

# Rural Satcom Broadband in India

25<sup>th</sup> November, 2020

**HughesON**<sup>TM</sup>

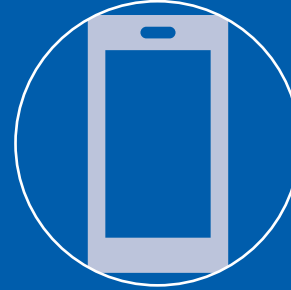
# Three Ways to reach the Rural citizen



Broadband to the  
**roof**  
(HughesNet, Govt  
projects, PPP)



Public/Community  
**WiFi** Hotspots  
(BharatNet,  
Private SPs)



4G/5G **Cellular**  
Backhaul  
(Jio, Airtel, VI,  
BSNL)

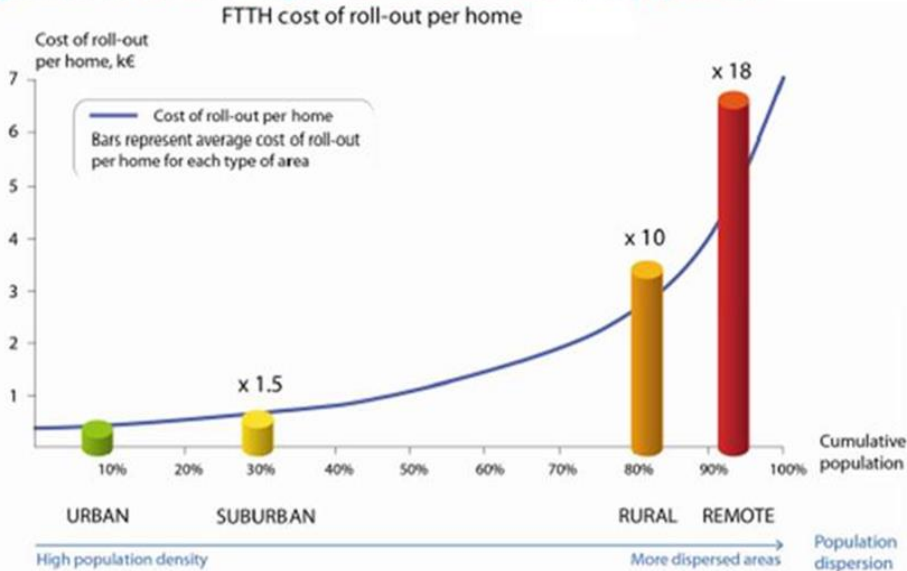


RURAL SATELLITE BROADBAND IN INDIA

# Satellite can deliver – “Broadband to the rooftop”

Cost of roll-out of terrestrial technologies in dispersed areas increases with remoteness

➤ E.g. fiber: 10-20 times higher for the last 10-20% of population



- DTH today effectively competes and complements cable even in cities

- **Similarly, Satellite can deliver broadband to the rooftop thus saving the middle mile**

- VSAT Service Providers can add substantial value by bringing in the killer applications that generates revenue

- Satellite is a very potent wireless medium to deliver broadband in rural areas

# Leading the World in Satellite Broadband

*Nearly 2 Million subscribers in the Americas, more than 65% market share*

**HughesNet**®

## North America:

- **First ISP** to offer satellite broadband at high speeds **25/3 plans**
- Huge success in **North America**, and high adoption across all of **South America**
- Market has expanded: **Proven alternative to DSL**
- **Outstanding customer satisfaction, higher rated QoS by FCC than wired broadband**



# BBNL Satcom Network by Hughes : Leveraging Indian HTS, Truly bridging the divide

## ONLINE COVERAGE HIGHLIGHTS

### Satellite network major to provide fast Net to 5,000 panchayats in 15 states, Galwan Valley

Surojit Singh | The | Oct 16, 2020, 03:02:17



NEW DELHI: Bharat Broadband Nigam Ltd (BBNL) and Telecommunications Consultants India Ltd (TCIL) have selected broadband satellite network major Hughes Communications India to provide high-speed satellite connectivity to 5,000 remote gram panchayats in over 15 states and UTs in places that lack terrestrial internet

connectivity like fiber or cable. Significantly, Galwan Valley in eastern Ladakh, where the going is since May, and border NE states.

The Times of India

### BharatNet project: Hughes India selected to connect remotely located panchayats with satellite broadband

Hughes Communications India said the project includes connecting village panchayats in Nagal, Arunachal Pradesh, Mizoram, Manipur, Meghalaya, Tripura, Assam, Jharkhand and West Bengal.

