

**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS**

**RAJYA SABHA
UNSTARRED QUESTION NO. 1607
TO BE ANSWERED ON 13TH MARCH, 2025**

AI-DRIVEN INFRASTRUCTURE PLANNING

**1607 DR. PARMAR JASHVANTSINH SALAMSINH:
SHRI LAHAR SINGH SIROYA:
SHRI MAYANKBHAI JAYDEVBHAI NAYAK:**

Will the Minister of Communications be pleased to state:

- (a) the manner in which AI-driven digital twin technology will improve existing infrastructure planning compared to traditional methods;
- (b) whether there is a plan to involve Indian startups and research institutions in developing digital twin solutions;
- (c) if so, the details thereof; and
- (d) the timeline for the first implementation of AI-driven digital twin technologies in India's telecom infrastructure?

ANSWER

**MINISTER OF STATE FOR COMMUNICATIONS AND RURAL DEVELOPMENT
(DR. PEMMASANI CHANDRA SEKHAR)**

- (a) Artificial Intelligence (AI)-driven Digital Twins can revolutionize infrastructure planning and design by addressing the challenges in traditional methods like siloed, static, incomplete data and manual interventions. Unlike conventional approaches that rely on fragmented datasets and periodic assessments, AI-driven Digital Twins integrate real-time, cross-sectoral data from various sources in a privacy preserving manner, ensuring a unified and dynamic planning process ensuring integrated planning and fostering a collaborative ecosystem. Digital Twins enable continuous real-time monitoring and predictive analytics. AI enhances data-driven decision making by simulating multiple scenarios, optimizing resource allocation, and improving infrastructure resilience under various conditions.
- (b) to (c) The Department of Telecommunications (DoT) unveiled the 'Sangam: Digital Twin' initiative on 15.02.2024, by publishing Expressions of Interest (EoI) inviting industry pioneers, startups, MSMEs and academia to participate in the initiative. As a response to the EoI, 169 applicants were selected which included start-ups as well.
- (d) The implementation of AI driven Digital Twins in telecom infrastructure will depend on factors such as regulatory support, stakeholder interest, extent of collaboration, and engagement of relevant parties.
