

# **CABLE BROADBAND – CURRENT STATUS AND WAY FORWARD**

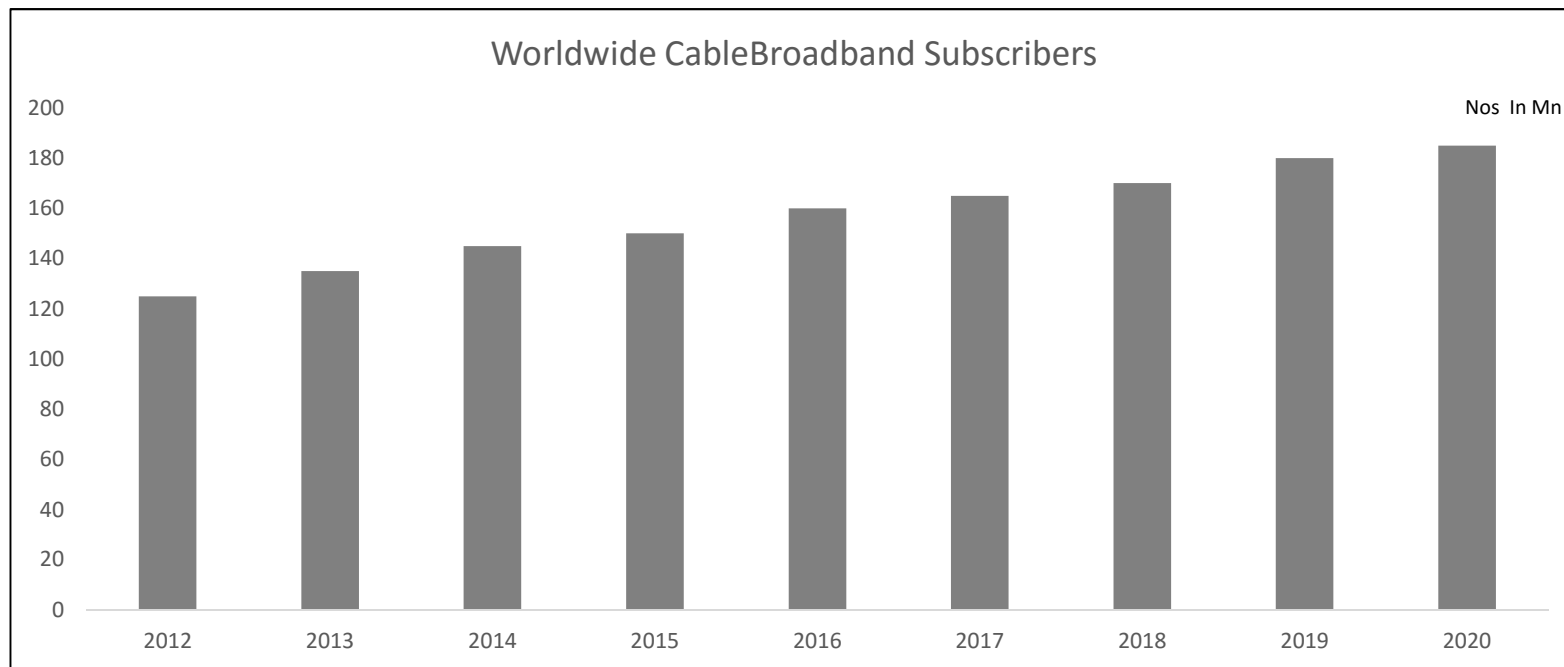
Rajan Gupta , Managing Director , Hathway Cable and Datacom Limited

18<sup>th</sup> Jan 2017 , TRAI's seminar on '**Brainstorming Broadband: Developing a Roadmap for India**