Business | 15th October 2020 14:29:59



NEW DELHI: The government has selected Hughes India to connect 5,000 remote gram panchayats with satellite broadband under BharatNet

The New Indian Express

### Government selects Hughes India to connect remotely located panchayats with satellite broadband

Oct 16, 2020, 12:43:54 PM IST

#### Synopsis

The 5,000-gram panchayats are located in north-eastern states, including Manipur, Meghalaya, Tripura, Mizoram, Arunachal Pradesh, and the Galwan Valley in Eastern Ladakh, as well as in Andaman and Nicobar and Lakshadweep that lack terrestrial connectivity, such as fiber or cable, Hughes said in a statement on Tuesday.



NEW DELHI: The government has selected Hughes Communications India to connect 5,000 village panchayats in border and Naxal-affected states as well as in island territories with satellite broadband under BharatNet project by March 2021.

The 5,000-gram panchayats are located in north-eastern states, including Manipur, Meghalaya, Tripura, Mizoram, Arunachal Pradesh, and the Galwan Valley in Eastern Ladakh as well as in Andaman and Nicobar and Lakshadweep that lack terrestrial connectivity, Hughes said in a statement on Tuesday.

The Economic Times

### BharatNet: Hughes India to provide high-speed satellite connectivity to 5,000 remote gram panchayats

Hughes India will enable internet service for each gram panchayat using capacity from ISRO's GSAT-19 and GSAT-11 satellites with the Hughes JUPITER System, the de facto standard for satellite broadband implementations, in use on more than 40 satellites worldwide.

ET Telecom | Updated October 15, 2020, 17:03:17



NEW DELHI: Hughes India said that it has been selected by Bharat Broadband Nigam Limited (BBNL) and Telecommunications Consultants India Ltd (TCIL) to provide satellite broadband to 5,000 remote

ET Telecom

### Government selects Hughes India to connect remotely located panchayats with satellite broadband

October 15, 2020 05:46:00 PM



The government has selected Hughes Communications India to connect 5,000 village panchayats in the border and Naxal affected states as well as in island territories with satellite broadband under the BharatNet project by March 2021. The 5,000-gram panchayats are located in north-eastern states, including Manipur, Meghalaya, Tripura, Mizoram, Assam, Jharkhand and West Bengal as well as in Andaman and Nicobar and Lakshadweep that lack terrestrial connectivity, such as fiber or cable, Hughes said in a statement on Tuesday.

CNBC TV18

### Hughes India to connect 5,000 gram panchayats to the internet with satellite broadband under Bharatnet

Hughes Communications announced its selection by Bharat Broadband Nigam Limited (BBNL) and Telecommunications Consultants India Ltd (TCIL) to provide high-speed satellite connectivity to 5,000 remote gram panchayats.

Focused Digital Campaigns...



We ENGAGE with your AUDIENCE

Large Enterprise / Medium Enterprise / Small and Medium / Channel Partners / Resellers / Distributors / End Customers / Gaming Community

Hughes India will enable internet service for each gram panchayat using capacity from ISRO's GSAT-19 and GSAT-11 satellites with the Hughes JUPITER System, the de facto standard for satellite broadband implementations, in use on more than 40 satellites worldwide.

The award is part of the government's flagship BharatNet Project to provide internet connectivity to all 250,000-gram panchayats throughout India.

Voice & Data

# BBNL Project – Toughest sites with >30 Mbps



HUGHES PROPRIETARY

**Hughes**ON.

# APPLICATIONS

**EDUCATION**

**HEALTH**

**FINANCIAL  
INCLUSION**

**CONSUMER  
BROADBAND**

# END POINTS

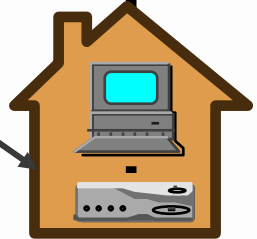
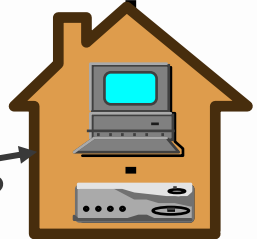
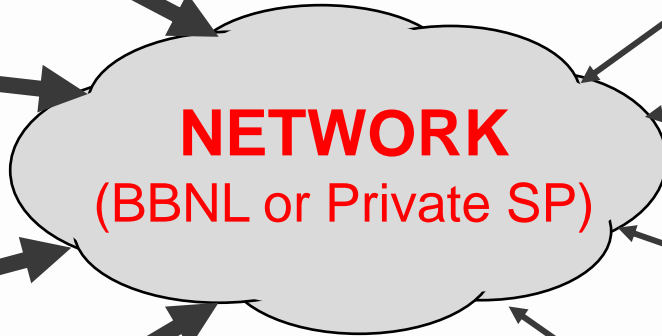
SCHOOLS

