Next Generation USF – USF 2.0

ITU-USF Pakistan Workshop

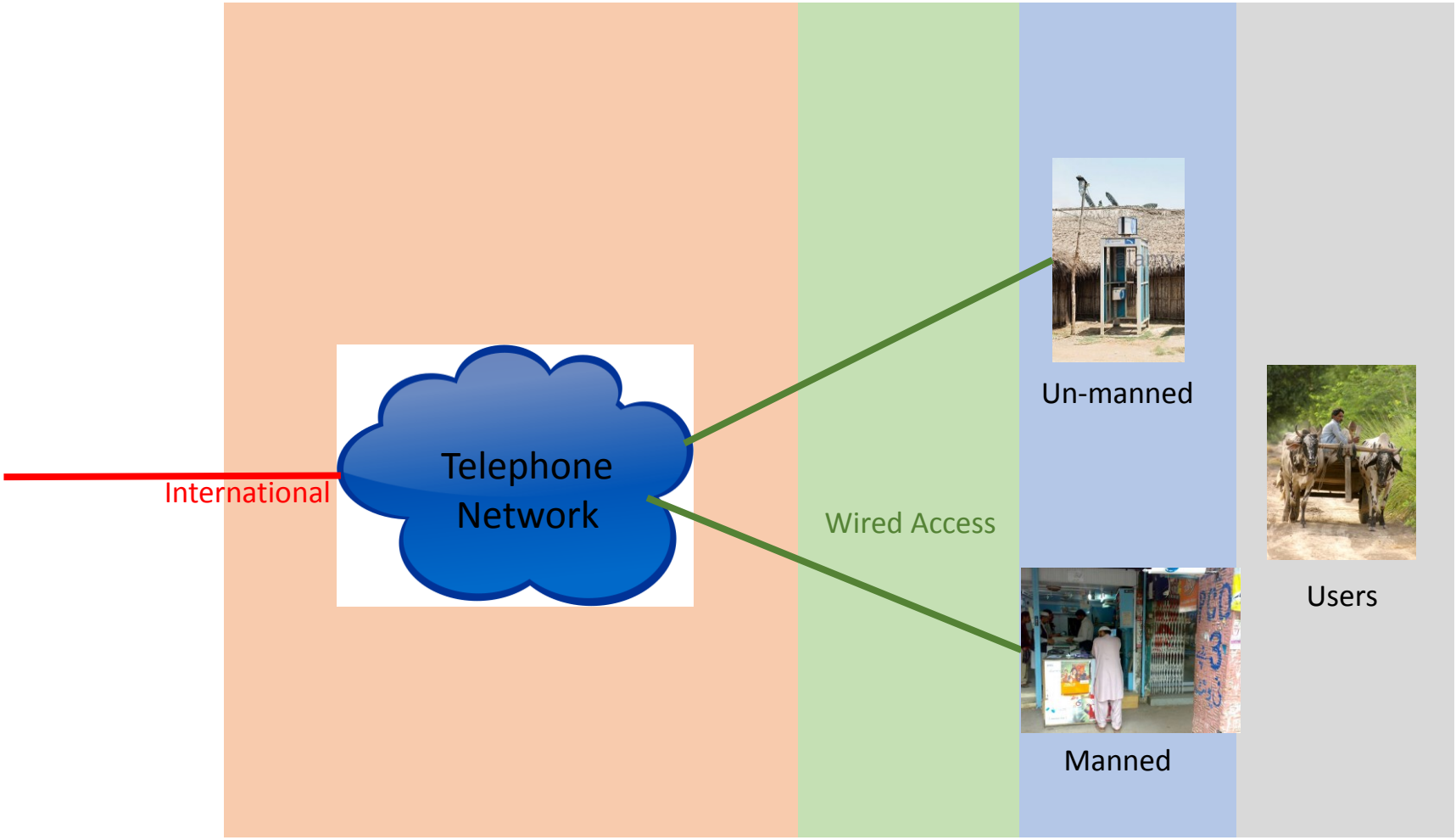
“Internet Access and Adoption”

