



Bhutan ICT/Telecommunications Policy & Infrastructure

BT-NOG 2014

Sonam Phuntsho
Head, Infrastructure Division
Department of IT & Telecom



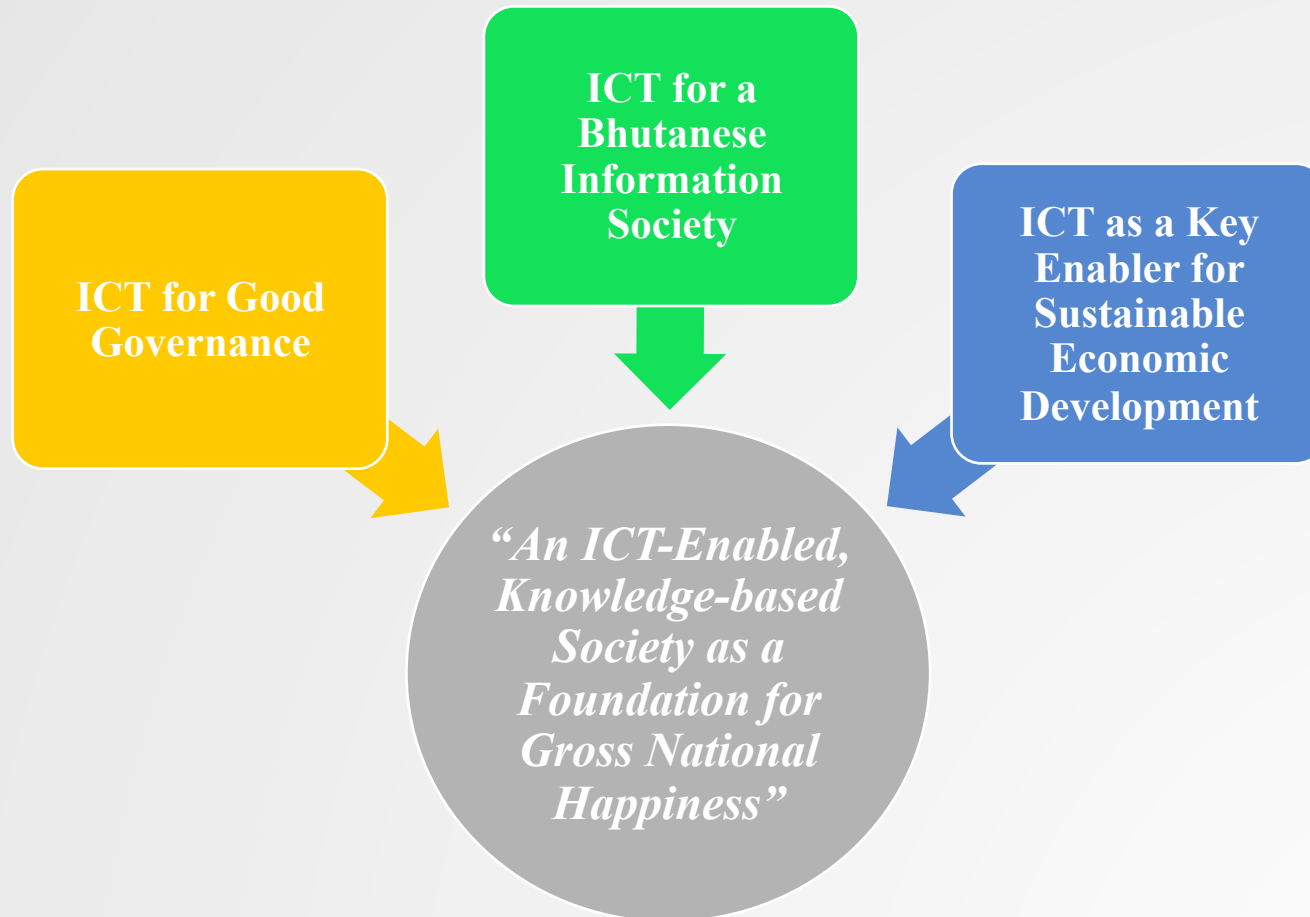
Outline

1. ICT/Telecommunications Vision, Act & Policy
2. ICT/Telecommunications Infrastructure
 - Projects

ICT/Telecommunications Vision, Act & Policy

1. ICT Vision
2. Bhutan Information, Communications & Media Act 2006
3. Bhutan Telecommunications & Broadband Policy 2014

ICT Vision



Bhutan Information, Communications & Media Act

- ✓ Passed by Parliament in 2006
- ✓ A converged ICT & Media Act
- ✓ Is currently undergoing revision [data privacy, cyber security]

Draft Bhutan Telecom & Broadband Policy

- ✓ Competitive Market (Regulatory framework)
- ✓ Universal Access
- ✓ Affordable Services
- ✓ Consumer Protection including QoS
- ✓ Green Telecom/Broadband

Infrastructure

1. National Broadband Network
2. International Gateways
3. Government Intranet
4. Government Data Center

National Broadband Master Plan Project

Project Background:

- ✓ Executed by DITT and implemented by BPC

Rationale:

- ✓ To create a contemporary core communication back bone for the country.
- ✓ Capital intensive nature of investment
- ✓ Create level playing field

National Broadband Master Plan Project

Project Status:

- ✓ Fiber Optic Network to 18 district (OPGW)
- ✓ Fiber Optic Network to 2 district and 200 gewogs (ADSS)
 - 187 gewogs completed
 - Deferred Deadline: End 2014 (due to delay in BPC's RE Project)

National Broadband Master Plan Project

Agreement with BPC:

- ✓ 2.1 % to BPC for O&M of fibers
- ✓ 3.17% depreciation for replacing fiber assets at the end of their economic life.

