



Global Summit on
**Smart, Secure &
Sustainable Cities**
OPPORTUNITIES AND CHALLENGES IN INDIA

17th - 20th July, 2016
Harte & Garter, Windsor,
Royal Berkshire, UK

Modernization and Expansion of Indian Railways- a \$300bn Opportunity

One of the key objectives of the Indian Government under Prime Minister Narendra Modi has been to trigger major investments in infrastructure sector for the next round of development in India. Estimates are that India's infrastructure investment requirements will be over \$1tn over the next decade.

Whilst the development of Smart Cities and Industrial Corridors provide much opportunity for investments, one key area where a major push for reforms and investments can be seen is in transport infrastructure in particular in the Indian railway sector.

Development of railways is critical

In the last year, a considerable amount of activities has occurred across the railway system. According to Suresh Prabhu, Minister of Railways, the Indian Railways is planning to invest \$142bn over the next five years and is expecting to double the investments in the subsequent five years. In other words, the Indian Railways is expected to invest more than \$300bn over the next decade. Recognising the criticality of infrastructure investment the Indian Government has allowed 100% Foreign Direct for the development of railway infrastructure.

Key recent initiatives

Recently Indian Railways has awarded contracts worth \$5.6bn to GE and Alstom to supply diesel and electric locomotives to Indian Railways. While Alstom will manufacture 800 electric locomotives, GE will manufacture 1000 diesel locomotives. Furthermore Indian Railways is in the process of modernization and redevelopment of 400 major railway stations through a Public Private Partnership.

In parallel, Indian Railways is developing numerous high speed and semi-high speed rail corridors. The high speed corridors will run along the proposed industrial corridors. Most of these corridors will be created with foreign collaboration thereby creating major opportunities for European, Japanese and US based companies with expertise in railways sector.

To enable this the Indian Government has created a separately funded and dedicated organisation- the High Speed Railway Corporation.

Similar to the Golden Quadrilateral highway project which was completed in 2012 creating world class highways to connect the key cities of Delhi, Mumbai, Chennai and Kolkata, Indian Railways has also planned a similar solution to create high speed rail corridor to connect these cities through the Diamond Quadrilateral project. The feasibility studies for this project are underway and the plan is for the new railway corridors to pass through 14 states of India thereby connecting numerous cities.

Apart from the high speed rail corridors, India is also working on development and upgrading of many rail corridors to the level of semi-high speed railways corridors which would have trains running at around 200 km/hour. Some of the major corridors which have been approved for conversion into semi-high speed rail corridors include, Chennai-Hyderabad Corridor, Delhi-



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Chandigarh, Delhi- Kanpur, Mumbai- Goa, Mysuru-Bangaluru-Chennai, Nagpur-Raipur-Bilaspur and Nagpur-Secunderabad rail corridor.

Overseas investment and expertise are key

The opportunities for overseas investment are readily apparent. For example, India's first high speed rail corridor which will connect Mumbai with Ahmedabad is being constructed in collaboration with Japan with more than 80% of the \$16bn required being financed from Japan. More recently announcements have also been made for construction of the Bangaluru-Amravati and Vishakhapatnam-Chennai high speed rail corridors. These projects too will be financed and delivered in collaboration with a foreign organisations.

Also a pilot project has already been initiated by India in collaboration with France for upgrading the Delhi-Chandigarh rail corridor to 200km/hour. In addition to Indian rail and financial organisations, major French companies such as Alstom, Thales, Vinci, ETF, Vossloh Cogifer, Actia, Elna, Lumiplan, Railtech and Keolis are involved. The recommendations of the joint study will be implemented across nine major corridors covering over 6400 km.

With over \$300bn of investment required in the railways and recognition by the Indian Government that overseas investment and expertise are critical to success this is an obvious opportunity for overseas companies in terms of investment and development.