State-wide
Rural Broadband Deployment

Maharashtra

State-led BharatNet initiative in Maharashtra

Project Background

This case study details how STL has been connecting around 3958 Gram Panchayats of Maharashtra through its optical fibre cable network as a part of the Digital India program of the Government of India. The MahaNet network will enable all the digital services of the state to reach the citizens even in remote rural areas to become more connected and prosperous.

Challenges Faced and Mitigated

- Massive scale established in a densely populated state
- Geopolitical constraints like Naxal turbulence
- Tough terrains, 750+ km of dense forest
- Arid conditions, temperatures up to 50°C
- Large diverse scope involving more than 80 partners at any given time
- FRO process challenges
- Continuous Monitoring is required at the location

STL Solution

STL enabled digital inclusion in Maharashtra through its hyper-scale network modernisation powered by the STL's Fibre Deployment Services approach. STL deep-dived into challenges associated with the FRO process and addressed them through cerebral design thinking and innovation at every step.

- A model project for handling complex RoW scenarios
    - FTR and sound applications
    - Single window clearance for NH & NHAI
    - Separate government resolution for forest areas
- Extensive soil-strata analysis and data-basing
- Technology-led granular and accurate surveys
- The execution was done with techniques like 360° photogrammetry
- Highly mechanised operations with the use of specialized augurs and specially designed trenchers
- Ensuring continuity and quality by adopting one Taluka one Partner strategy
- Implemented robotic trenching, drone-led, LiDAR-based survey

Impact Created

STL has helped in creating internet connectivity in 3,000 Gram Panchayats through MahaNet. In this state-led implementation of the BharatNet project, 17 million citizens are connected with a 0% error rate in the execution process and 500 on-ground machines working simultaneously. This has fructified into a robust connectivity of e-education, e-health and e-governance.

3000 Gram Panchayats connected with internet

17 million citizens connected

Rural broadband connecting **4K villages**

Future-ready network design

First-time implementation of IP-MPLS technology in BharatNet