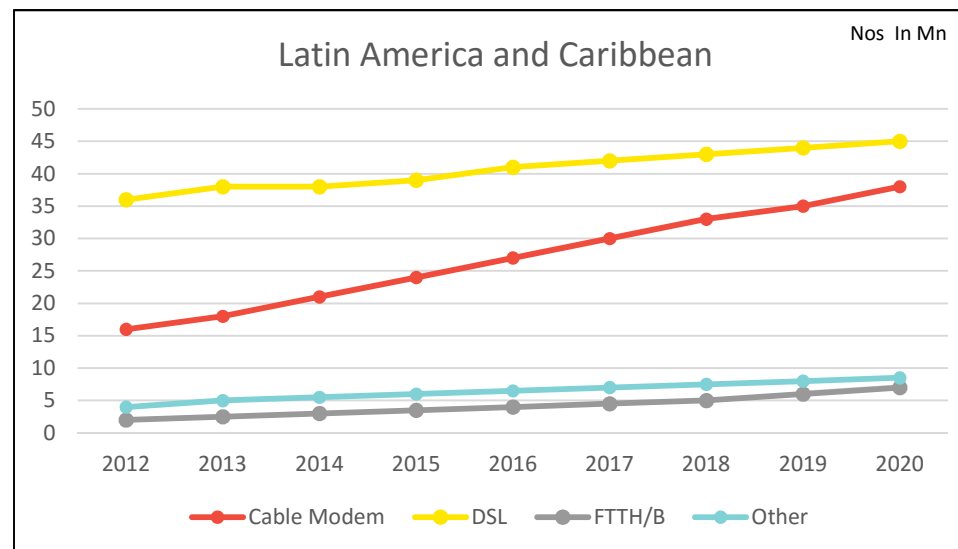
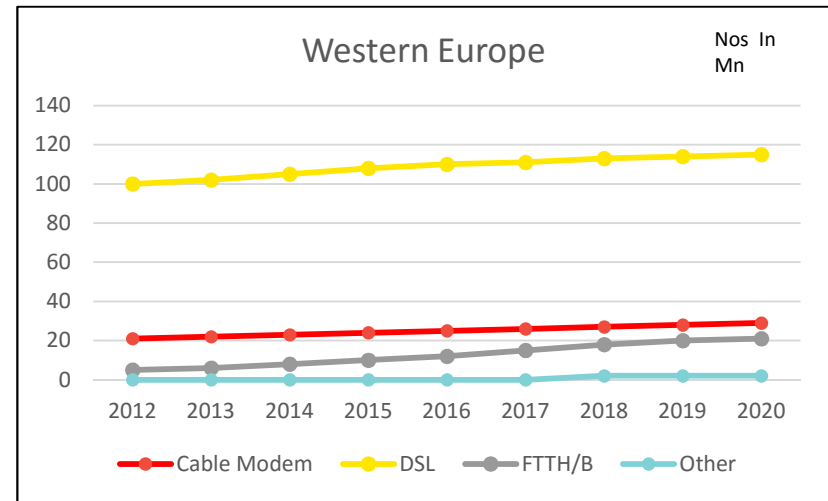
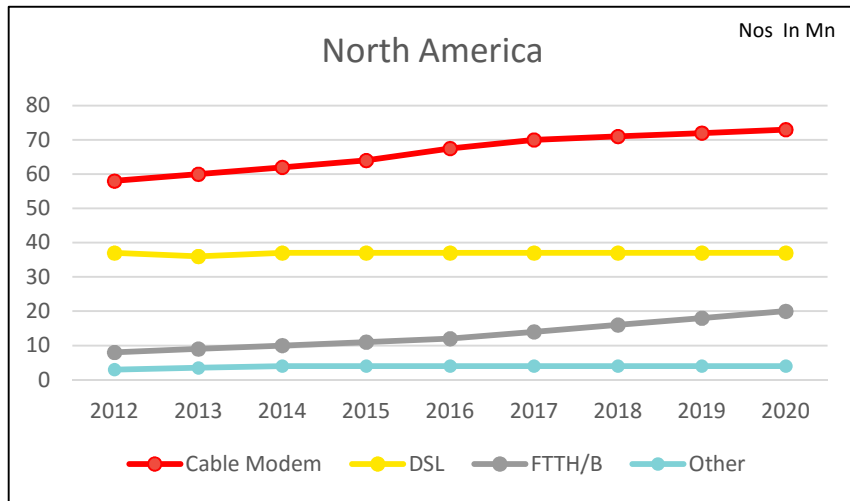
# Cable Broadband- Global Perspective

---

- ▶ Cable broadband across world is a key component of all major cable operators technology strategy aiming to enable every home, business and community to receive high speed broadband while leveraging existing infrastructure.
- ▶ Cable broadband subscribers continue to grow across world.



