Public Wi-Fi Growth Challenges and Spectrum

Presentation by Mr Anil Jain, CGM BSNL

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1. Internet Offering and Current Scenario

2. Market Trends

3. Application of Wi-Fi

4. Contribution of BSNL

6. Challenges and Issues

6. Technology Offerings

INTERNET OFFERING

1 LANDLINE BROADBAND

2 MOBILE BROADBAD

3 WI-FI

4 WI-MAX

5 FTTH

6 CDMA BROADBAND

CURRENT SCENARIO

LANDLINE BROADBAND

01 Till now total Wire line Broadband subscribers in May, 2017 has 18.23 million and its declining year on year

MOBILE BROADBAND

02 According to COAI report 2017, the total mobile subscribers by end of August 2017 was 948.54 million down from 954.95 million in July 2017

WI-MAX

03 The technology provides fixed as well as fully mobile high speed broadband connectivity along with roaming feature. It provides users a thrilling
Internet browsing experience.

4

TRAI Report, July 2017 & COAI Report Aug, 2017

CURRENT SCENARIO

FIBER TO THE HOME

04

According to iData Research for FTTH Council APAC, FTTH connections in India stands at only 1.25 million or 0.5% of the total households connections
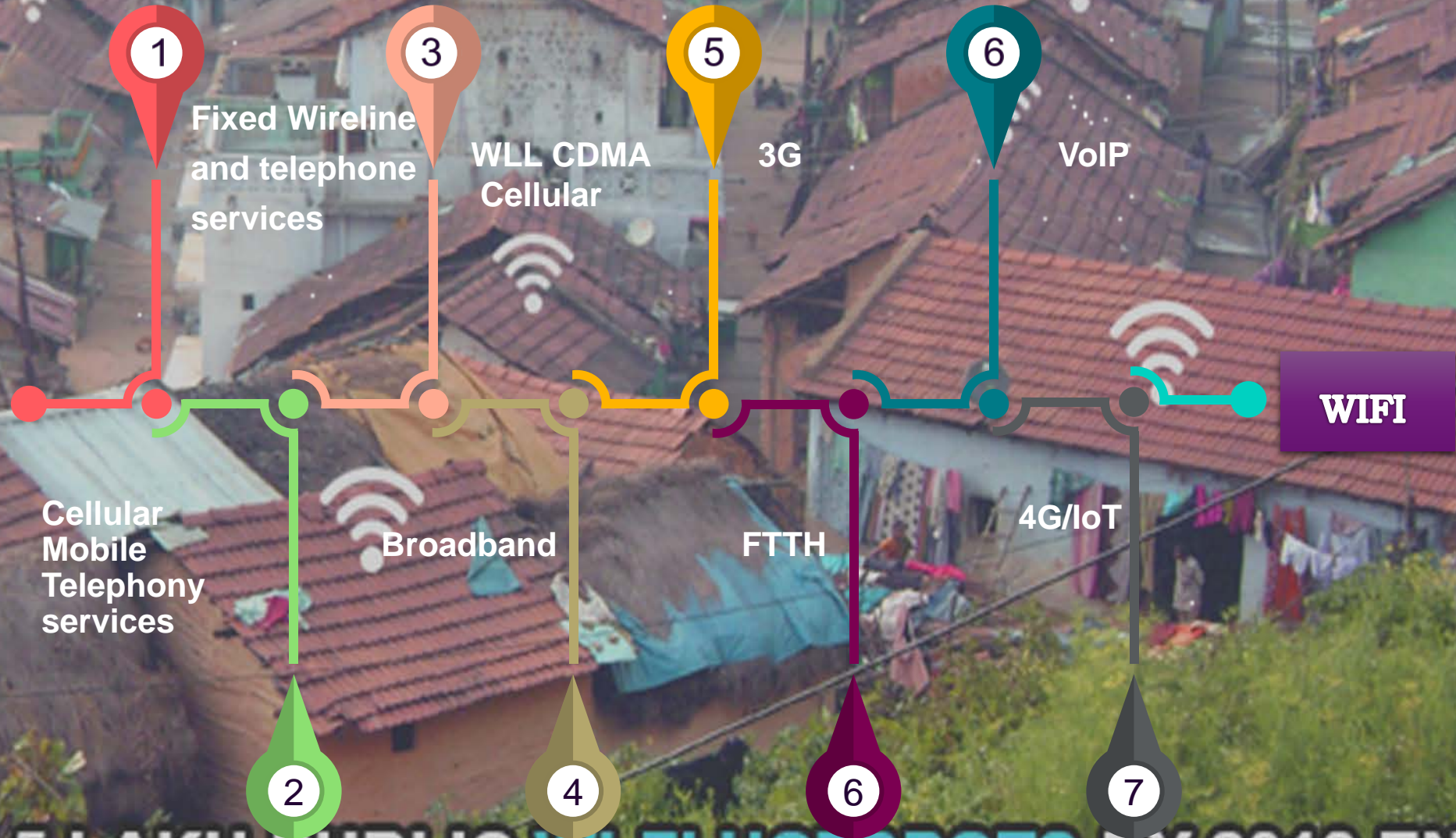
WI-FI

