India's
Smart Intelligent Village - SATNAVARI
on
ITU Standards

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VoICE

About Smart Intelligent Village

- **The Smart Intelligent Village initiative is a landmark in India's digital transformation journey for rural community using IoT and ICT use cases and start was done based on industry recommendations from a Workshop at Pusa Agriculture Institute, New Delhi on 10 July 2024 and reference was to Recommendation ITU-T Y.4218 "Internet of things and information and communication technology requirements for deployment of smart services in rural communities"**

- **Inauguration of Smart Intelligent Village at Satnavari, Nagpur Rural, Maharashtra was done on 24 August 2025 by H.E. Devendra Fadnavis, Chief Minister, Maharashtra (India)**

- **VoICE team with 24 Start-ups has demonstrated, how innovation and collaboration can drive rural empowerment, sustainability, and inclusive growth.**

SMIV Use Cases, IoT Platform and Dashboard

SMIV – Network & Use Case

Optional

Lte 5G

eSIM

Internet Cloud

Satellite Connectivity

Bharat Net connectivity

Tower and Control Cabin Infra

W-Fi Network

P-P Link

Backbone

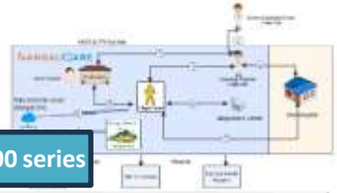
IoT to Wi-Fi

Direct to Wi -Fi

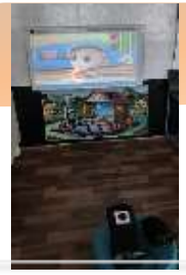
Application

ITU-T Y.4500 series

Smart Wastebin



Health & Medicine: Telemedicine & OPD Management



Smart ECCE – Digital Anganwadi

Security Surveillance

ITU-T Y.4500 series

Rural Drinking Water Supply & Quality Monitoring

Fire Safety

Climate Smart Agriculture

Smart Farming

Drone for Fertilizer and pesticide spraying

Coral PPDR/MCX & Emergency Announcement Solution

Smart Street Light

Smart Cattle Health Monitoring

ITU-T Y.4500 series

IoT Platform

Unified Application Dashboard

NoC

Technical Assistance Center

Monitoring & Operations

Connectivity Internet Cloud

Intelligent Village Use Case Details

1. **AGRICULTURE** • Smart agriculture uses IoT sensors to monitor soil and crop conditions in real time. • The use of automated irrigation and AI tools reduce waste and guide crop planning.

2. **FISHERIES** • Sensors track the water quality in ponds, measuring oxygen, pH, temperature, and alerts sent to farmers in real time.

3. **DRONES IN FARMING** • Drones equipped with Cameras GPS and sensors spray fertilisers based on soil mapping, ensuring precise application and reducing the use of chemicals

4. **SAFETY & CONVENIENCE** • Smart streetlights in the village that adjust brightness based on motion, time, or ambient light.

5. **DRINKING WATER** • An AI-powered system monitors drinking water supply and quality in real time,

6. **HEALTHCARE** • Comprehensive rural healthcare in the village offers on the-spot testing for more than 120 health parameters.

Intelligent Village Use Case Details

7. **EDUCATION** • Online education in the village uses e-learning platforms over a dedicated Wi-Fi network

8. **Wi-Fi** hotspots at the Gram Panchayat offer speeds up to 100 Mbps for free.

9. **SECURITY** • Public protection and emergency system staff can use handheld devices with push-to-talk communication. Alerts and announcements can be broadcast on loudspeakers,

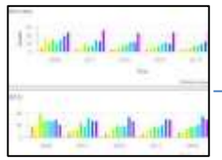
10. **WASTE MANAGEMENT** • Smart waste management system uses IoT-enabled bins and tracking tools to ensure the safe collection and disposal.

11. **FIRE CONTROL** • Automatic fire extinguishers in schools and public areas, shaped like balls and are filled with monoammonium phosphate.

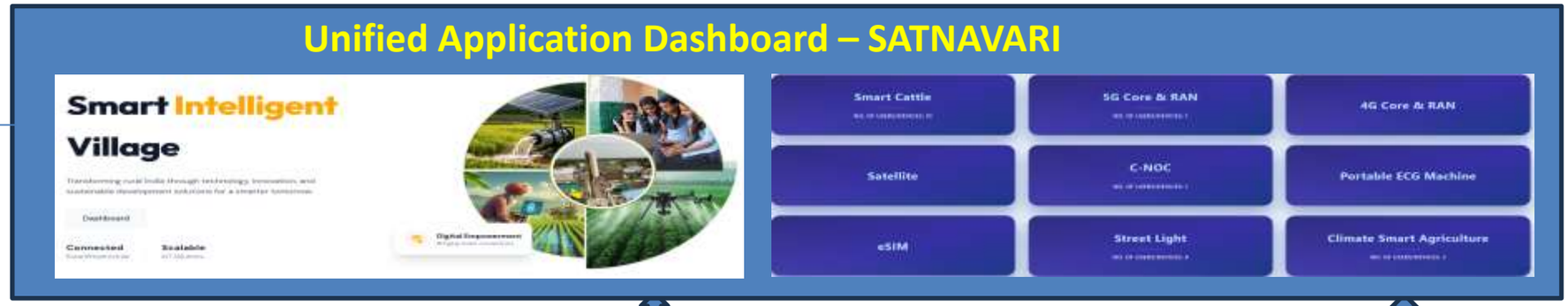
12. **IoT Platform & Dashboard** • oneM2M based platform enables integration of IoT use cases on standard APIs & unified dashboard enables centralized viewing of villages at village, taluk, district and state level by govt. authorities.