10-11 October 2018, Islamabad, Pakistan

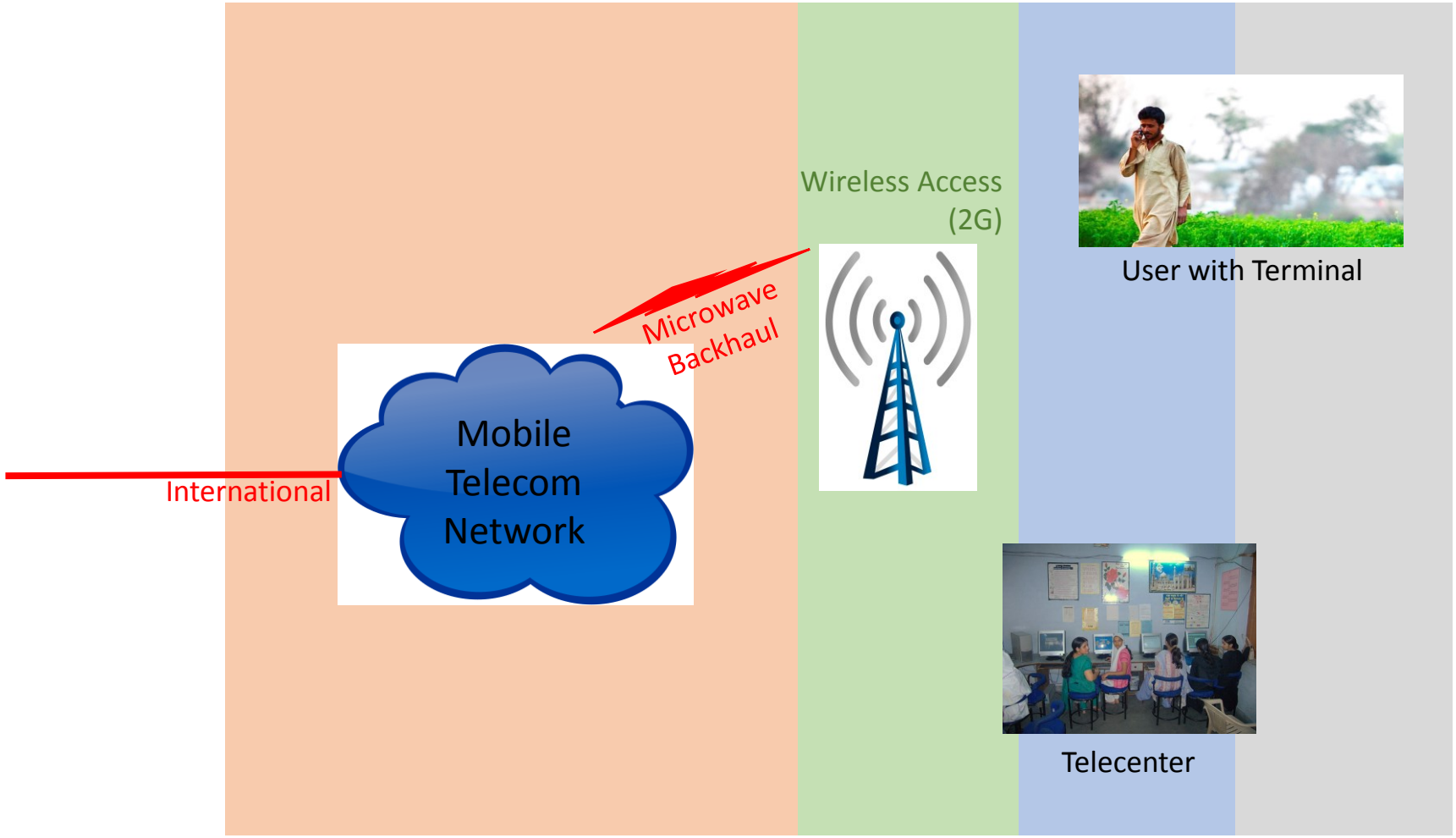
- Parvez Iftikhar

ITU USF Expert

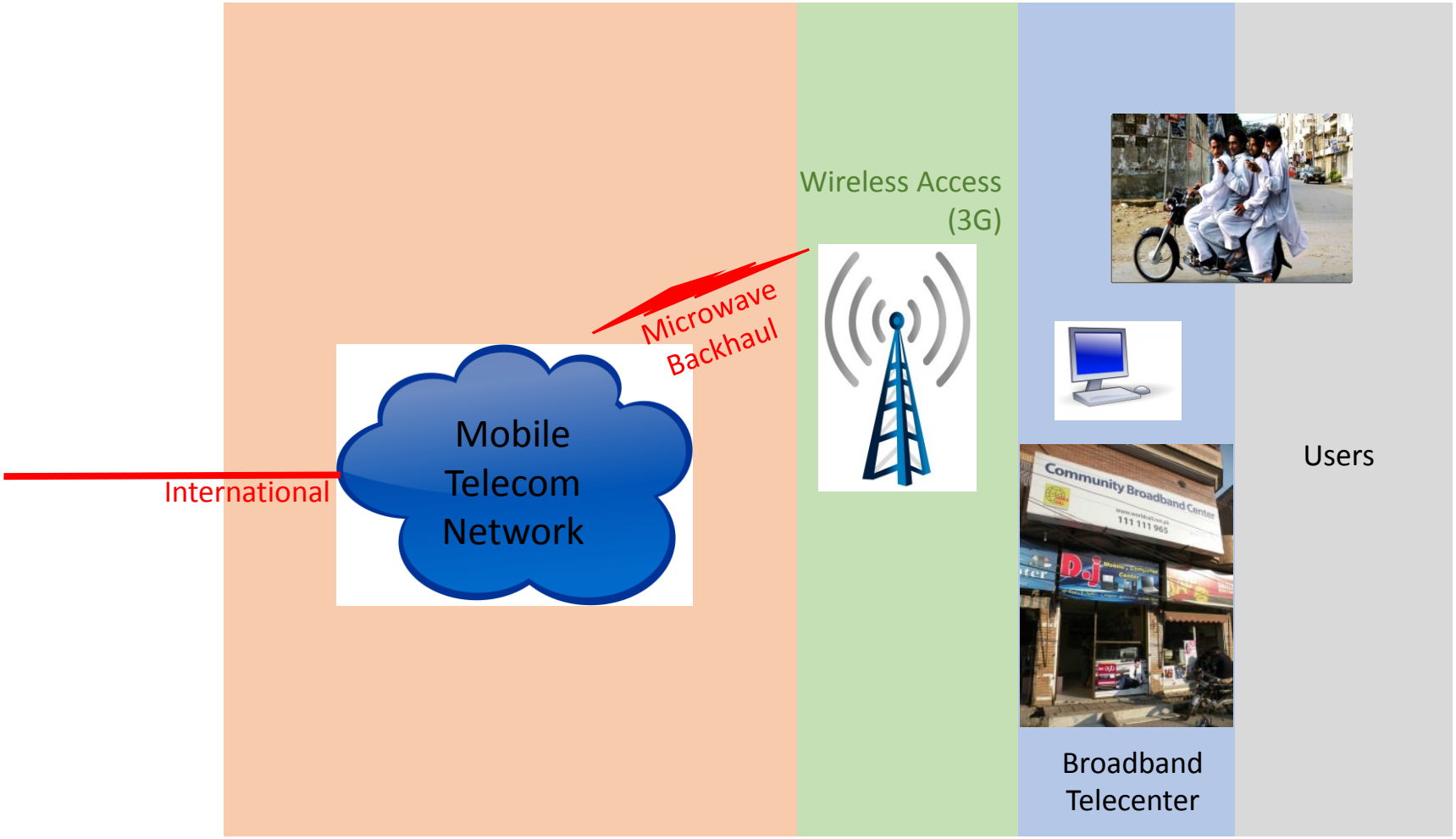
Beginnings of USF – Community Phones



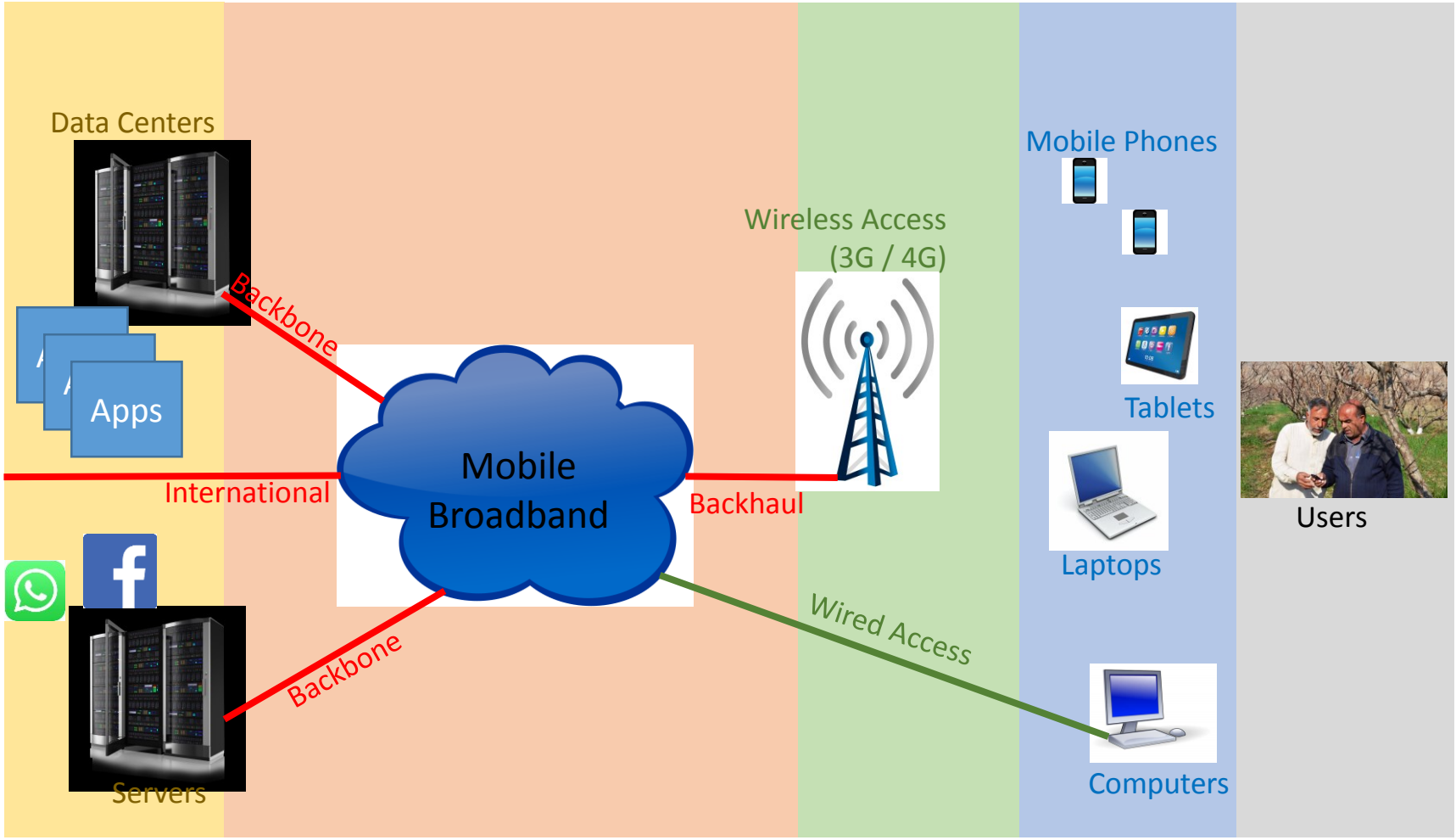