# Fixed broadband subscribers by technology



# Advantages of cable broadband

---

- Opportunity to continue to leverage existing infrastructure to provide faster speeds without the high cost of full FTTH build .
  - Faster speed to market.
  - Avoid complicated , time consuming and expensive civil works in dense urban environments.
  - Cable services currently compare well to other fixed solutions across key performance metrics ; downstream speed , upstream speed , actual perform vs advertised speeds , latency and packet loss.
-

# Major cable broadband operators

---

## UNITED STATES



- Comcast cable is the largest broadband provider in United States offering cable broadband , video and phone services to 56 million homes .
- During 2015 Comcast grew its high speed internet customer base by 6.2% gaining share in a market which grew at 4.8%

## UNITED KINGDOM



- Virgin Media , covers 13 million homes in UK and 0.9 million homes in Ireland

## SWEDEN



- Com hem, Second largest broadband operator with cable broadband coverage of 40% of Sweden homes .

## CANADA



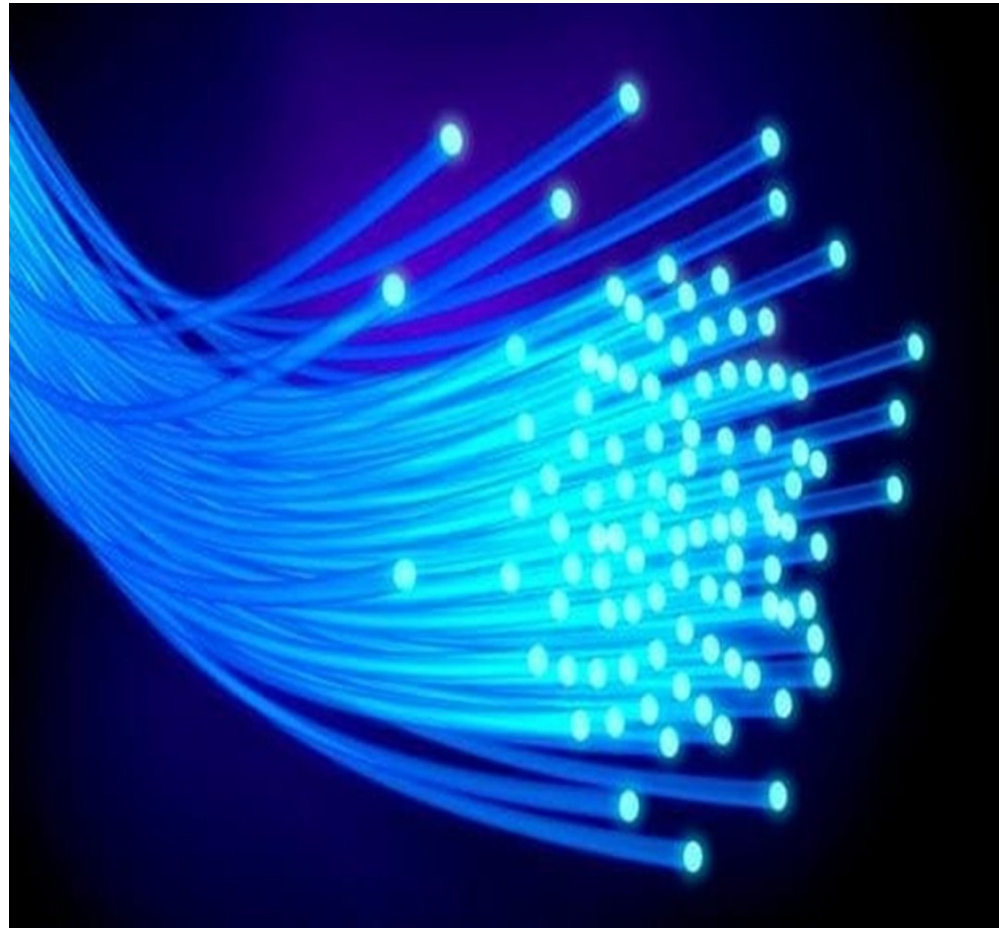
- Offers Cable and high speed broadband services to 41.5 million homes or 30% of Canadian households.



# Cable broadband – Indian scenario

---

- ▶ Multi System Operators (MSOs) provide cable TV services, as well as broadband services to customers. In January 2017, there were over 900 provisional and 230 permanent MSOs registered in India, but only a minority provide broadband services<sup>1</sup>. The MSOs provide these broadband services by obtaining an Internet Service Provider (ISP) license from the government.