Unified Application Dashboard & Standard based IoT Deployment in Satnavari

https://smiv.minfoway.com



Govt. Authorities
Login for
village/Taluk/District/State
viewing



IoT Vendor Login
at CCSP
1.. N

oneM2M IoT Platform/Recommendation ITU-T Y.4500 series
C-DOT Common Service Platform

CCSP

Non-IoT use cases

Smart Agriculture
1.. N

Smart Water Mgmt.
1.. N

Smart Waste Mgmt.
1..N

Smart Surveillance
1..N

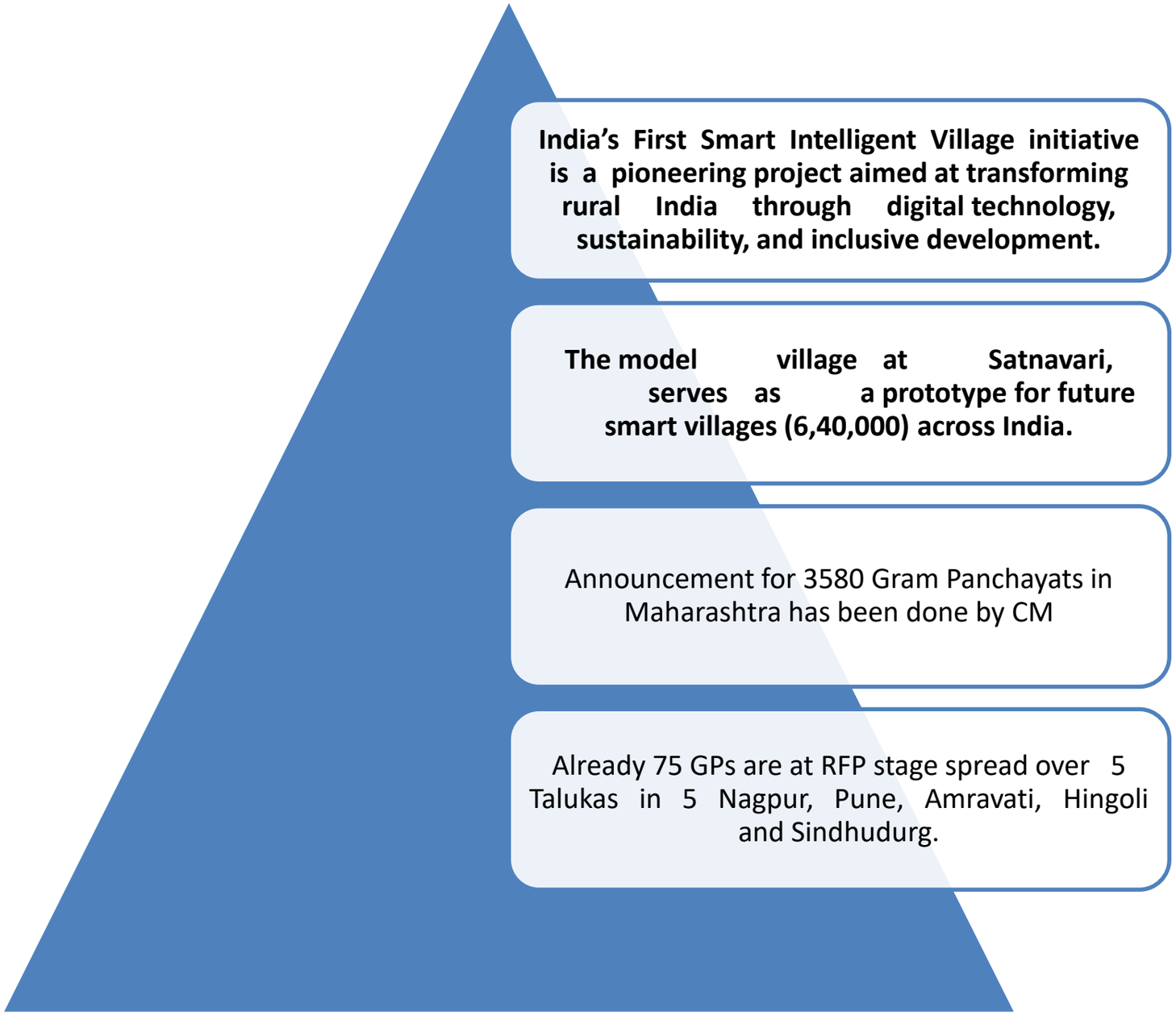
Smart ECCE –
Digital Anganwadi

Wi-Fi Network

Key Benefits:

- Scalability and flexibility
- Interoperability and Compatibility
- Security and Privacy
- Cost Efficiency
- Standard Compliance

Way Forward



India's First Smart Intelligent Village initiative is a pioneering project aimed at transforming rural India through digital technology, sustainability, and inclusive development.

The model village at Satnavari, serves as a prototype for future smart villages (6,40,000) across India.

Announcement for 3580 Gram Panchayats in Maharashtra has been done by CM

Already 75 GPs are at RFP stage spread over 5 Talukas in 5 Nagpur, Pune, Amravati, Hingoli and Sindhudurg.

Thank You