USF after advent of Mobile Telecom



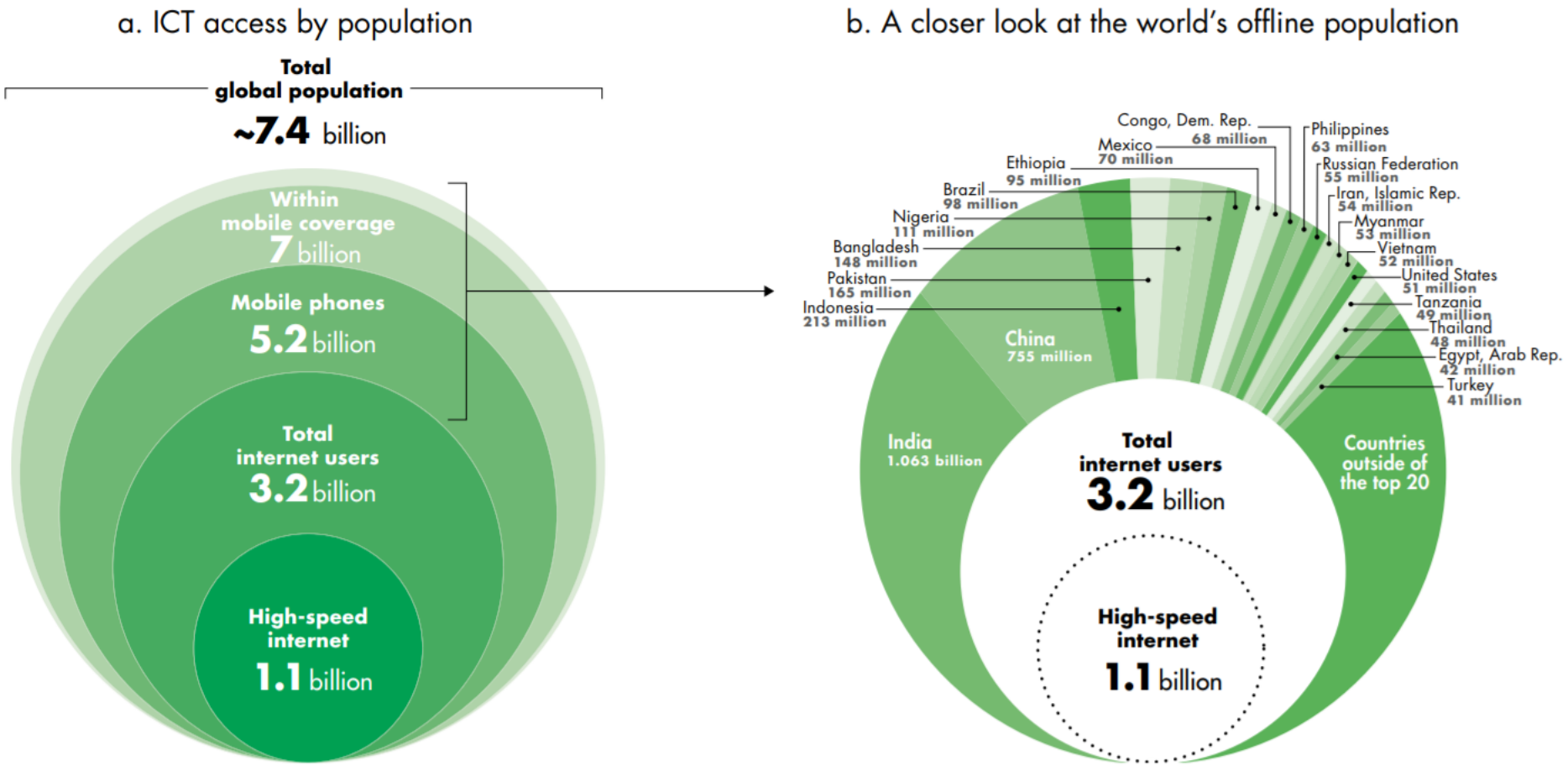
USF initially after Mobile Broadband



Including Demand Side of Mobile BB

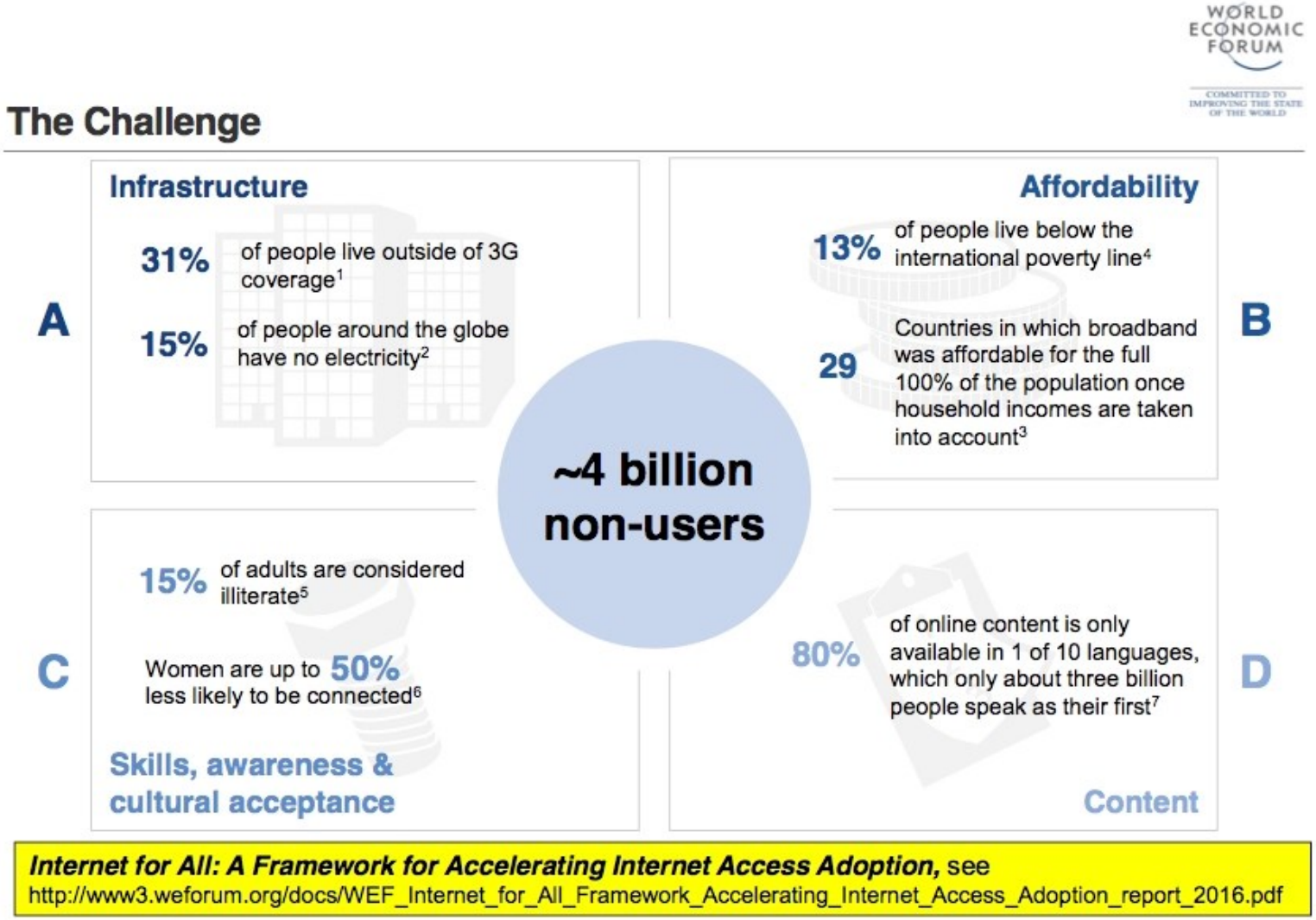


Only 3.2 Bln have adopted Broadband



