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# ITU Asia-Pacific Regional Development Forum Session 1: Harnessing Digital Opportunity through Broadband

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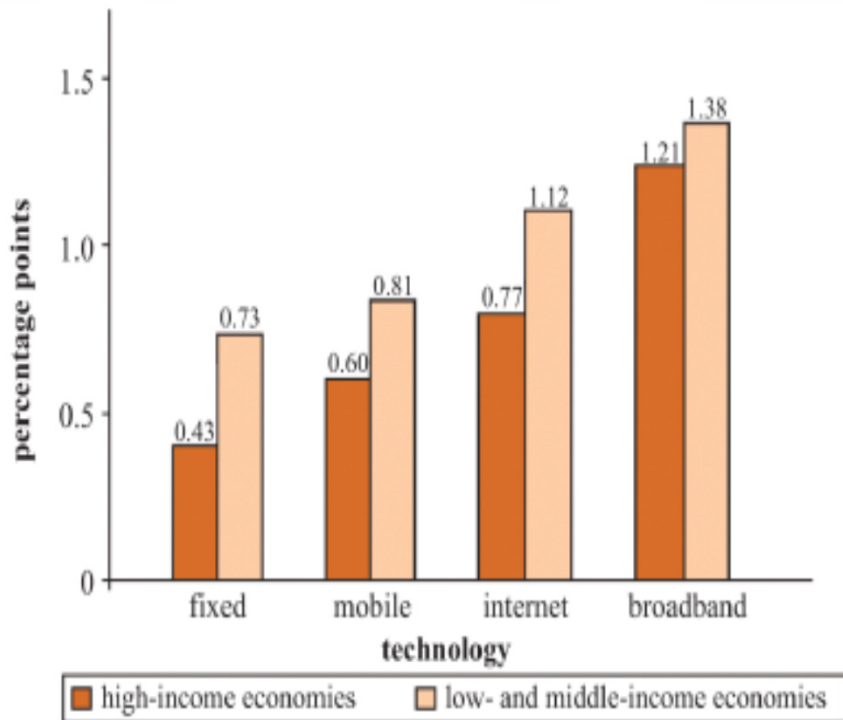
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# Encouraging investment in infrastructure: Creating opportunities for incentives

## Importance of Broadband

### Impact on Growth



Source: Qiang 2009

**10% increase in broadband penetration brings increase in economic growth of**

- **1.38% in developing countries**
- **1.21% in developed countries**

**Overall  
Impacts &  
Externalities**

▪ **Raises productivity, and brings employment.**

**Nation's  
Telecom  
network**

▪ **Transition to Next Generation Technologies**

**For Service  
Providers**

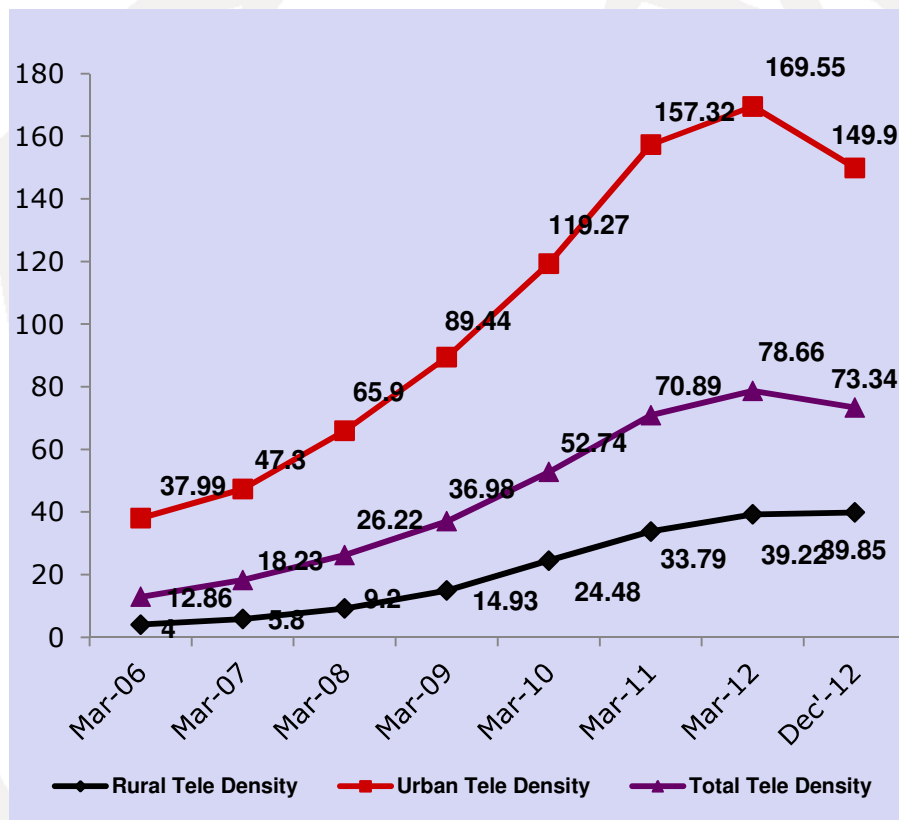
▪ **Alternative revenue streams for operators**