05

Data projections of various research reports suggest that by 2020 Asia Pacific will lead the Global Public Wi-Fi Hotspots Market with a share of 37% led by China, Japan and India

CDMA BROADBAND

06

In an attempt to make wireless broadband more affordable India's largest telecommunication company BSNL launched EVDO Data STV's for all its customers

NEXT TECHNOLOGY ERA

① **Fixed Wireline and telephone services**

③ **WLL CDMA Cellular**

⑤ **3G**

⑥ **VoIP**

Cellular Mobile Telephony services

Broadband

FTTH

4G/IoT

WIFI

② ④ ⑥ ⑦

7.5 LAKH PUBLIC WI-FI HOTSPOTS BY 2018 END!

Market Trends

The Global Wi-Fi hotspot market is poised to **grow** at a CAGR of around **14.2%** over the next decade to reach approximately **$5.1 billion** by 2025
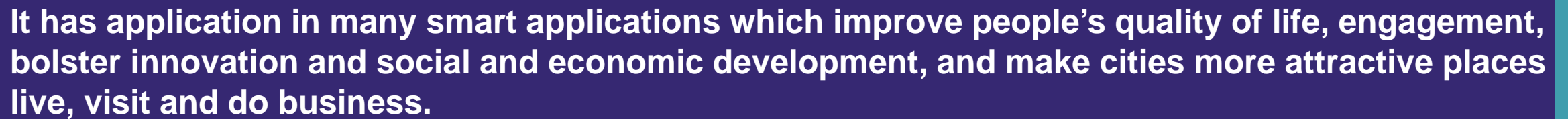
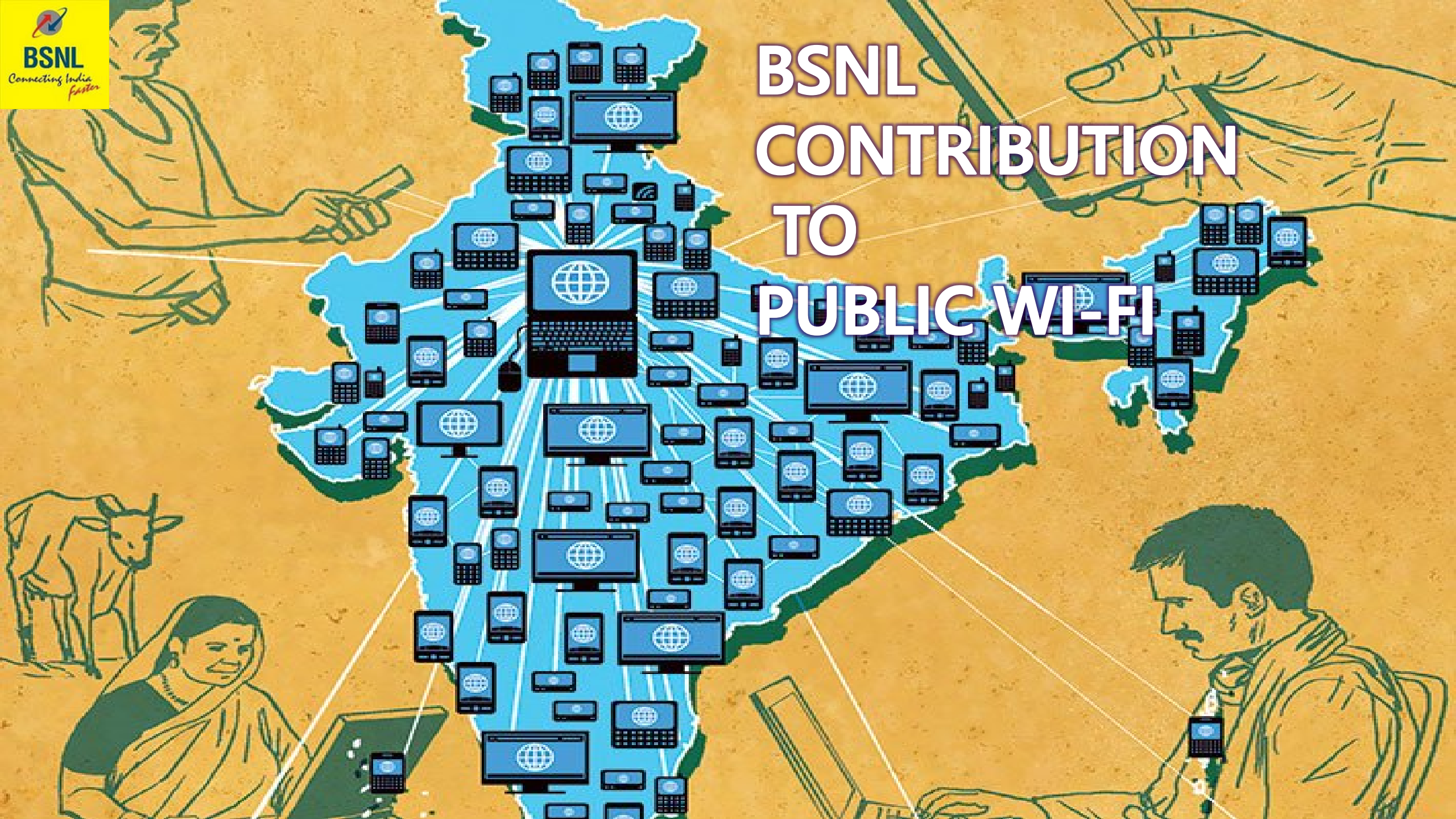Globally, Hotspots have increased **568%** since 2010, But in INDIA they have risen only by **12%**