Source: World Development Report 2016: Digital Dividends

Key Barriers to Internet Adoption



Internet for All: A Framework for Accelerating Internet Access Adoption, see
http://www3.weforum.org/docs/WEF_Internet_for_All_Framework_Accelerating_Internet_Access_Adoption_report_2016.pdf

Addressing the barriers to Adoption

1. **Demand Side was easier**

   a) **Infrastructure**

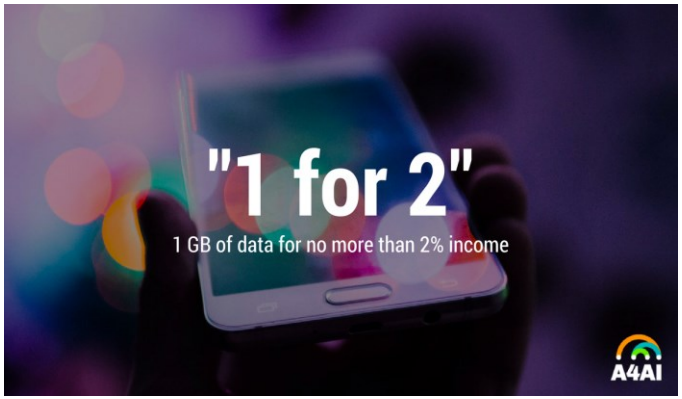
   Wireless last-mile

   Optic Fibers in backbones/backhaul

   b) **Affordability**

   Set Targets.

