Proposed Digital Development in Central Asia and South Asia (CASA)
Outline

1. Why a Regional ICT Program for Central Asia and South Asia?

2. World Bank Group Experience with Regional ICT Programs:
   • Africa Regional Broadband Programs
   • Caribbean Regional Communications Infrastructure Program (CARCIP)

3. Proposed Digital Development in Central Asia and South Asia (Digital CASA)
1. Why a Regional ICT Program for Central Asia and South Asia?
Broadband contributes to growth, employment, innovation, trade

- 10% increase in broadband penetration yields at least 1% increase in **GDP growth** (see chart)
- 1% increase in Internet penetration correlates with 4.3% **export growth** (Wallsten, 2007)
- 20% of all **jobs** will be contracted online in 2020 (oDesk) - SMEs that integrated the Internet into their businesses created twice as many jobs as the average (McKinsey Global Institute)
- Enables **Smart infrastructure**, including Intelligent Transport Systems, and Smart Grids
- **Health and education** programs (distance learning, eHealth, digital technologies for learning)
- Telecom networks underpin a majority of global trade in goods and services: 80% of the production of a 787 Dreamliner is outsourced to contractors linked to Boeing through a **complex supply chain** enabled by IT (McKinsey Global Institute)
Central and South Asia: Disconnected in the digital age

- Poor quality and expensive internet connectivity

- General reasons:
  - Incomplete policy and regulatory environments
  - Landlocked, global Internet traffic bypassing CA
  - Limited regional integration
  - Limited use of ICT
  - Low level of private investment

Private investments in telecom, per capita since 1990; Source: PPI database

International connectivity (kbps per capita, 2015)
Source: Terabit Consulting
ICT HUB between East-West, North-South

Conditions are ripe:
• Open economy
• Competitive telecom sector
• Eurasian EU
• Links to China, Central and South Asia
• Qualified IT professionals
• Access to cheap green energy
• Strong political will

• BUT need to work collectively with regional partners
2. World Bank Group Experience with Regional ICT Programs
Africa Regional Broadband Programs

- Full Connectivity Solutions at International, Regional, Cross-border, National levels leveraging Public & Private funding and alternative infrastructure
  - RCIP (East/Southern) - $424m
  - EaSSy Submarine Cable – $235m ($32m IFC)
  - Central Afr. Backbone - $215m
  - West Africa Reg. Com. Infrastructure - $305m

- Drastic drop in Internet wholesale prices; connected Africa to the world
Africa Regional Communications Infrastructure Program (RCIP)

- **Programmatic Approach (up to $424 million):**
  - Kenya, Burundi and Madagascar in Phase 1 ($165 m)
  - Other countries up to 25 joining on a readiness basis

- **4 Main components (“Menu of options”):**
  - **Enabling Environment Component**
    - Telecom Regulation
  - **Connectivity**
    - Regional backhaul and national backbone networks
    - Government pre-purchase of capacity – wholesale services for use in schools, hospitals, targeted user groups
    - Landing stations
    - Rural ICT
  - **Transparency / Traffic Stimulation Component**
    - e-government
  - **IT industry development**
    - Connectivity for BPO industry
Caribbean Regional Communications Infrastructure Program (CARCIP)

Significant improvement in ICT infrastructure in the region, but gaps remain:

- National level: little investment in broadband networks beyond main urban centers, especially in the form of fiber backbone
- Regional Level: Inadequate connectivity between countries
- International level: Most countries served by only one alternative international cable

CARCIP program structured in several phases:

- Phase 1: 3 countries, $25 million
- Phase 2: Dominican Republic, $30 million
- Phase 3: additional countries, including Caribbean part of Central America
CARCIP Menu of Options – 3 components

- **Connectivity Infrastructure:**
  - Telecommunications regulation
  - Landing stations, submarine cables, cross-border fiber links, IXPs
  - Broadband backbone networks, rural access
  - Government networks (GovNet), emergency communications

- **ICT-Led Innovation:**
  - Policy support for IT/ITES industry
  - Regional network of IT parks and business incubators
  - Skills development: certification programs, university-industry collaboration, diaspora knowledge
  - Entrepreneurship financing: Venture Capital Funds

- **E-Transformation:**
  - Legal and regulatory framework, e-government standards, interoperability frameworks
  - Government cloud infrastructure, e-security infrastructure
  - E-services, mobile apps
  - Digital literacy, credit to increase device penetration
3. Proposed Digital Development in Central Asia and South Asia (Digital CASA)
Proposed Digital CASA Program

- Regional approach
- Affordability
- Employment
- Accessibility
- PPPs
- Innovation
- Fiscal benefits
- Digital Connectivity
- Enabling Environment
- Digital Government
- Public services
Proposed Program Objectives

**Proposed Objectives:**

- increase access, affordability and integration of regional broadband communications networks and ICT-enabled services, including digital government, across the region and within countries

Specific components to be tailored to each country on the basis of a broad Menu of Options
1. Connectivity Infrastructure (supply-side component):

- **Regional Backbone** made up of existing fiber networks and creation of new cross-border fiber links on PPP basis
- **National backbone** networks including Internet Exchange Points (IXPs)
- Government pre-purchase of capacity and **government network** (GovNet)
- Bridging the **connectivity gap** under PPP arrangement
2. Applications and Content (Demand-side component):

- **Policy and regulatory support for regional IT and ITES industry** (business process outsourcing-BPO, IT parks/incubators, venture capital programs, inter-university linkages)

- **Digital skills initiatives** (digital literacy, specialized skills for IT industry), with a special focus on skills development in local youth population to improve employability

- **Digital government policies and standards**, cybersecurity and interoperability frameworks, enterprise architecture

- **Digital government infrastructure and shared platforms** including “cloud computing” data centers, secure identification, data integration and sharing infrastructure and portals

- **Digital government core applications**, including e-services that can be delivered on the basis of PPPs with participation of regional IT industry

- **Data and analytics innovations and smart solutions** for reaching the SDG targets and fostering modernization of key sectors (transport, agriculture, health, education, extractives, etc.)
3. Regulatory / Enabling Environment component:

- **Regulatory development** to promote more competition in the market
- Enabling environment for **cross-sector infrastructure sharing**
- **Institutional strengthening** of regulators
- Telecom regulation capacity building
- **Training** and TA in ICT sector
Current status of Digital CASA

- **Afghanistan**: PCN review took place in June 2016

- **Kyrgyzstan**: PCN is planned for October-November, right after Macroeconomic Council approves concept internally

- **Tajikistan**: main counterpart at Prime Minister’s office changed, team is looking to re-engage with support from IFC

- **Kazakhstan**: not a part of Digital CASA. However, team has advanced discussions on Digital Kazakhstan (jointly with T&C). DK will have common regional elements with Digital CASA.
THANK YOU!