India has **31,000+ hotspots out** of which BSNL has established more than **17000+** Wi-Fi hotspots

Carrier-grade Wi-Fi hotspots will grow from **14%** in 2014 to **72%** by 2018

INDIA plans to establish **7.5 lakh Wi-Fi hotspots by 2018**

BSNL
Connecting India *faster*

Application of Wi-Fi

Smart Public Services

Smart healthcare

Smart infrastructure

Smart éducation

Smart Surveillance

Smart administration

Smart buildings

Smart transportation

Smart tourism

It has application in many smart applications which improve people's quality of life, engagement, bolster innovation and social and economic development, and make cities more attractive places live, visit and do business.

BSNL CONTRIBUTION TO PUBLIC WI-FI

Contribution of BSNL

⭐ As a major source of offering in landline, enterprise business, broadband and mobile services.

⭐ 17000+ public Wi-Fi hotspots in the country, highest by any operator in India

⭐ By 2018 – 2019, BSNL is planning to install 20000+ Wi-Fi hotspots in country; and have a roaming agreement with 44 million Wi-Fi hotspots globally

⭐ BSNL would be participating in tender published by USOF for implementing 500,000 hotspot in India

Challenges and Issues

Challenges and Issues

Safety and Security becomes the major issues

Difficult to get electric connection in both Rural and Semi - Urban areas

User authentication in the network

Getting the space (Access Point) for the tower

Managing dynamic users and network performance

Absence of single window Clearance Mechanism

Technology Offerings

BSNL's : Few of Smart solutions for Efficient Public Service Delivery

⭐ Smart Poles

⭐ Smart Public Toilets

⭐ Smart Classrooms

⭐ Smart or e-Healthcare

Smart Pole

Intelligent Lighting
- ✓ LED streetlights
- ✓ Solar power based illumines
- ✓ Centralized Controlled

LED Lamp

Smart Group Control

HR/HD Video Camera
- ✓ Security Monitoring
- ✓ Vehicle Monitoring

Public Security
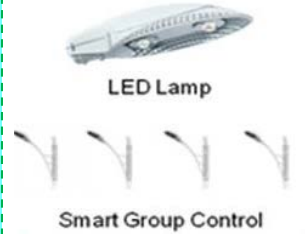
Wi-Fi Access Point
- ✓ Wi-Fi Hotspot

4G

Information Display
- ✓ Advertising
- ✓ Political news
- ✓ Information release

Sensors
- ✓ Environmental Sensors
- ✓ Pollution detecting sensors

Environment Monitoring

Emergency Call
- ✓ Field Contact with Monitoring Centre/ Helpline stations

Education and Skilling in diverse verticals

- 2D/3D digitized content of school syllabus
- Industry Training / Skilling

AR for Remote Education

THANK YOU