



**Substantive session on the WSIS+10 Review
Palais des Nations, Geneva
Wed May 14, 2014**

**Item 2: Progress made in the implementation and follow-up of
WSIS outcomes at the regional and international levels**

Commission on Science and Technology for Development (CSTD)
Seventeenth session

Mike Jensen

Association for Progressive Communications (APC)

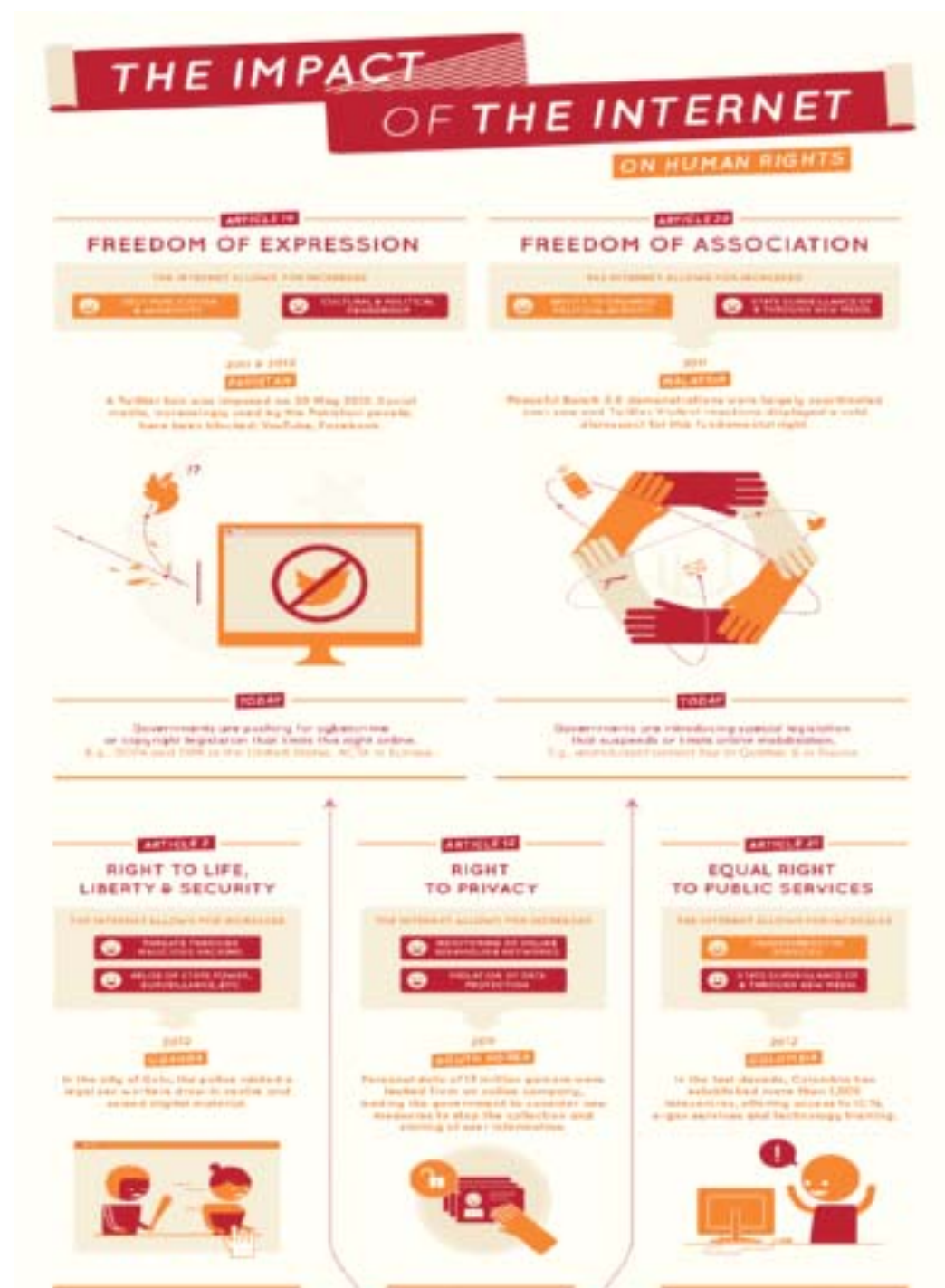
<http://www.apc.org>

What is APC?

