Bibek Debroy**, chairman of a committee for the restructuring of the railways) and other members of the reform commission prior to my meeting with the minister.

What is the business model underlying this high speed rail? One understands that it won't necessarily make profits considering the high capital costs. So, how would one recover the costs and tariffs?

For one of the routes called Tokaido Shinkansen, we were able to recover the total cost in 7 or 8 years as these lines covered densely populated areas in Japan. While for other routes like Tohoku and Joetsu Shinkansen, which were established in areas with relatively small population, the profit was not large enough to repay the loans and the construction cost placed a heavy burden on the Japanese National Railways (JNR) and led to reforms in 1987.

Under the reforms, the ground facilities were dealt with as public works and it was decided that two-thirds of the cost of infrastructure would be borne by the central government and one-third by the local government.

Private companies like JR East will rent the ground infrastructure. A lease fee will have to be paid to look after this infrastructure, procurement of rolling stock and operational cost. The lease fee would be within the amount of profit so that these companies can drive the operations.

This is how we put together the scheme of privatization while being able to provide network service. We went through extremely difficult times as we reformed the JNR system but we have learnt valuable lessons which have made the Shinkansen the system it is today.

Were you able to zero in on any specific areas of cooperation in these meetings?

In order to achieve safe operations on a day-to-day basis and carry out proper maintenance and provide a high level of service to our customers, we need a variety of staff that is skilled, well-trained and aware.

This is an important factor which is often overlooked because people focus too much on hardware and not enough on software. In 50 years, we have trained our staff and developed human resources which has enabled these achievements.

I emphasized this point to the minister. People, human resources and software are extremely important factors in the operation of high speed rail. We are in a position to fully assist India in this sphere. The rail minister agreed and expressed interest in our assistance.

India is keen to set up about 4,600km of high speed rail corridors. There is already one study commissioned on the 500km stretch between Mumbai and Ahmedabad. It is clear that Japan is keen to participate in these projects. But considering potential competition from Europe and countries like China, how does Japan plan on tapping into this opportunity?

I don't know how other countries will participate in the competition as the project progresses. However, I can say that the government of India will have to make some major policy decisions in order to expedite the project.

The Japanese government and other relevant Japanese organizations certainly look forward to keeping a track of the policy developments that may enable Japanese participation and partnership. What Japan can do in that context is to get India to understand and appreciate the essence of the Japanese Shinkansen.

How key is the Indian market to the Japanese companies and its economy?

Personally speaking, I believe the Indian economy will further expand on a steady basis and will become even greater.

Japan needs to work more on overseas markets and exert its strength in order to succeed and expand economically. The Indian market is thus extremely important for Japan.

In terms of investment or economic relationships, there has always been great potential between the two nations but perhaps, Japanese efforts have not been sufficient. I believe that, going into the future, the relationship between Japan and India should be wider and deeper. I am certain there will be more and more Japanese companies who will be taking such initiatives.

Do Japanese companies view Indian markets differently and with keenness since the Narendra Modi government took over? There is a sense of renewed energy in the bilateral relations between the two countries.

I agree with you completely. Since PM Modi has taken over, the relationship (between the two countries) has been energized.

Even during the time of Mr (Manmohan) Singh, the bilateral relations between India and Japan was very important and friendly. However, especially after PM Modi's visit to Japan, the friendship between the two countries has been further enhanced.

The Japanese people feel that India and Japan should have a closer economic relationship. The strength of our companies has improved due to the current economic policy adopted by the Japanese government post the recent slump.

So, the opportunity for Japanese business to expand overseas has increased and that, in turn, will contribute to a greater presence of Japanese companies here in India.

Can you talk about some of your other international experiences? I believe you helped Taiwan set up a high speed railways system.

In terms of high speed rail (HSR), Taiwan would be the only economy for which Japan has provided full-fledged assistance in development outside of the country. But there are many countries that are looking to introduce HSRs around the world.

In specific terms, there are certain countries with which Japanese government is developing relationships with. These countries include the US, Australia, Singapore, Malaysia, Indonesia, Vietnam, Thailand, UK and Canada.

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'Bullet trains will help change Indian society'

NEW DELHI: Bullet trains will transform not just India's transportation dynamics but will change lifestyles and society, says Masafumi Shukuri, chairman of the International High Speed Rail Association. Excerpts from his interview: What is Japan's offer to India in respect of the proposed Mumbai-Ahmedabad high speed rail corridor? During my meeting with railway minister Suresh Prabhu on Tuesday, I reiterated Japan's offer to collaborate on the project. The Japan International Cooperation Agency (JICA) is conducting a joint study with Indian Railways on the Mumbai-Ahmedabad line. Specific funding options and technology issues will be discussed after submission of the JICA report. Sections say Indian Railways could do well by investing its scarce funds on improving its mainline services instead of taking to the capital-intensive high speed path. At the end of World War-II, Japan needed to invest in several areas. But the government decided to build the Tokaido shinkansen (bullet train). It is important for any government to take a decision and stick to it. India's high-speed project has been in the pipeline for several years. Are you hopeful of a breakthrough? Rail minister Prabhu is enthusiastic. He told me about his rediscussions with Singapore on high-speed funding options. He is considering the possibility of using pension funds for building high speed corridors. Japan is keen to offer assistance. Later this month, Japan is hosting a high speed rail seminar in Delhi.