<sup>1</sup> Ministry of Information & Broadcasting, Jan.2017

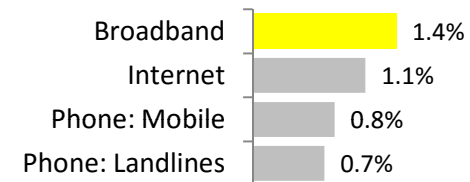
# Broadband has become a key utility and can help the government achieve its key economic goals and Digital India objectives

## Broadband Highways

Like other infrastructure networks before it such as roads and railways, broadband can profoundly transform India's economic landscape:

- ▶ Accelerates the velocity of commerce and boosts employment
- ▶ Expands the ability to communicate, share knowledge and innovate
- ▶ Brings more people into the formal economy via access to e-services and online payment gateways

Impact on GDP Per Capita due to a 10% Rise in Broadband Penetration (Low and Middle-Income Countries)<sup>1</sup>



### Early Harvest Programmes<sup>2</sup>

Short timeline projects such as provision of public wi-fi hotspots in 1mn.+ cities and wi-fi access in all universities

### 'IT for Jobs' Scheme & Skill Development<sup>2</sup>

Training for IT sector jobs for 10mn. students across smaller towns and rural areas over 5 years

### e-Governance<sup>2</sup>

Formalization of the economy and labor markets via access to online platforms for Aadhaar, certificates, degrees, payment gateways etc.

### De-Monetization & e-Kranti<sup>2</sup>

44 mission mode projects around digitizing services relating to land records, income tax filing etc.

