

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



WORLD BANK GROUP

Uran Esengeldiev

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Outline

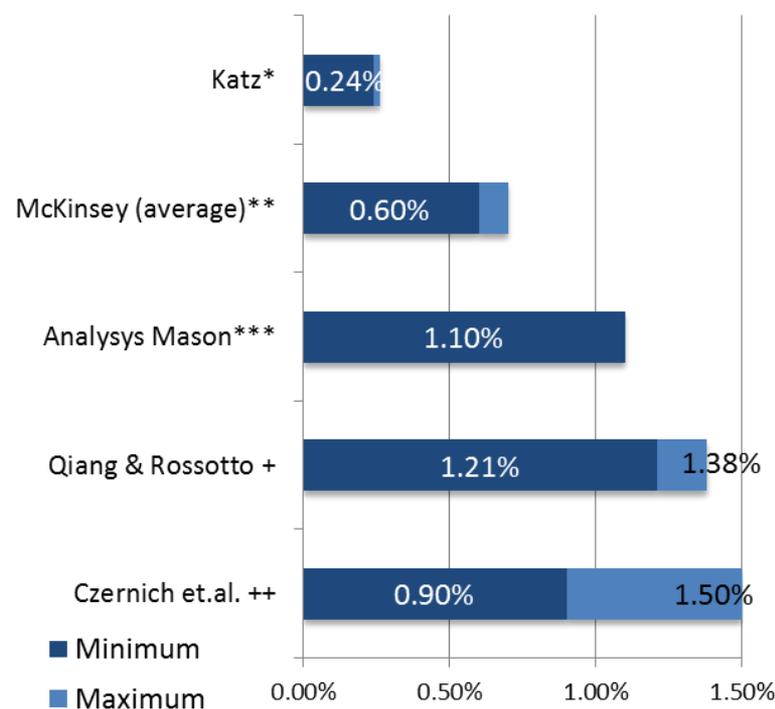
1. Why a Regional ICT Program for Central Asia and South Asia?
2. World Bank Group Experience with Regional ICT Programs:
 - Africa Regional Broadband Programs
 - Caribbean Regional Communications Infrastructure Program (CARCIP)
3. Proposed Digital Development in Central Asia and South Asia (Digital 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 on line 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)

Impact on GDP of an increase of 10% in broadband penetration



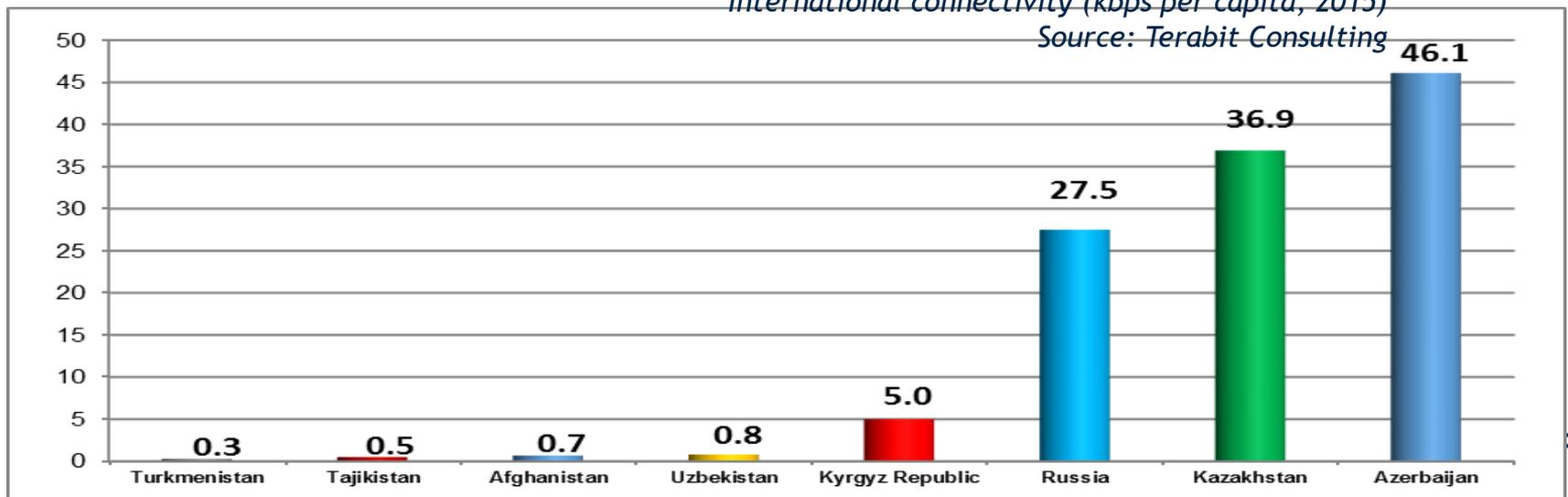
Central and South Asia: Disconnected in the digital age

