

VOICE at a Glance in Year 2025-2026

The Voice of Indian Communication Technology Enterprises (VOICE) has achieved significant milestones in promoting indigenous technology, rural digital transformation, and supporting the Atma Nirbhar Bharat initiative. The VOICE initiative is recognized as a "game-changer" for the rural Indian economy, aiming for 100%, fully functional, and locally designed technological infrastructure.

Here are the key achievements and initiatives during Year 2025 – 2026:

1. Smart Intelligent Village & Rural Transformation

a) Smart Intelligent Village concept based on ITU-T Y.4218 Recommendation as a follow up on Workshop organised jointly by VOICE and DoT at Pusa Agriculture Institute:

VOICE developed the blueprint and white paper featuring 18-20 integrated use cases (e-health, education, agriculture, surveillance, AI). for development of Smart Intelligent Village and circulated in many States.

b) Maharashtra Leadership Meeting:

A VOICE consortium of 24 domestic startups and SMEs met with Maharashtra's senior leadership, including Chief Minister H.E. Devendra Fadnavis on June 19, 2025, to present the pilot project, which was offered to be developed in a record time of a few weeks and targeted for deployment on 15 August 2025 at no cost to State or Central government.

c) India's First Smart Intelligent Village:

VOICE deployed the nation's first AI-driven "Smart Intelligent Village" at **Satnavari, Nagpur rural** that was inaugurated by **Maharashtra CM H.E. Devendra Fadnavis** on 24 August 2025.

d) Technological Integration:

The Satnavari pilot features smart agriculture (IoT soil sensors), AI-powered water monitoring, telemedicine, and digital classrooms.

e) Scaling across Maharashtra:

Following the pilot's success, the Maharashtra government announced plans to develop **10 smart villages in every taluka** i.e. 3,580 villages in a phased manner across 358 talukas .

f) High-Level Meetings:

The VOICE team held strategic meetings with Maharashtra CM and then followed up meeting with Deputy CM Ajit Pawar on 13 October 2025 to discuss state-wide scaling and funding of Smart Intelligent Villages in Maharashtra.

g) Smart Village Leadership Award:

VoICE Consortium team members received a "Certificate of Honour" for designing and planning the Satnavari smart village project that was lauded by Maharashtra's top leadership.

h) Budget & Government Engagement:

75 AI Smart Villages: is the first phase of the initiative as included in the state budget for 2026-27 for implementation based on Consortium approach.

i) AI/Drone Initiatives:

The Satnavari project uses AI for many use cases, drones for pesticide & fertiliser spraying, and fire control. Multiple technology options included VSAT, 4G, 5G, Private 5G Networks (CNPN) in support of use cases with Bharat net Bandwidth being the main support line for the pilot project.

2. Atma Nirbhar Bharat & Indigenous Initiatives

a) Consortium Based Approach

VoICE has supported domestic design-led telecom players to reduce dependency on foreign technologies, supporting the Make in India initiative.

b) India as a Product Nation

VoICE focuses on developing indigenous, deep-tech solutions (AI, IoT, 5G, Drones) to make India a product nation, not just a service-oriented one.

c) CNPN Networks

VoICE is actively promoting Commercial Non-Public Networks (CNPN) for private 5G enterprise use cases like smart factories, mines, and public safety.

d) Drone Integration:

Consortium players are implementing drones for precision agriculture and pesticide/fertilizer spraying and supporting fully designed domestic Drones for Defence requirements.

e) Indigenous 4G Deployment:

Tejas Networks in partnership with TCS and CDoT design and domestic R&D efforts, has installed 1,00,000 4G sites in the BSNL Network.

f) Indigenous 5G Development

VoICE members focus on domestic designs, R&D and then manufacturing covering 5G Radio, Core, and other network support systems. That has helped in reducing dependence on foreign vendors. VoICE teams with 15+ startups and other companies including ignaltron, Lekha Wireless, Niral Networks, Coral Telecom, Resonous, Galore and many more are ready to challenge global players in 5G CNPN market segment. Market Access and Spectrum are some bottlenecks.

g) Indian 5G Stack:

15+ VoICE players with their domestic R&D and using the consortium approach have showcased that a full stack of domestic design-led 5G products can be available to meet national and global requirements. Two of the players have already received BSNL orders for 5G in National Capital Region covering around 2900 sites through VoICE members Galore and Lekha Wireless. Some are working on 5G CNPN solutions including on Mining sector.

