STATE OF THE NET: OPPORTUNITIES AND CHALLENGES FOR TELCOS

airtel
Mobile Penetration and Changing landscape

- Total telecom subs: 957.6 Mn
- Overall Teledensity: 76.7%
- Rural Teledensity: 45%
- Broadband internet subs: 75.7 Mn
- Only 8% Telecom subs are broadband internet users

India:
More than 80% internet users are wireless subscribers

Worldwide Forecast:
90% Mobile subscriptions will be Mobile broadband by 2020

- Worldwide Aggregate Mobile Traffic
- 55% of Mobile traffic from video in 2020
- 6.1 Bn Smartphone subs by 2020
- 55% of Mobile traffic from video in 2020
- 25x growth over 5 years!
- WhatsApp messaging volume equalizes SMS volumes
- In 2014, video accounted for ~45% of mobile data traffic

Source: Ericsson Mobility report Q3 2014
Source: TRAI report as of Sep-14
Source: 4G Americas
Source: Ericsson Mobility report Q3 2014
Technology as Key enabler for exponential data growth

Wireless Access Generations

- **The foundation of mobile telephony**
- **Mobile telephony for everyone**
- **The foundation of mobile broadband**
- **Mobile broadband enhanced**
- **Embracing a Networked Society**

Source Ericsson Mobility report Q3 2014

- Enhanced technology
- Enhanced Usage
- Enhanced experience

FTTH

Source: Airtel 4G
Telecom networks – Enriching the lives of millions

- Digital Presence enhancement
- m-Commerce, Education & Health

Customers connected everywhere using 2G/3G/4G/Wifi Technologies

ET Telecom Award:
Airtel initiative with IFFCO -- benefited 2.6mn farmers
Use of Telecom for Social good

Smarter Planet
An internet of things
Digital Presence enhancement
m-Commerce, Education & Health

To live an empowered, happy and sustainable life, millions need to be brought into digi-presence.

Ensure digital presence through far-reaching, even and efficient network coverage and deep internet penetration.

Airtel through its Mobile, DTH and Broadband platforms, facilitates financial services, education and health.

Provide financial, education and health services through mCommerce, mEducation and mHealth.

Karnataka Mobile One

It's not just about the money
DIGITAL INDIA
A programme to transform India into a digitally empowered society and knowledge economy

- Broadband for all Rural and Urban
- Universal Access to mobile connectivity to all villages by increasing network penetration
- Technology for Education - e-Education

- Technology for Health - e-Healthcare
- Technology for Farmers - Real time pricing
- Technology for Justice - e-Courts, e-Police

- Public Wifi hotspots
- School books to be e-Books
- SMS based weather information, disaster alerts

Big opportunity for Telcos to meet this huge expectation
Smart network usage and collaboration

**Data optimization and efficiency**

- **Data Optimization**
  - Data scheduling in non-peak hours
  - Caching
  - ISP traffic optimization
  - Video optimization

- **Network Optimization**
  - Advanced techniques and features
  - Policy control
  - QoS Implementation

**Advanced Techniques**

- **Small Cells**
  - Improved Indoor Coverage and user experience

- **SON**
  - Real time actions based on network performance reports

- **MIMO**
  - Enhanced capacity and improved user experience

- **Enhanced Fast Dormancy**
  - Improved smartphone experience and Battery life

- **Antenna Beam Forming**
  - Efficient network capacity usage and improved user experience

**Collaboration**

- Application Developers
- Network Operators
- Network Vendors
- Device Manufacturers
Challenges Telcos are facing

- **Spectrum**
  - Scarcity of Spectrum
  - High cost

- **Infrastructure**
  - Fiber availability / rollout
  - Difficulty in site acquisitions

- **Device Eco-system**
  - High end devices affordability
  - Limited 4G handsets

- ** Radiation**
  - Lack of understanding with general public

- **OTT Regulation**
  - Dumb data pipe
  - No regulation on OTT players
  - Huge revenue impact

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TRAI’s reserve price for 900 Mhz spectrum is 27 times higher than Spain & 24 times with Singapore

- **Radiation Limit:**
  - India: 0.45 W/m²
  - ICNIRP: 4.5 W/m²
  - India is 10 times more stringent than international recommendation

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Source: UBS
THANK YOU