HEALTH  
CENTRES

BANK  
AGENCY

HOME  
CSC

**NETWORK**  
(BBNL or Private SP)



# Key Rural Govt projects for Satcom Broadband



Broadband to 6L Village's by 2023

Speeds upto. 25Mbps

Media Mix allowed

Satellite can give 100Mbps

GSAT-11, GSAT-19, GSAT-29, GSAT-20

Telecom Coverage for NE

DONER vision 2022

USOF funded programs

Financial Inclusion using Jan Dhan, Aadhaar, Mobile

Schools, Health, SWAN needs quick connectivity

NEP 2020

Affordable & Quality education to all

Digital two way Education

Multicast brings down cost of delivery and delivers seamless content

Rural Health for all

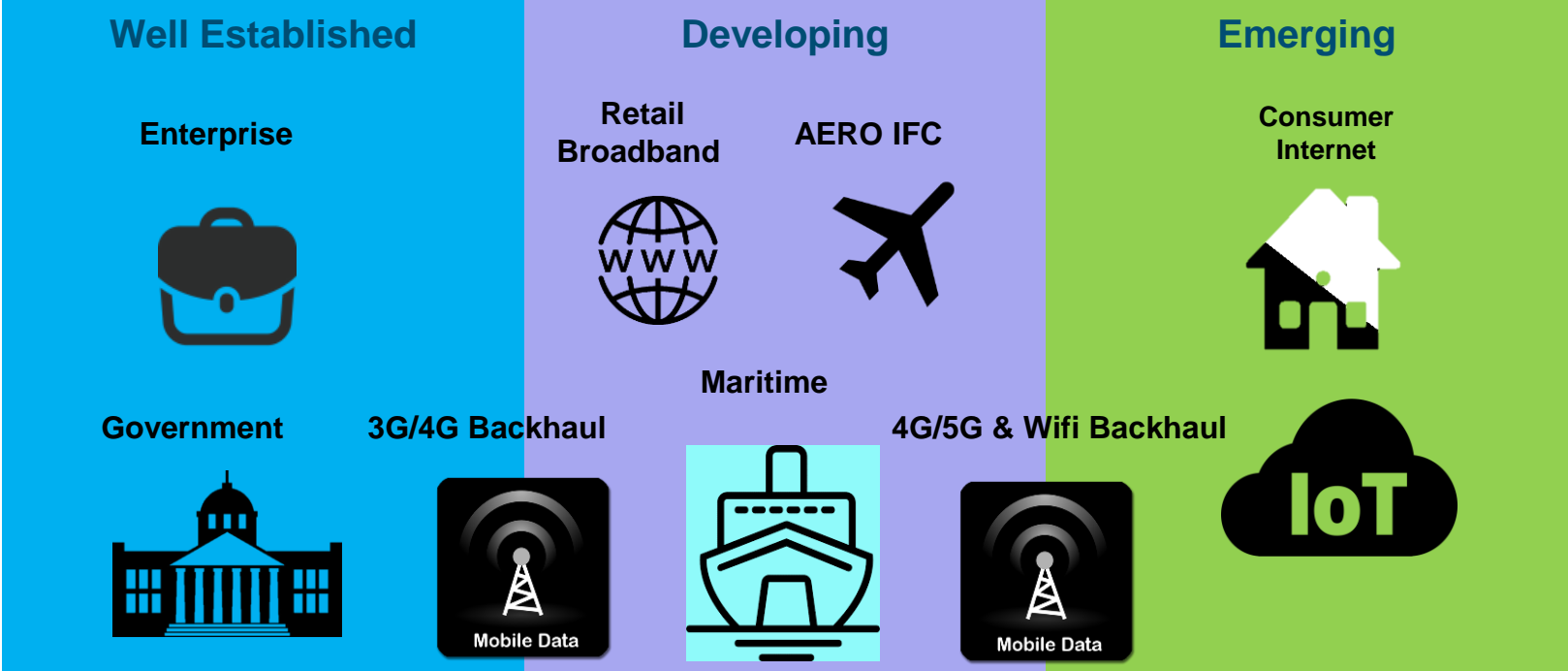
Connect 2L Health Centres to state Hospitals