3. Policy Support, Awards, and Industry Recognition

a) Pandit Deendayal Upadhyaya Telecom Excellence Award 2024:

Niral Networks, CDoT, Saankya Labs (Tejas Networks), member companies of VoICE, were honored with the Year 2024 Award for contributing to India's digital transformation and awards were presented by Telecom Minister Sh. Jyotiraditya M. Scindia during the IMC2025 launch function.

b) IMC Participation, Contribution:

VoICE members were active participants in the India Mobile Congress (IMC), which showcased cutting-edge 5G and AI use cases, Smart Intelligent Village, Industry 4.0, and many more telecom innovative solutions developed by VoICE players through their R&D and other initiatives.

c) Task Forces & Policy Work:

VoICE acts as an industry association engaging in policy reforms to empower Indian tech enterprises.

d) RDI Policy Support:

VoICE provided required support on the Research, Development, and Innovation (RDI) Scheme of Rs. 1 lakh Crore announced by the Government. DG, VoICE was part of advocacy for the policy reforms formulation that will enable local design-led private players to be better prepared for competing globally. Three VoICE members have already submitted their RDI proposals to the Government. /

4. Global and Specialized Engagement

a) ITU Contribution:

The Smart Intelligent Village project is tailored to meet international ITU (International Telecommunication Union) expectations for rural connectivity based on ITU-T Recommendation Y.4218.

b) International Collaborations:

VoICE is aligning its technology roadmap with global players including those from European bodies like European Space Agency, EU, UK.

c) MWC Barcelona:

Some of the VoICE members participated in global events like Mobile World Congress (MWC) Barcelona to showcase Indian design capabilities.

d) Smart Village Solutions into Samridh Gram

Smart Village Solutions from VoICE can provide support to the Department of Telecommunications (DoT) on Smart Samridh Gram projects initiative, which leverages for rural innovation in agriculture, education, and healthcare.

5. Role of Director General of VoICE

As Director General of VoICE, Shri Rakesh Kumar Bhatnagar has been a central figure in aligning India's domestic telecom ecosystem with global standards and national 5G goals. His leadership has facilitated critical partnerships with government R&D bodies and international standardisation organisations.

a) Key Contributions & Global Standards

- i. **ITU SG20 & International Contributions:** Bhatnagar has been an invited expert at the **International Telecommunication Union (ITU) Study Group 20 (SG20)**, which focuses on IoT, smart cities, and communities.
- ii. **IEEE Event Presence:** He recently delivered a keynote titled "*Challenge Globally... Solve Locally! Smart Intelligent Villages for Global Rural Economy*" at the **IEEE Connecting the Unconnected (CTU) Summit** (late 2025), highlighting the global scalability of the VoICE smart village model.
- iii. **Standardisation (TSDSI):** He plays a significant role in working with the **Telecommunications Standards Development Society, India (TSDSI)** to harmonise Indian requirements with global 3GPP and ITU standards, ensuring "Make in India" products are globally compatible and a MoU is work in progress.

b) Strategic Partnerships & MoUs

- i. **MoU with C-DOT:**

Under his leadership, VoICE maintains a close strategic relationship with the **Centre for Development of Telematics (C-DOT) on Smart Intelligent Villages and** supporting collaboration on **indigenous 4G/5G stacks** and promoting domestic IPR in advanced telecom equipment.
- ii. **Bharat 6G Alliance (B6GA):**

Mr. Bhatnagar is currently finalizing an **MoU** between VoICE and Bharat 6G Alliance. This partnership aims to synergize efforts between domestic startups and the national 6G vision to ensure India leads in 6G patents and products.

iii. **Government Advisory:**

As a former Advisor (Technology) to the Department of Telecommunications (DoT), he continues to bridge the gap between private domestic enterprises and the **Ministry of Communications (MOC) and other ministries & PSUs in** providing technical roadmaps for domestic design led digital transformation.