   Latest (2018):

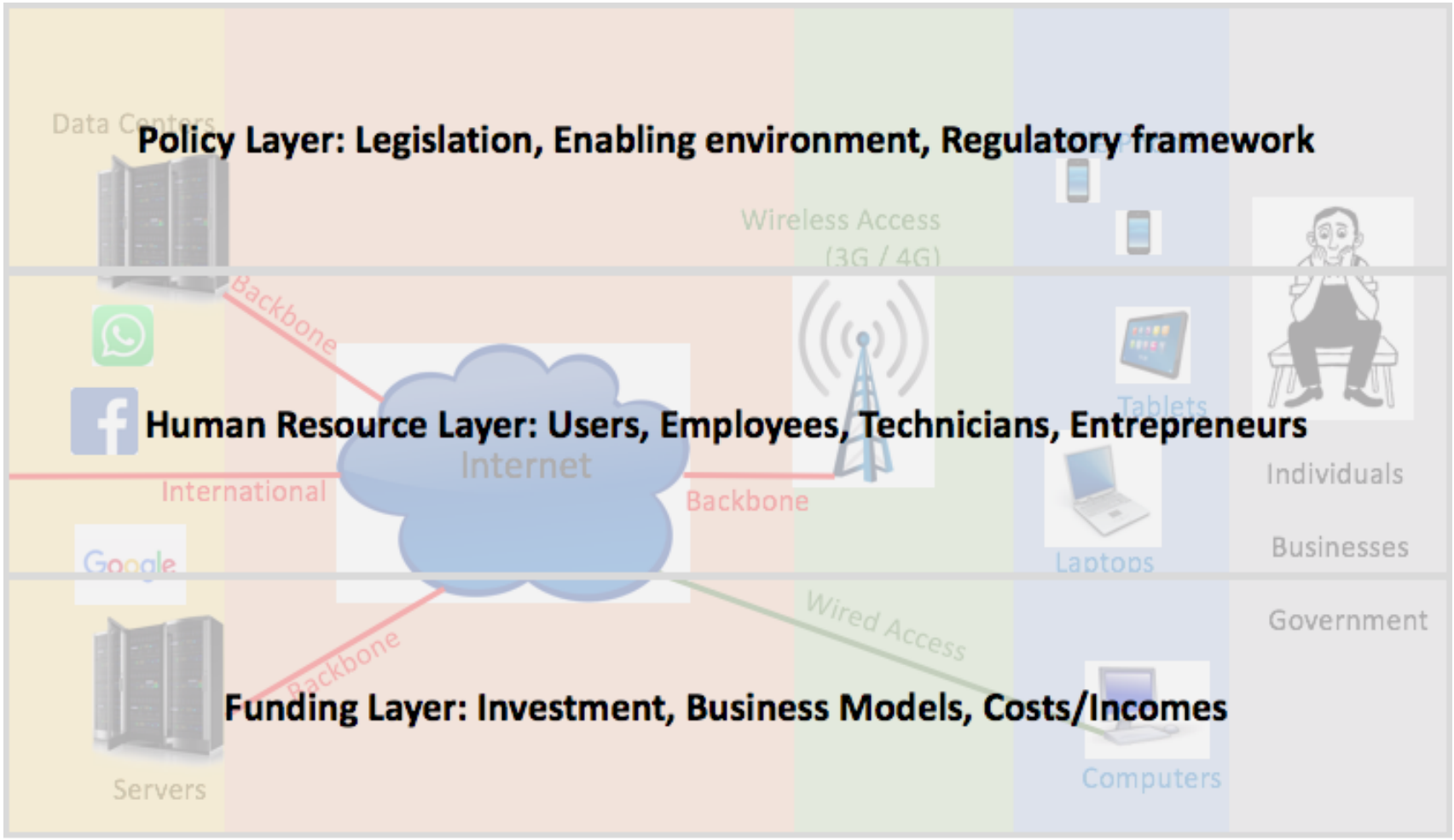


2. **Demand Side was not easy**

   The whole Broadband Ecosystem needed to be touched

What is Broadband Ecosystem?

Apps & Content.....Backbones.....Access.....Devices.....Users



Addressing the Ecosystem

Access to broadband involves a set of interdependent elements, comparable to ecosystems in the natural world

1. Policies:

Legislation, Policies, Regulatory Frameworks, etc. govern features of ecosystem, including: Content and Applications.

2. Human Resource

Technicians, Management, Workers, and others involved in creating, delivering, maintaining, and innovating at each level of ecosystem.

3. Funding

Financial components of ecosystem elements, ie: Capex, Opex, and the Revenues that ultimately pay for them.

1. Policy Layer

- People need access in order to benefit from the latest in ICTs
- People cannot benefit from services that they cannot understand due to language
- Therefore, relevant Policies have to ensure that:
  - citizens are able to use Content and Application offered to them over internet
  - there are no restrictions on their use owing to gender, race, religion, disabilities, or relevant devices

Policy Layer Eg: Smart Devices

Users can only use advanced ICT services and applications if they possess appropriate Smart Devices, like:

- Smartphones
- Tablets
- Digital Assistants
- Laptops
- Other modern devices

As more key functions requiring such devices are integrated into daily life,

it will have to be ensured that all citizens can obtain Affordable Smart Devices – not just the service!