- 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

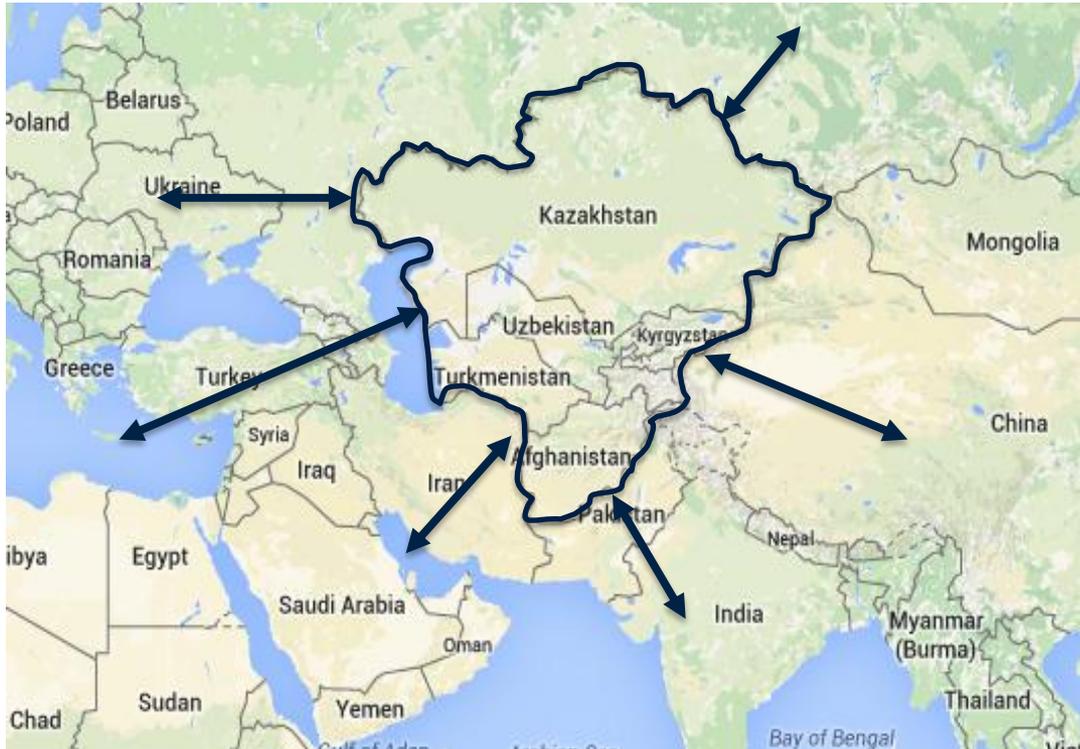
Private investments in telecom, per capita since 1990; Source: PPI database