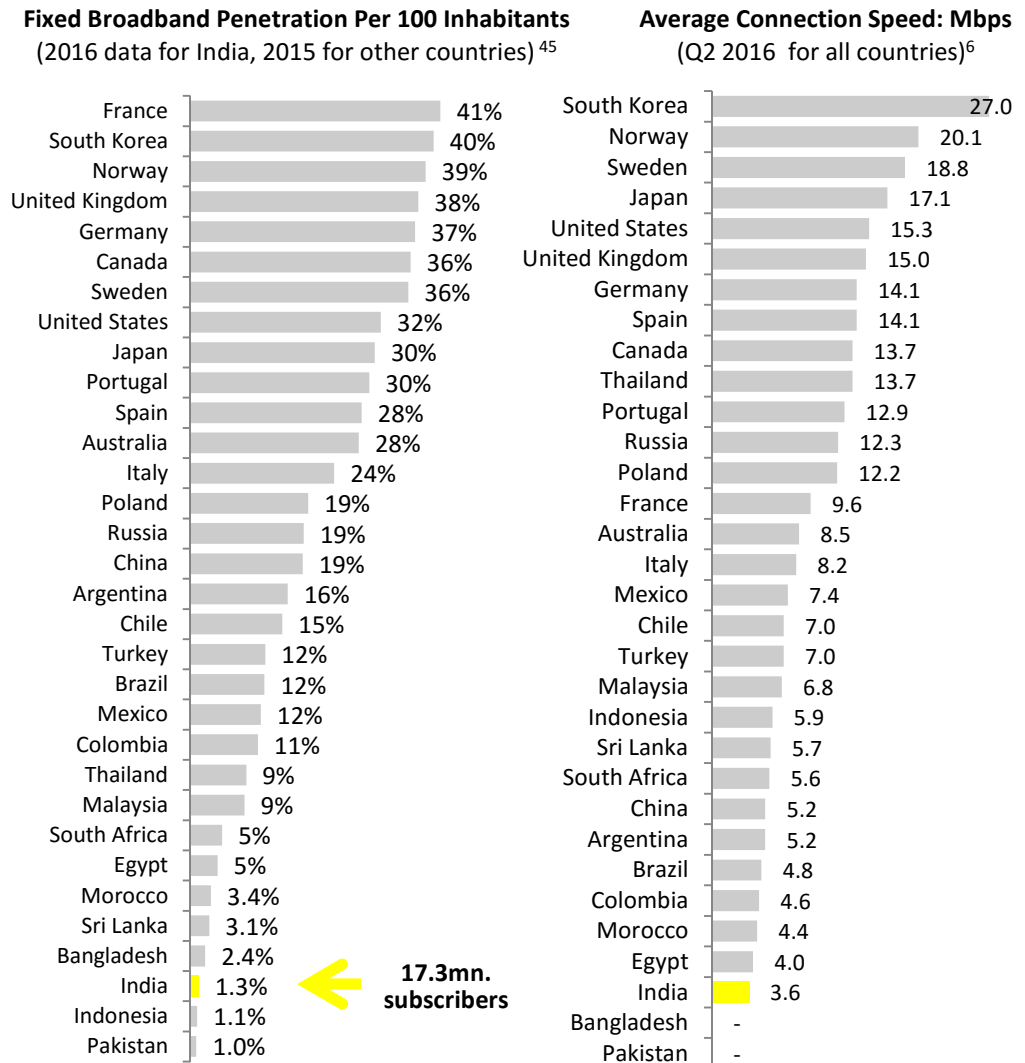
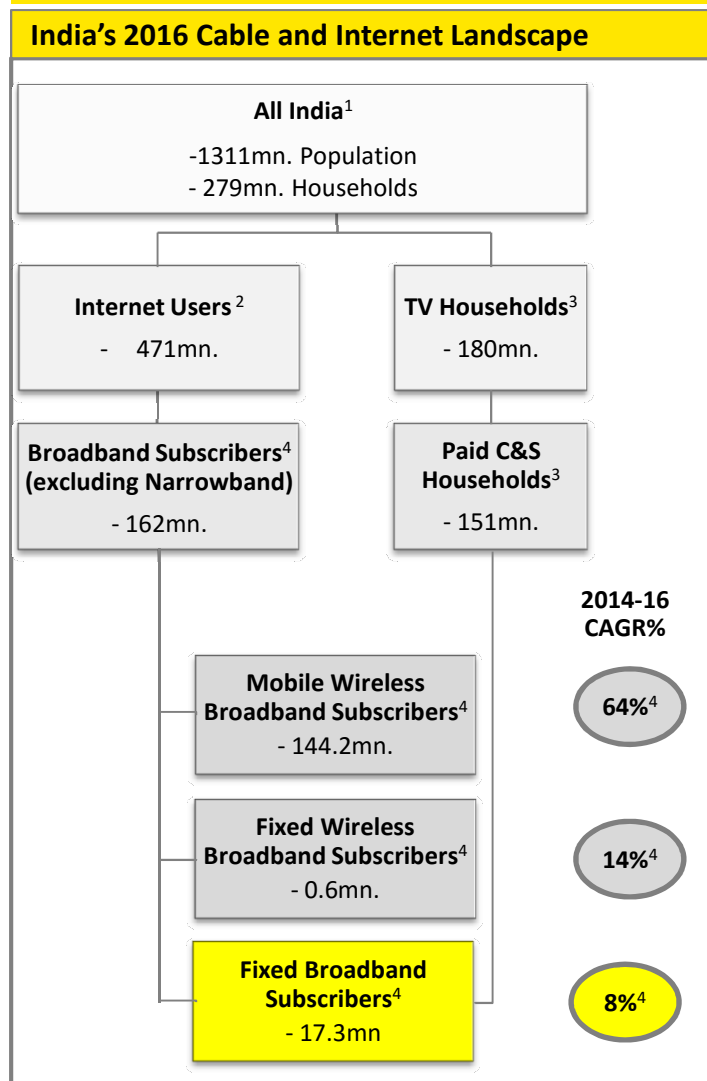
### Public Internet Access Programme<sup>2</sup>

Creation of delivery end-points for government/business services via common service centers in every gram panchayat

<sup>1</sup> World Bank: Economic Impacts of Broadband, 2009

<sup>2</sup> Digital India Portal

# But India's broadband penetration lags behind key peers, and in 2015 it ranked 132<sup>nd</sup> for fixed and 156<sup>th</sup> in wireless penetration<sup>5</sup>



<sup>1</sup> United Nations: Urbanization and Development Report 2016, World Bank 2015, EY Analysis    <sup>2</sup> As forecasted for June 2016, IAMAI: Mobile Internet in India    <sup>3</sup> FICCI M&E Report 2016, EY Analysis    <sup>4</sup> TRAI Quarterly Performance Indicators Jun.2014 and Jun.2016 . TRAI's definition of broadband only includes speeds >512kbps- this definition is used here.    <sup>5</sup> United Nations Broadband Commission Report 2016    <sup>6</sup> Akamai Technologies: State of Internet Connectivity Q2 2016