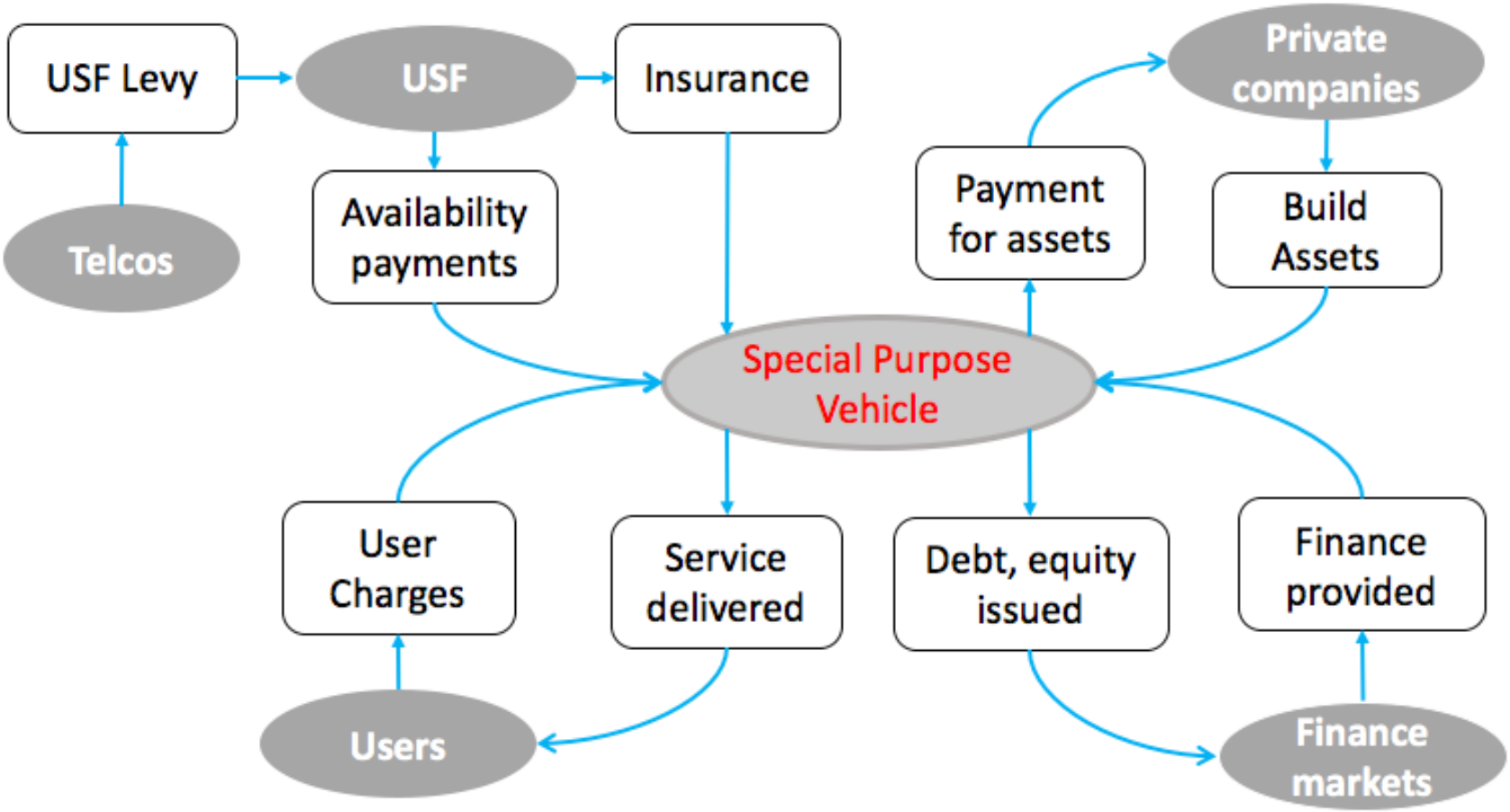
2. Human Resource Layer

- As technology improves, services and applications always migrate to higher quality networks (eg: 4G/5G)
- As ICTs advance, and get integrated into society, the need for teaching those who live at remote locations also increases
- public digital literacy programs esp. in Schools, are becoming a vital gateway for such trainings
- Digital Literacy is becoming one of the highest priorities in most countries