International connectivity (kbps per capita, 2015)
Source: Terabit Consulting



ICT HUB between East-West, North-South



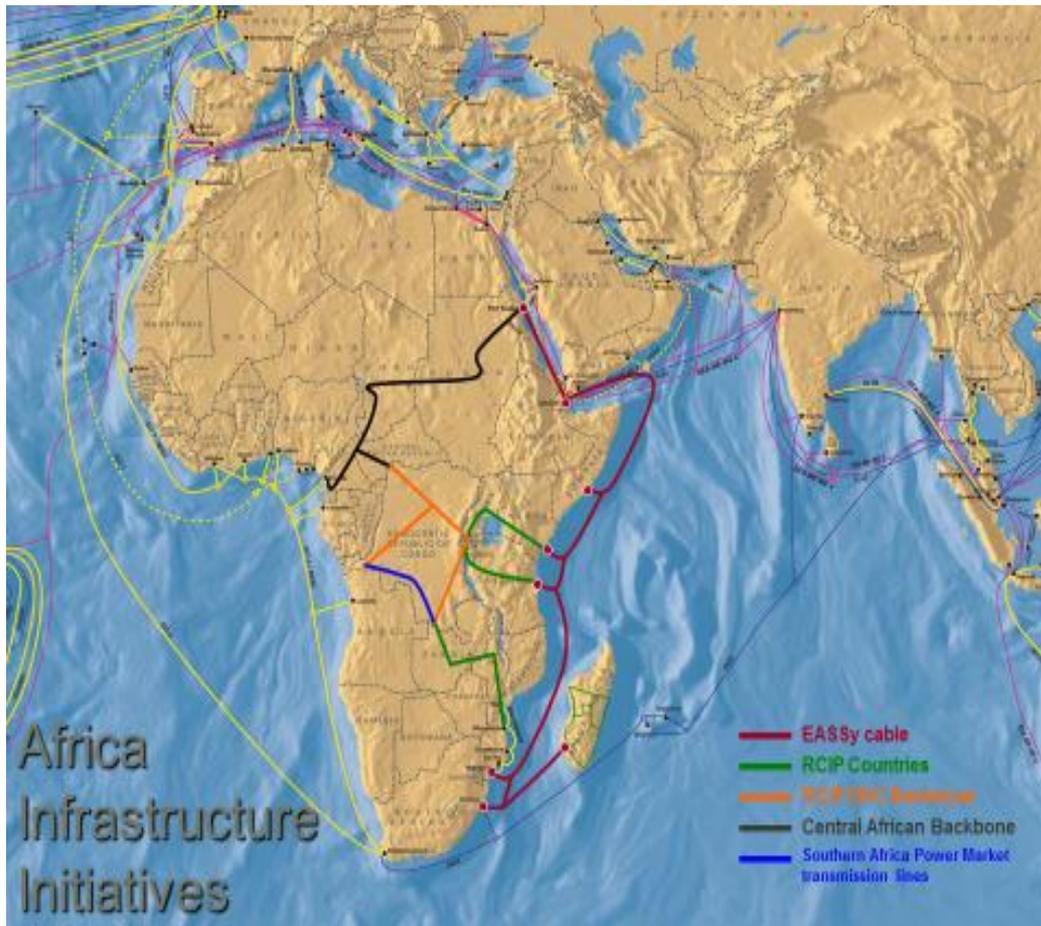
Conditions are ripe:

- 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

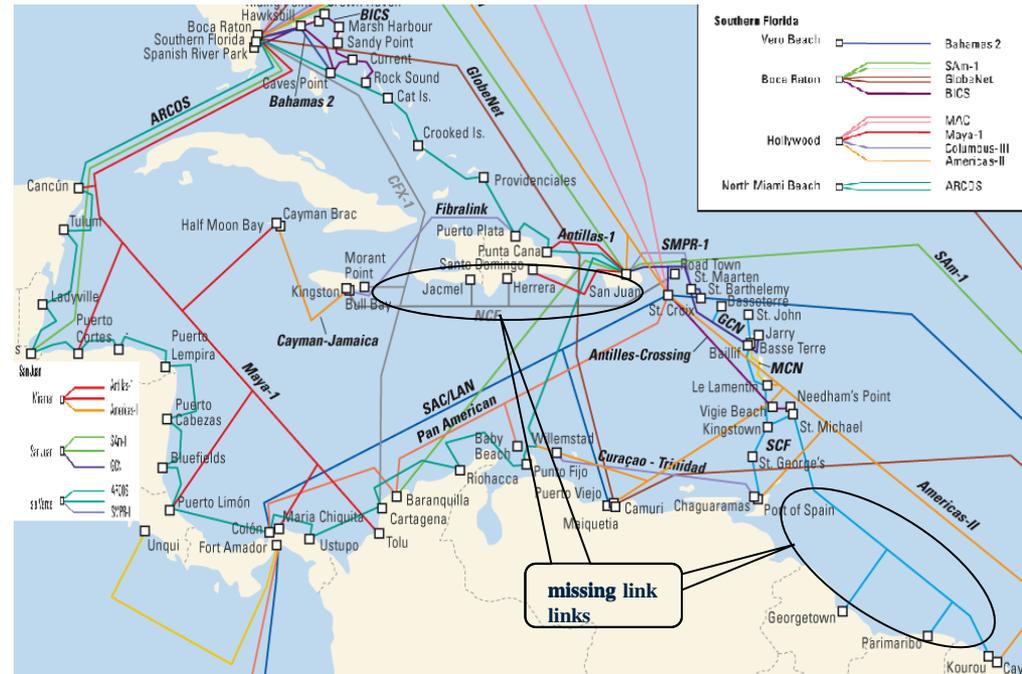
Africa Regional Communications Infrastructure Program (RCIP)