# Cable broadband is uniquely positioned to bridge this gap and reach millions of untapped users in smaller cities and rural areas

## Value of Fixed Broadband

### Accessibility

- ▶ The BharatNet initiative has resulted in over 150,000km. of fiber cable being laid across 65,000 gram panchayats as of Dec.2016<sup>1</sup>
- ▶ While such long distance cable is available (via government and private telecom operators)- **local access networks are lacking**
- ▶ The cable TV industry has a distinct advantage here, having already reached deep in urban and rural areas, with **last-mile access in 150mn.+ homes and 1500+ towns**<sup>2</sup>
- ▶ India's copper-based fixed phone line cables are often of poor quality and cannot take high speeds<sup>2</sup>. But MSOs reach over 2/3 of cable homes via fixed line coaxial connectivity, which can be **quickly upgraded to carry high-speed broadband**<sup>23</sup>

### Speed & Reliability

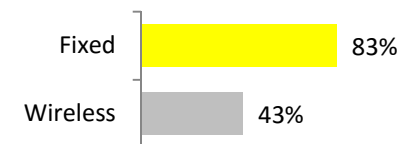
- ▶ Given that crowded and scarce wireless spectrum may struggle to keep up with the ongoing data consumption boom in 2-3 years, wired broadband becomes critical<sup>45</sup>
- ▶ There is significant scope for synergies across fixed and wireless broadband, especially in terms of **data offloading and easing pressure on spectrum**- as has been noted in studies across both the US<sup>5</sup> and EU<sup>6</sup>
- ▶ For reliability, wired broadband is able to enter the home, and thus offers highly dependable connections that are not impacted by walls and other obstacles<sup>2</sup>

### Skilling & Training

- ▶ To provide last-mile access, MSOs partner with a network of 100,000+ LCOs, comprising a **workforce of 500,000** ready to serve broadband subscribers<sup>2</sup>
- ▶ MSOs work with LCOs on training and upgrading skills/technical knowledge- **0.5-1% of broadband revenues will be spent** on such programs, and government initiatives can help to further support this<sup>2</sup>
- ▶ The roll-out of cable broadband will generate further multiplier effects on employment- **estimated at 65 workers per 10,000 new subscribers**<sup>2</sup>

100mn.(digital cable) homes with same pipe and a little bit of upgradation can be used for delivery of robust broadband connectivity to 500mn. people. <sup>3</sup>  
**R.S. Sharma, TRAI Chairman**

**% of Internet Subscribers with Broadband**  
 (ie: Speeds >512kbps)<sup>7</sup>



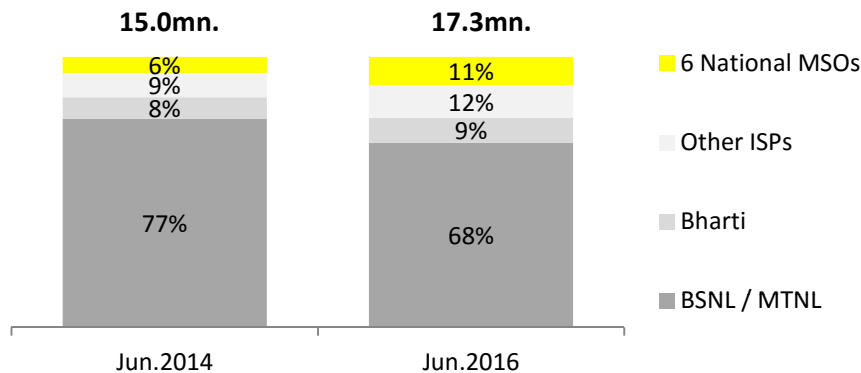
**Case Study: PMMY (Mudra) Textile Loans**  
 The government has supported skill and loom upgradation efforts in the textile industry by extending loans to 500,000 handloom weavers over 3 years<sup>8</sup>

