

GNSS-based barrierless tolling to reduce 5 million tons of carbon emissions annually: Primus Partner & Think Infra

India's road infrastructure is expanding rapidly, driven by the government's vision for a 'V Bharat.' However, the tolling ecosystem faces challenges such as congestion, inefficiencies and environmental impact. Modern solutions like GNSS-based barrierless tolling systems have emerged as a way forward, promising faster commutes, transparent operations, and sustainability.

Authored by Online Bureau | ET Government



This approach paper marks a significant step toward creating a seamless and efficient tolling infrastructure in India.

Read on: <https://government.economictimes.indiatimes.com/news/smart-infra/gnss-based-barrierless-tolling-to-reduce-5-million-tons-of-carbon-emissions-annually-primus-partners-think-infra/117274197>

Article Content:

Primus Partners, in collaboration with Think Infra, today unveiled a thought paper titled "Barrierless Tolling in India: Towards Efficient, Sustainable & Innovative Infra". The paper was launched at an event held at the India International Centre, New Delhi, in the presence of Nitin Gadkari, Minister of Road Transport & Highways, Santosh Kumar Yadav, Chairman, NHAI, and V Umasankar, Secretary, MoRTH, on January 15.

The launch brought together key stakeholders, including A.S. Kiran Kumar, Former Chairman of ISRO, and Vishal Chauhan, CMD of the Indian Highways Management Company Limited, alongside other industry leaders to discuss the roadmap for an efficient, sustainable, and

innovative GNSS-based barrierless tolling solution, aligning with advanced technology standards, addressing critical policy considerations, etc. to modernise India's tolling infrastructure.

India's road infrastructure is expanding rapidly, driven by the government's vision for a 'Viksit Bharat.' However, the tolling ecosystem faces challenges such as congestion, inefficiencies, and environmental impact. Modern solutions like GNSS-based barrierless tolling systems have emerged as a way forward, promising faster commutes, transparent operations, and sustainability.

Primus Partners and Think Infra recognised the need for actionable strategies to transition to barrierless tolling and conducted extensive research and stakeholder consultations. The approach paper draws insights from international best practices and offers a roadmap for implementing GNSS-based tolling in India, emphasising technology integration, policy frameworks, and governance measures.

Nitin Gadkari, Minister of Road Transport and Highways, said, "The GNSS-based barrierless tolling solution is a forward-thinking initiative that will not only enhance traffic flow and reduce congestion but will also bring significant environmental benefits. I am committed to supporting this transformative plan, which aligns with the Government's vision of a sustainable and efficient transportation network."

We will take immediate steps to integrate these solutions and work closely with all stakeholders to ensure its successful implementation, driving both operational efficiency and substantial reductions in carbon emissions. This initiative is an important step towards realising our goal of a 'Viksit Bharat' and a greener future," Nitin Gadkari added.

Key Highlights:

Efficiency Gains: Reduction in travel time by 20–30%, saving 8–10 minutes per toll point on average

Environmental Impact: Annual reduction of 5 million tons in carbon emissions and fuel savings of ₹12,000 crores

Revenue Optimisation: Improved toll collection efficiency by 15–20%, translating to an additional ₹10,000 crores in annual revenue

Technology Integration: Real-time toll collection using GNSS technology ensures accuracy and scalability

The event also featured insightful panel discussions with experts such as Kunal Kalwatia, Chief of Products at NPCI, Akhilesh Srivastava, President of ITS India Forum, and Aman Gera, Partner at AZB Partners. Discussions covered a wide range of topics, including the transition from RFID to GNSS systems, data privacy standards, and implementation strategies.

Davinder Sandhu, Co-Founder & Chairman at Primus Partners, said, "The transportation and infrastructure sectors in India are indeed on a promising path of transformation, with significant strides being made to improve efficiency and sustainability. We feel these strategies would represent a pivotal opportunity for the industry to rethink and redefine how tolling systems operate. By embracing next-generation technologies we are not only addressing operational inefficiencies but also unlocking a new wave of economic and environmental benefits."

The integration of ESG principles, coupled with real-time data analytics and improved revenue collection, offers a unique opportunity for the industry to drive growth while minimising its

ecological footprint. It's evident that the future of tolling is not just about improving traffic. This approach paper marks a significant step toward creating a seamless and efficient tolling infrastructure in India. With continued collaboration among stakeholders and the integration of advanced technologies, the initiative aims to address current challenges and pave the way for sustainable highway operations.