- **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:**

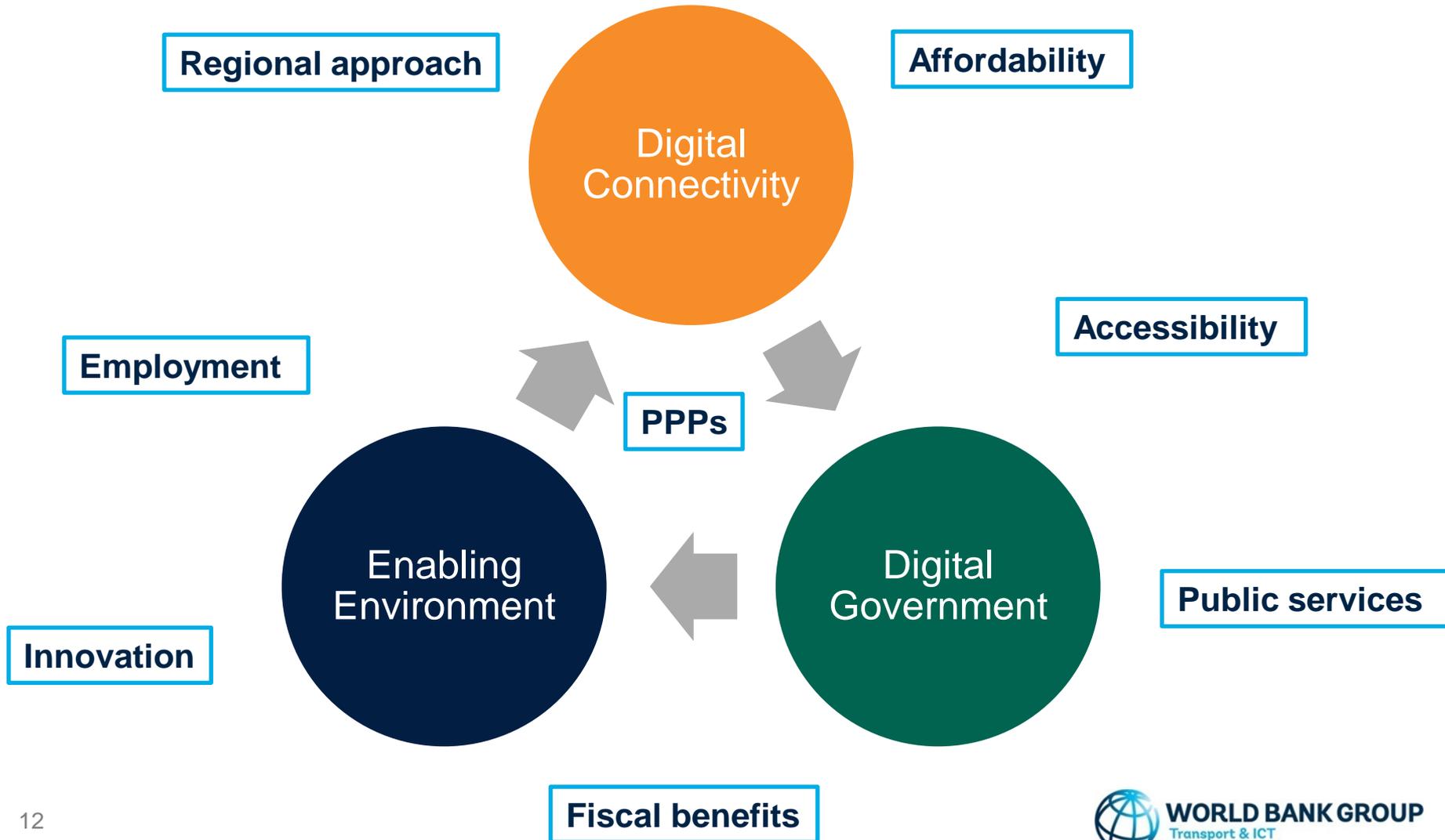
- **Policy support for IT/ITES industry**
- **Regional network of IT parks and business incubators**
- **Skills development: certification programs, university-industry collaboration, diaspora knowledge**
- **Entrepreneurship financing: Venture Capital Funds**

➤ **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



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

Digital CASA Menu of Options – Preliminary Proposal (1)

- ◆ **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

Digital CASA Menu of Options – Preliminary Proposal (2)

◆ **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!



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