**Investments in broadband networks - a part of overall development strategies**

# Encouraging investment in infrastructure: Creating opportunities for incentives

## The Indian Context

### Rural-Urban Divide



### As on 31.12.2012:

**Internet subscribers - 25.33 million**  
**Broadband subscribers - 14.98 million**  
**(59.15% of Internet subscribers)**

### 2011-12:

**Additions in Internet subscribers - 2.94 million**  
**Additions in broadband subscribers- 1.63 million**

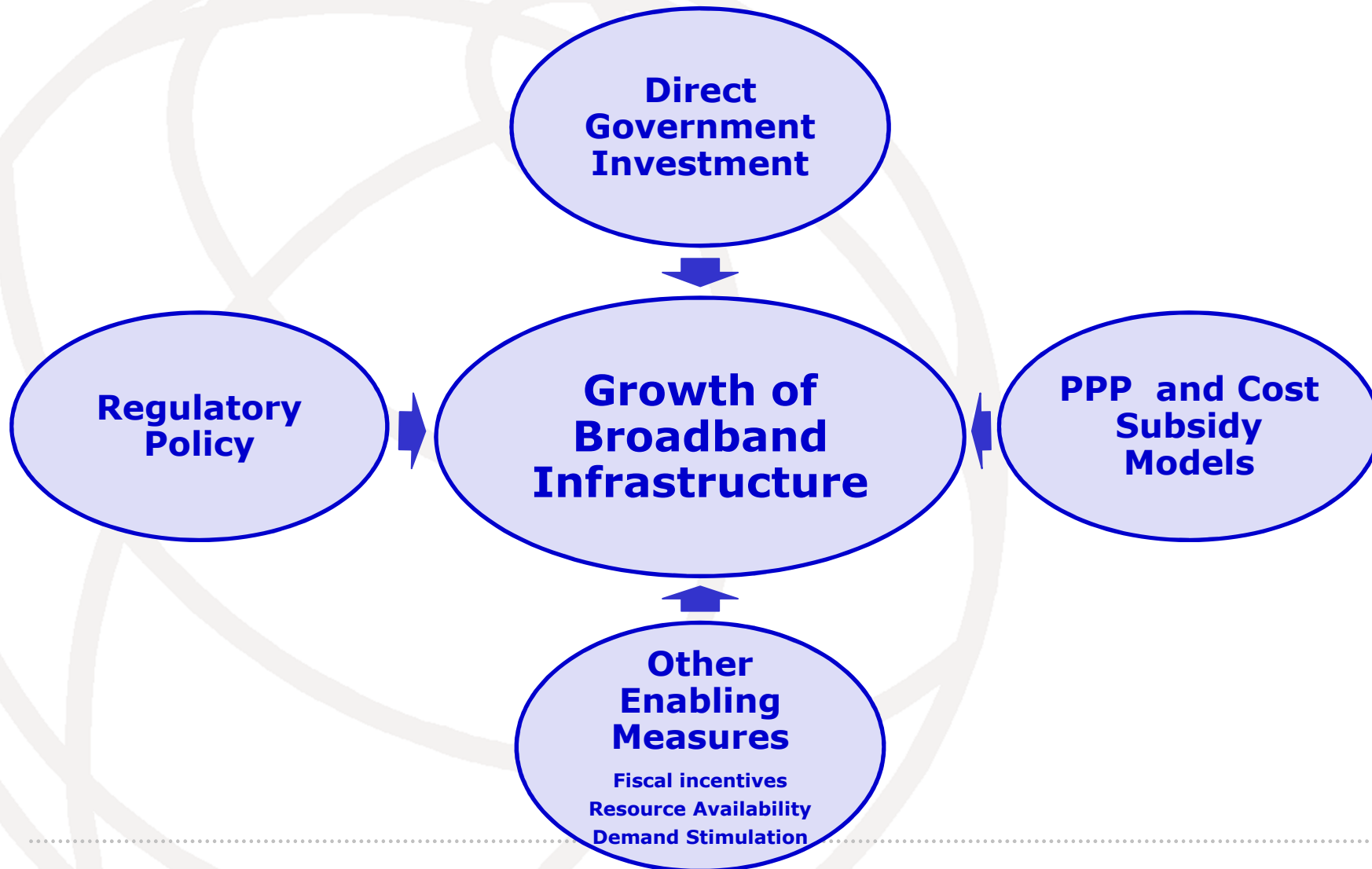
### **National Telecom Policy (NTP)-2012 seeks to provide**

- *affordable and reliable broadband-on-demand by the year 2015;*
- *achieve 175 million broadband connections by the year 2017 and*
- *600 million by the year 2020 at minimum 2 Mbps download speed;*
- *make available higher speeds of at least 100 Mbps on demand.*

**But Broadband is growing**

# Encouraging investment in infrastructure: Creating opportunities for incentives

*How can Investment in Broadband be Encouraged?*



# Encouraging investment in infrastructure: Creating opportunities for incentives

## Direct Public Investment

### The model

- Create high-capacity backbone infrastructure in rural and remote areas
- Provide connectivity to rural schools, hospitals and public institutions
- Allow service providers to interconnect and distribute access to users on their own facilities.