Telemedicine by CDAC

Arunachal Pradesh LIVE on BBNL VSAT

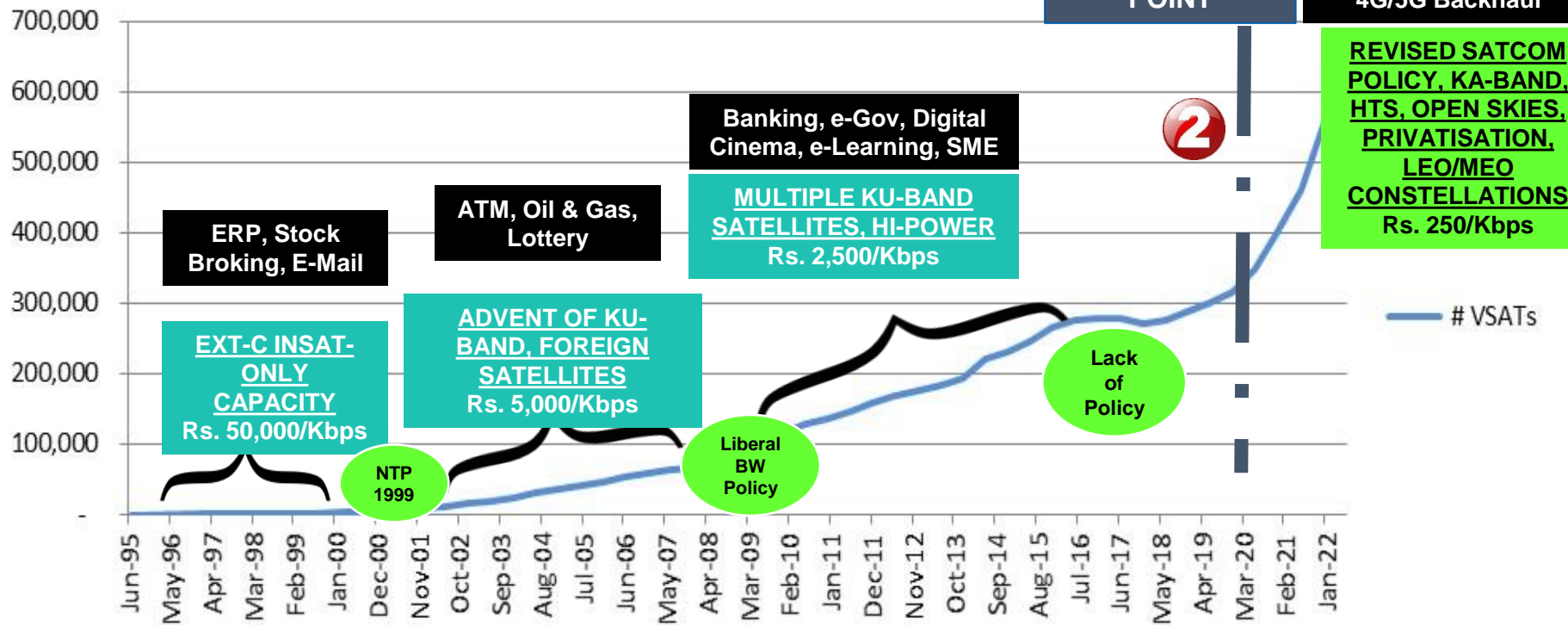


# Evolution of Satellite Broadband in India



# Satellite Broadband in India – Future Growth (provided favourable policies come into force)

## Growth in Industry : Shared Hub VSATs



Retail Broadband, BharatNet/USO, Aero, Maritime, WiFi, 4G/5G Backhaul

REVISIED SATCOM POLICY, KA-BAND, HTS, OPEN SKIES, PRIVATISATION, LEO/MEO CONSTELLATIONS  
Rs. 250/Kbps

# Summary

- There is a huge untapped potential in the Indian VSAT Industry
  - Enterprise, Consumer, Rural, Mobility, Backhaul
- India lags way behind in terms of HTS capacity availability
  - Supply-side economics are critical for success
  - LEO and MEO satellite constellations offer unique inclusion
- Bridging the Digital divide is truly possible only with Satellite
  - Numerous examples from around the world
  - Many goals of the Indian Government can be met



# Thank You!