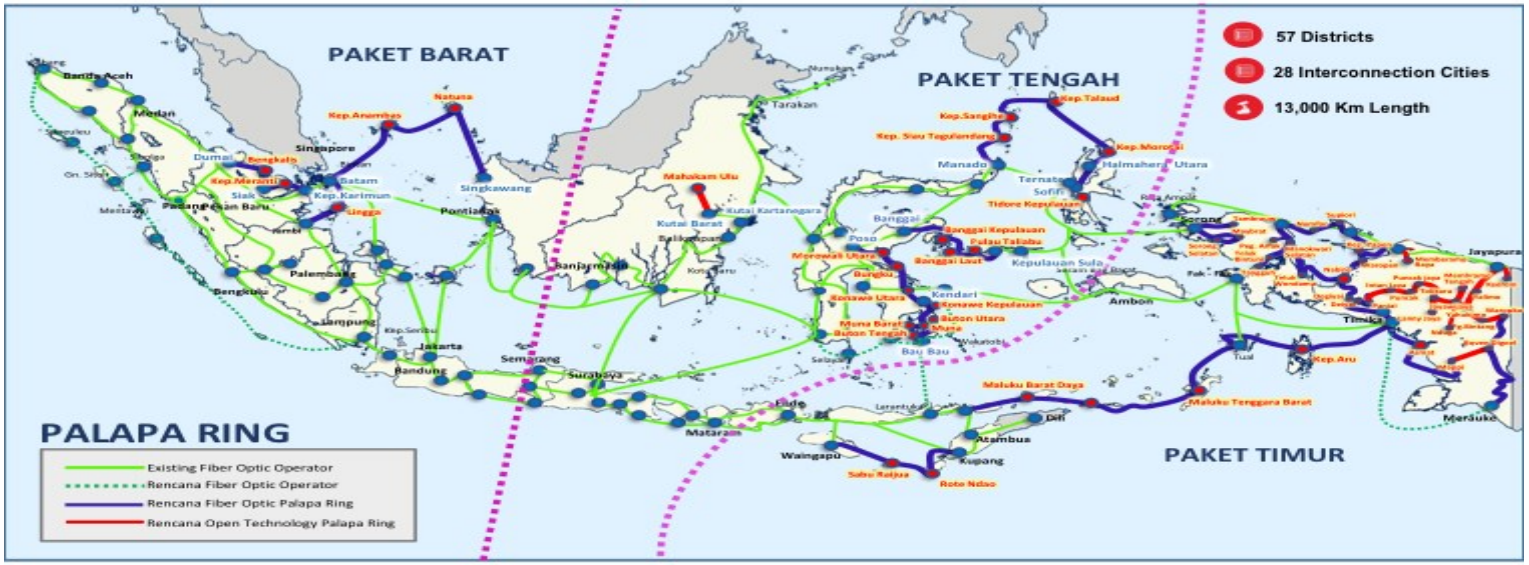
3. Funding Layer

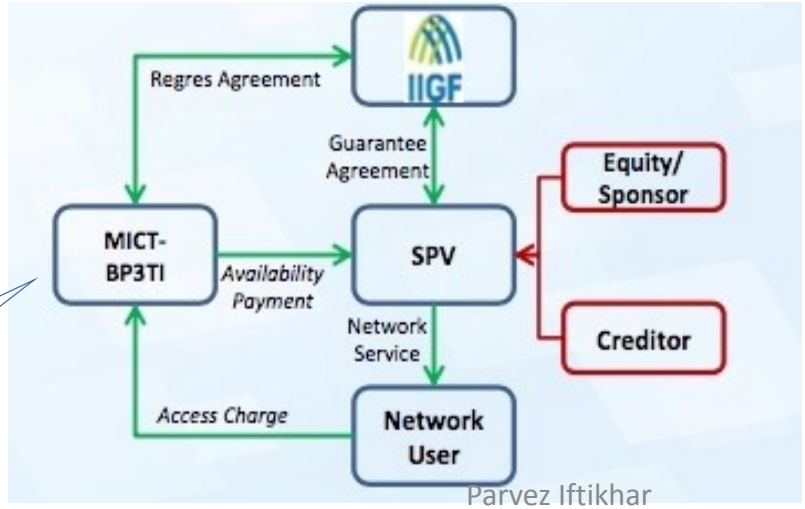
- Just like it is done in case of physical infrastructure projects,
- New model of funding ICT initiatives must be explored and tested
- One such obvious form seems to the **Public Private Partnership**

Funding Layer Eg: PPPs



Real example of USO employing PPP





Indonesian USF

US$ 400 Million subsidy being provided by BP3TI (USF)

Scenarios for Future USO Policies

Digital Finance

- Mobile Banking and other forms of Digital Financial Applications are already being used for payments and money transfers by millions
- Such applications are going to grow, as traditional banks - and even physical currencies - decline
- When Digital Finance becomes essential to commerce,
  USF may have to recognize that supporting access to Digital Finance is unavoidable!

Digital Security

- With Broadband becoming more ubiquitous, the risks with personal and business data security are also increasing
- For universal adoption and integration of these technologies have to be safe, and users must be protected from cyber crime and exploitation
- **USF may have to support digital security laws, monitoring and enforcement - particularly for the vulnerable and inexperienced new users.**

Internet of Things (IoT)

- Internet of Things (IoT) is bringing connectivity to many items equipped wit sensors.
- It is also possible that some local IOT capabilities become indispensable to households or businesses just like mobile phones became!
- Some of the new smart IoT devices may eventually become “essential” enough to qualify for USO support

Over-the-Top (OTT) Applications

- Rapidly growing OTTs are downloadable only via digital networks and devices.
- Telcos revenues are declining, while demand for data is increasing
- Telcos say that OTTs should also contribute to USFs – but that may not be possible to implement

- **USOs may persuade some OTTs that in exchange for their contributions, they support access to OTTs!**

Artificial Intelligence, Virtual/Augmented Reality

- AI, VR, AR, are all becoming more and more visible, with limitless potential applications
- These may get incorporated in many useful devices and applications.
- **Thus the next-generation Technologies may become so useful, that the demand of support by USOs may appear reasonable and justified.**

TO ALL THOSE WHO THINK THINGS LIKE 'USO 2.0' ARE TOO FAR FETCHED, IT CAN ONLY BE SAID: WHO KNEW 25 YRS AGO THAT USF WILL SUPPORT EVERY INDIVIDUAL TO HAVE HIS/HER OWN CONNECTION!

Thank You