### The project

- India Government approved the National Optical Fibre Network (NOFN) for providing broadband connectivity in rural areas to connect through OFC.
- A special purpose vehicle 'Bharat Broadband Network Ltd' (BBNL) launched to execute NOFN project.
- BBNL to use existing OFC infrastructures of public companies like Bharat Sanchar Nigam Ltd (BSNL), RailTel and Power Grid Corporation.
- BBNL to lay an incremental OFC network of 500,000 km to connect the 2,50,000 Gram Panchayats (GPs)
- Access layer will continue with telecom service providers
- NOFN to be funded from the Universal Service Obligation (USO) Fund

BBNL will lease long-haul, backbone dark fibre capacity from BSNL, Railtel and Power Grid Corp.

New fiber about 500,000 kilometers will have to be laid, running from multiple POPs along the transport backbones.

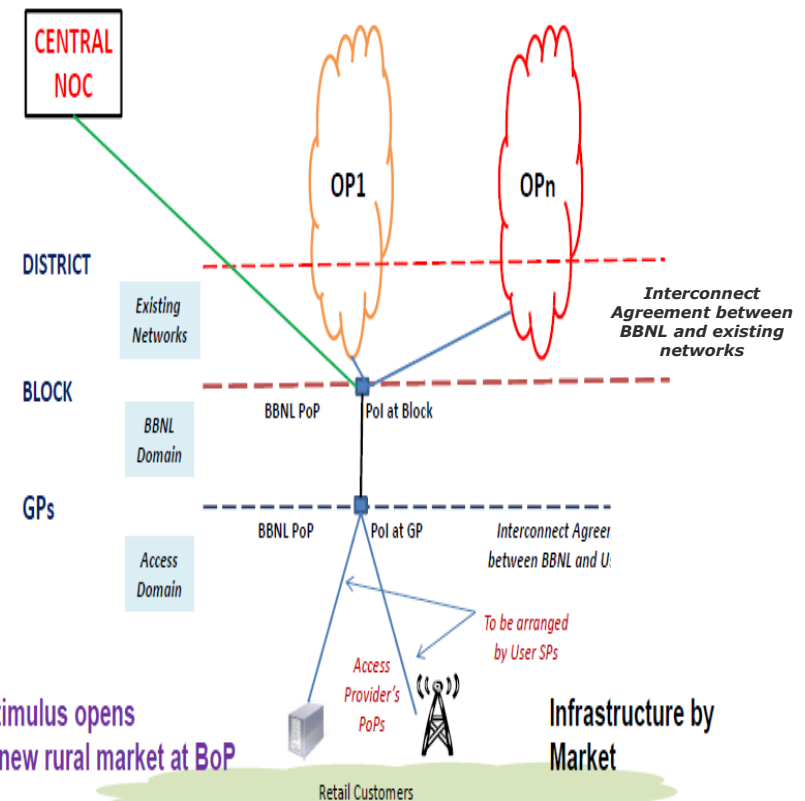
BBNL will offer interconnection at Block level and Gram Panchayat (GP) level.

## Public Private Partnership Models – Market Based Financing Mechanisms

- Channel public support through PPPs
- Harness managerial and technical capabilities of private sector to meet policy objectives
- Competitive subsidy or cost-sharing mechanisms  
- for encouraging the rollout of networks into underserved areas
- Keys to success
  - ✓ Public investment 'crowds in' rather than replaces private investment
  - ✓ Private sector has incentives to invest and operate networks efficiently
  - ✓ Open access rules for non-discriminatory sharing of infrastructure

## Direct Investment in India Using USO Funds- National Broadband Plan

### BBNL Interconnection



# Encouraging investment in infrastructure: Creating opportunities for incentives

## Regulatory Policy

-Level Playing Field  
-Non-discrimination

-Fair returns on investment  
-Ability to innovate

- *Wholesale access prices should get 'Buy or Build' signals right*
- *Long Run Incremental Cost with appropriate mark up for common costs*
- *Impose obligations where most useful for alternative operators, and least burdensome to incumbents' normal commercial activities*
- *Technology neutrality in licensing regimes*
- *Stability of regulatory policy*

## Additional Enabling Measures

**Financial incentives** (Investment tax incentives, accelerated depreciation, tax-credit bonds)

**Measures to reduce roll out costs**  
(Right of Way issues)

**Availability of spectrum**

**Digitization of Cable TV**

**Consumer Awareness and Digital Literacy**

**Access Devices**

**Relevant content**  
(language and special needs and interests)

**Efforts of telecom service providers**  
(device bundling, tariffs, awareness campaigns)