National Broadband Master Plan Project

Achievements:

- ✓ Dark Fibers leased at Zero cost
- ✓ TSPs/ISPs already using fibers to provide services
- ✓ Agreement between BPC and DITT for O&M and depreciation
- ✓ New Tariff Order issued by BICMA (reduction in domestic connectivity 22% – 95%)

International Connectivity/Gateways

Connection today:

- Phuntsholing
- Gelephu

International Redundancy

Issues with international redundancy

- ✓ Both gateways comes through the chicken neck at Siliguri corridor
- ✓ No complete redundancy

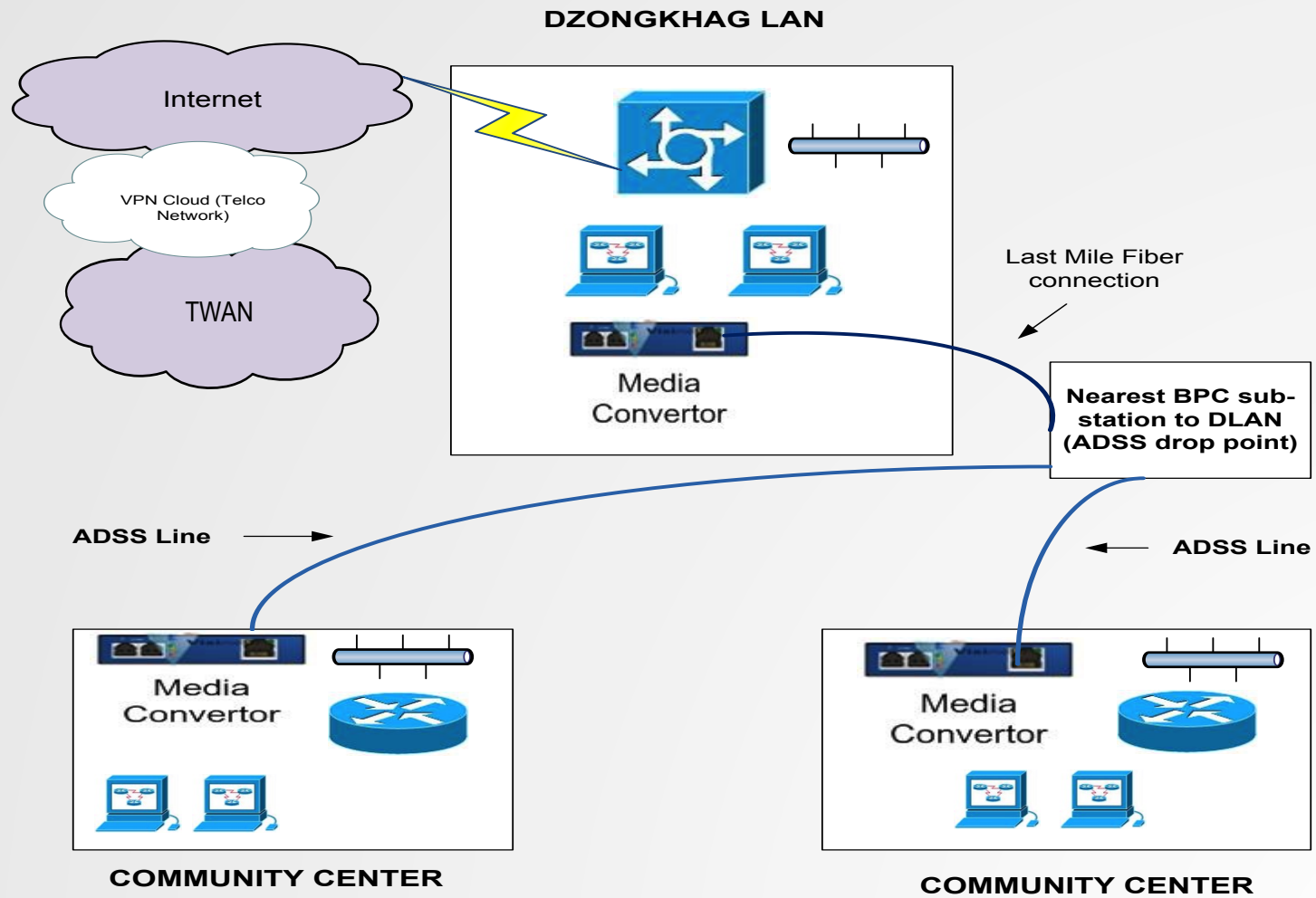
Plans to solve the above issue

- ✓ Establish redundancy through Cox's Bazaar (cable landing port in Bangladesh)
- ✓ AP-IS initiative

Government Intranet (TWAN+)

- 95+ agencies connected to TWAN on fiber optics network in Thimphu
- 20 District Administration (DLAN) connected to TWAN
- 167 CCs connected to TWAN through DLAN
- VC in all Ministries and 20 Districts
- Revamp TWAN and DLAN
- Extend connectivity to dungkhags and gewog adms

Government Intranet



TWAN Services

- DNS
- Website
- E-Mail
- Proxy
- P2P to dzongkhags
- G2C services
- VC
- VZ

Government Datacenter (GDC)

- Warm shell in place at IT Park-TIER3+ (power and cooling with redundancy)
- House, operate and maintain government systems and services at highest standard
- Power & cooling, facilities, network, and security management
- Improved effectiveness and efficiency

Thank You