<sup>1</sup> BBNL Bharat Net Phase 1 Status Update, Dec.2016    <sup>2</sup> Industry discussions, P&Ls of 5 national MSOs    <sup>3</sup> Television Post, Dec.16    <sup>4</sup> R.S.Sharma, TRAI Chairman in Outlook India, May 2016    <sup>5</sup> Wireless Broadband Not a Viable Substitute for Wireline Broadband, Vantage Point, 2015    <sup>6</sup> Working Together: Synergies of Fibre and Wireless Networks, FTTH Council EU, 2015    <sup>7</sup> TRAI Quarterly Performance Indicators Jun.2016    <sup>8</sup> India Today, Jun.2016

# National MSOs- and cable broadband in general- will continue leveraging these advantages to grow their share of the market

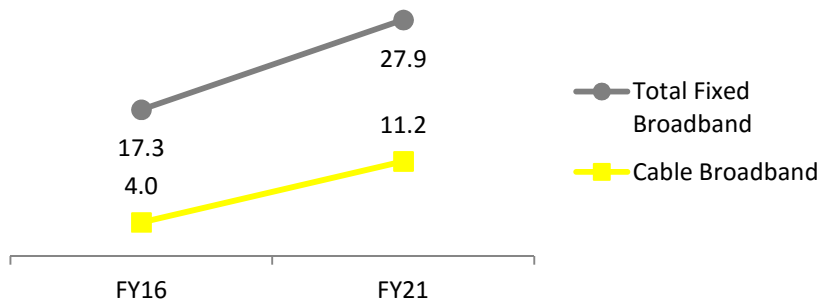
## Cable Broadband Landscape

Indian Fixed Broadband Industry:  
Subscriber Market Share by Key Players<sup>1</sup>



- ▶ The fixed broadband industry today is dominated by the state-owned companies BSNL and MTNL, who had 77% of India's wired broadband subscribers in 2014<sup>1</sup>
- ▶ But in recent years, BSNL/MTNL have lost market share to competitors- particularly national MSOs
- ▶ 6 national MSOs\* added nearly 1mn. subscribers from June 2014 till June 2016, taking their total to more than 1.8mn. cable broadband subscribers<sup>1</sup>

Broadband Subscribers (mn.)<sup>12345</sup>



- ▶ Given these MSOs' existing reach across 100mn.+ digital cable homes and future plans for heavy capital expenditure- cable broadband is projected to outgrow the market, even in a baseline scenario with no reforms

<sup>1</sup> TRAI Quarterly Performance Indicators Jun. 2014 and Jun. 2016    <sup>2</sup> Industry discussions, P&Ls of 5 national MSOs    <sup>3</sup> 2018 Forecast for India's Fixed Broadband Market- IDC 2014  
<sup>4</sup> 2020 Indian Fixed Broadband Market Forecast- Budde Communications 2015    <sup>5</sup> APAC Pay-TV and Broadband Markets, Media Partners Asia 2016

\*Note: National MSOs considered- Hathway Cable & Datacom, SITI Cable, Den Networks, IndusInd Media & Communications, Fastway Transmissions, ATRIA Convergence Tech.

# license fee rationalization - lever for accelerating broadband growth

## International Levies on Fixed Broadband Operators

Many countries do not subject fixed broadband providers to any major license fees, and are often designed to simply recover regulatory costs\*...

...while the countries that have license fees, have rates lower than India's 8%

Country	Regulatory/License Fee Structure <sup>12</sup>
US*	Exempt (however telecom operators contribute an annual regulatory fee to the Universal Service Fund)
UK*	Slab-based annual regulatory fee, basis proportionate share of revenue/subscribers
Australia*	Annual regulatory fee, basis company's share of eligible revenue in industry's total revenue
Canada*	Annual regulatory fee, basis company's share of eligible revenue in industry's total revenue
Norway*	Annual variable administrative regulation fee
Sweden*	Annual variable administrative regulation fee
Mexico	National Universal Service Fund receives voluntary contributions

Country	License Fee as % of Gross Revenue <sup>12</sup>
Pakistan	2%
Indonesia	1.25%
Bhutan	1%
Brazil	1%
Singapore	Max 1%
Malaysia	0.50%
South Africa	0.15-0.35%

<sup>1</sup> United Nations ITU 2016    <sup>2</sup> TRAI Release: Delivering Broadband Quickly- What do we need to do?, Apr.2015

\*Note: Regulatory regimes where the objective is to recover regulatory costs- any license fees collected are therefore nominal

**THANK YOU**