

EXPERT SPEAK

NCRTC MD INTERVIEW

Mr. Vinay Kumar Singh



1) First of all, as NCRTC is on the threshold of operationalizing the Priority Section, please accept our heartiest congratulations on spearheading this \$15 billion project. Please tell us about your professional journey and how did the project conceptualize.

Thank you. We have put in a lot of hard work and diligence in the implementation of this project. It's the result of the perseverance of my team, that despite the multiple waves of the Pandemic, we are not only on schedule, but are going to operationalize the Priority Section of India's first RRTS before time, in March 2023.

Over the years, I've gained extensive exposure to infrastructure planning, implementation and maintenance of rail-based transport systems, especially high-speed rails. While working with the Indian Railways in various capacities, I got opportunities to visit & study several global high-speed rail projects and understand the advanced technologies being adopted for such projects. While heading the implementation of the country's first RRTS (Regional Rapid Transit System) project, the knowledge gained over the years helped me to bring new-age technological solutions to the country and to customize & optimize them to suit the needs of the people of NCR.

In the Integrated Transport Plan for NCR 2032, a Multi-Modal Transit System was planned for National Capital Region (NCR), with special emphasis on RRTS, connecting regional centres. Eight corridors were identified by the Task Force and

three corridors were prioritized for implementation, namely Delhi-Meerut, Delhi-Panipat, and Delhi-Alwar. RRTS would offer commuter transit services which would be safe, comfortable, reliable, and reduce the commuter journey time to one-third in the region. With an unprecedented focus on Multi-Modal-Integration, we are creating a huge network of networks by integrating RRTS stations with Railway Stations, Inter State Bus Terminals (ISBTs) / Bus Depots, Airport and Metro Stations, wherever possible, enabling seamless commuter movement. This is also in line with the Hon'ble Prime Minister's visionary 'PM GatiShakti Master Plan'.

2) Your name has been associated with many 'firsts' of this industry, please tell us the 'firsts' you introduced in this project.

India's first Regional Rail is an entirely new project with no precedents in the country. To make this project feasible and to provide the best quality services to the commuters, it was imperative to opt for technologies and practices which are being adopted for the first time in the country or what you call 'firsts'.

To give you an example, we intended to provide a system that allows commuter movement comfortably without the hassle of changing trains. Hence, we decided to provide interoperability between the three priority RRTS corridors. To make it possible we adopted the hybrid Level 3 technology of the European Train Control System, one of the most advanced signalling & train control systems. You'll be happy to know that this will be

for the first time in the world that a combination of the latest ETCS Standard, the latest Interlocking, Platform Screen Door (PSD) and Automatic Train Operation (ATO) over Long-Term Evolution (LTE) radio will be deployed. Similarly, keeping commuters' interest in focus, we are setting many benchmarks in rail-based technologies through RRTS implementation.

Moreover, we have successfully signed two innovative contracts for Delhi-Meerut RRTS, which are first-of-its-kind for the country. Since the rolling stock of this project is unique and has never been used in India before, we wanted to ensure that their maintenance is being efficiently taken care of. Hence, we signed the 15-year maintenance of the rolling stock by the OEM bundled with the supply contract. We've also recently awarded a 12-year comprehensive O&M contract to Deutsche Bahn India. This leapfrog initiative will undoubtedly pave the path for the transfer of knowledge, best international practices, and managerial services.

I have worked on the first section of Delhi Metro as Dy. Chief Engineer and also as the first CEO of NHSRCL to develop Mumbai-Ahmedabad Bullet train project.

3) Kindly highlight some key differentiators between RRTS, Mainline Railways and other Urban Transit Systems.

RRTS is being implemented for the regional commute. Last few decades, Metro Rail services brought in a modal shift in favour of public transport for intracity travel across several cities in the country. However, with a design speed of 180 kmph, RRTS will bridge the gap of a high-speed comfortable and reliable mode of regional or intercity commute, which has been felt over the years. The whole system has been designed for longer journeys, say 50 km or 100 km. Interstation distances are 5-10 km, unlike the distance of metros of about 1 km. So, it is an entirely different kind of service for different objective. Moreover, unlike railways, it is not a time-table-based service but a high-frequency commuter service where trains will be available every 5-10 minutes, whose frequency could further be increased if required.

The other urban transit systems will complement the RRTS services, working as the feeder services for the commuters' journey ahead and vice-versa.

As I mentioned earlier, technologically also, we have brought in several new-age solutions and systems for this project. All four sub-systems being implemented in RRTS are one of the most advanced in the industry and entirely different from the existing metro rail systems. This will set the benchmark for future projects in the country.

4) RRTS project is being implemented for the first time in India. The speed and efficiency with which NCRTC is progressing under your able leadership are commendable. Please share some insights into the best practices being adopted for this prestigious project.

Since the beginning, I have always encouraged my team to adopt best-in-class technological solutions not only to enhance the commuter experience, but also during the implementation of the project.

During the initial years, our in-house IT team developed a project monitoring and management tool, called SPEED. This helped in efficient project implementation and we are even supporting other organizations with it. Similarly, we have deployed technologies like Common Data Environment (CDE), Building Information Modelling (BIM), and CORS (Continuously Operating Reference Station) during project implementation. These technologies have helped keep the project on the scheduled time frame and keep track of the construction speed and progress.

We have also achieved a speed of execution with meticulous planning and innovative & extensive use of techniques like pre-casting. The majority of the RRTS construction is being done at the median of a heavily operational highway. Pre-casting helps in minimizing the in-situ construction, resulting in the minimal deployment of Men, Materials & Machines to the project sites. It also helps in the safe and fast execution of the work, while ensuring good quality control, minimizing inconvenience to the people and reduction in air pollution & noise pollution at the sites.

5) Wabtec has been working with NCRTC through Alstom and is the supplier partner for the Brake system, Pantographs, Event Recorder and Passenger Information System for the RRTS project. Kindly share your experience in working relationships with global rail technology partners like Wabtec.

Considering the high design speed of 180 kmph, every sub-system of RRTS has the application of technology at a different level from its previous applications in the country. Moreover, as a strategy, we have adopted state-of-the-art, future-proof technologies across the rolling stock sub-systems. 100% of trainsets for RRTS have been Made-in-India at Alstom's manufacturing facility in Savli, Gujarat. The role of our global and private partners like Wabtec in this journey has been highly appreciable. They have ensured the timely delivery of products maintaining standards of quality desired for the project. With the help of various components supplied by Wabtec, we will be providing a host of amenities and features for the comfort and safety of commuters during regional travel serviced by these modern trainsets.

6) How do you see the role of large, diversified companies such as Wabtec, contributing meaningfully to the to the growth of rail transportation sector in India?

For providing efficient and reliable implementation as well as Operations & Maintenance for the RRTS project, we are working with partners who are leaders in their respective domains. It is with their continuous support and backing that we've stayed at the forefront of innovation and localization and kept the transformative RRTS project on schedule despite the numerous challenges seen in the past few years. We believe, private sector players will continue to play a key role in realizing the vision of an Atmanirbhar Bharat and in the development of large-scale transport infrastructure projects across the country.



October 2022 – RRTS TBM launching Shaft 01 at Anand Vihar