- An organisation working on Internet policy issues since 1990, and a network of member NGOs from around the world, mainly from the global South
- Consultative Status at ECOSOC
- Supports a rights based approach to ICT policy

APC's Vision:

- All people have easy and affordable access to a free and open internet to improve their lives and create a more just world



Careful Assessment of Progress in Access to ICTs is Needed

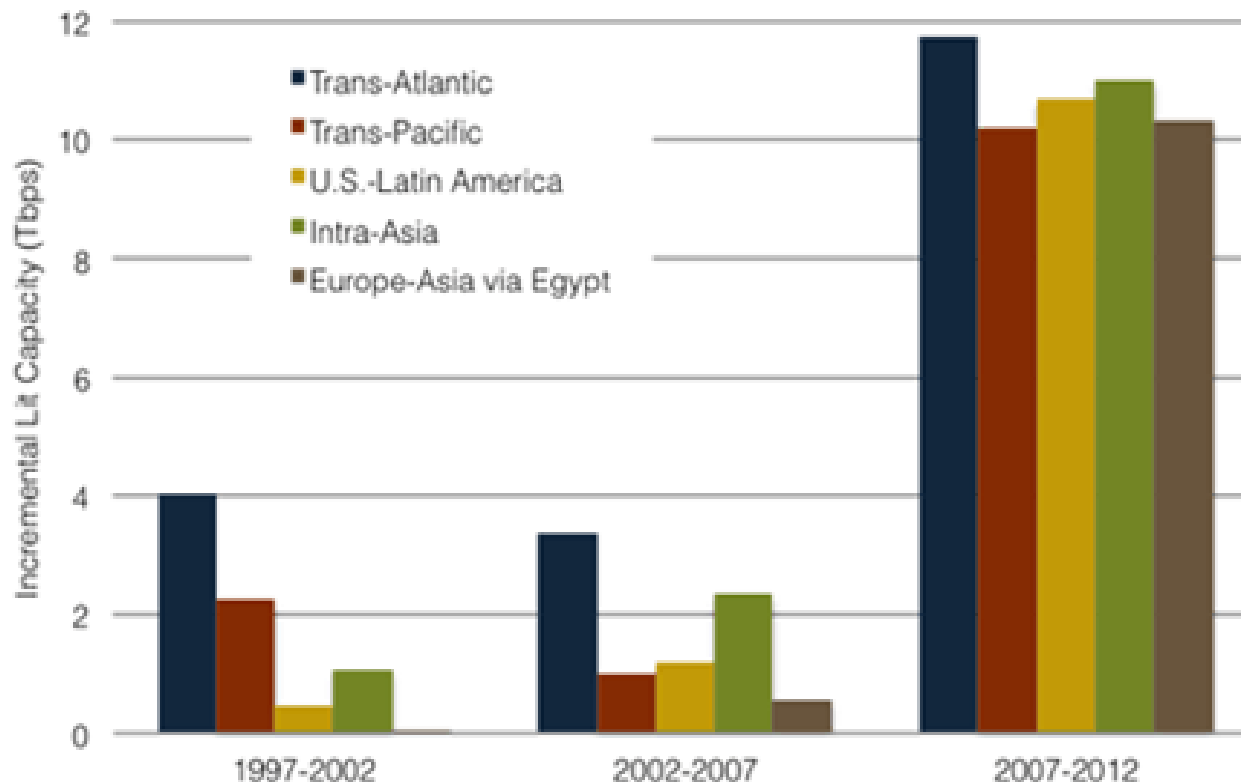
Is the cup half full or half empty?

- By the end of 2014 there will be almost 3 billion Internet users – double digit annual growth
- And more than 3 billion still unconnected
- But access is not just an either/or or on/off concept
The quality of access is a vital component. And in developing countries most of those who are connected have poor quality and/or high cost connections

Network Use Reflects Quality of Access

Internet Use is Rapidly Increasing, as Illustrated by Exploding Amounts of International Traffic

New Capacity Deployments on Major Submarine Cable Routes



Source: TeleGeography

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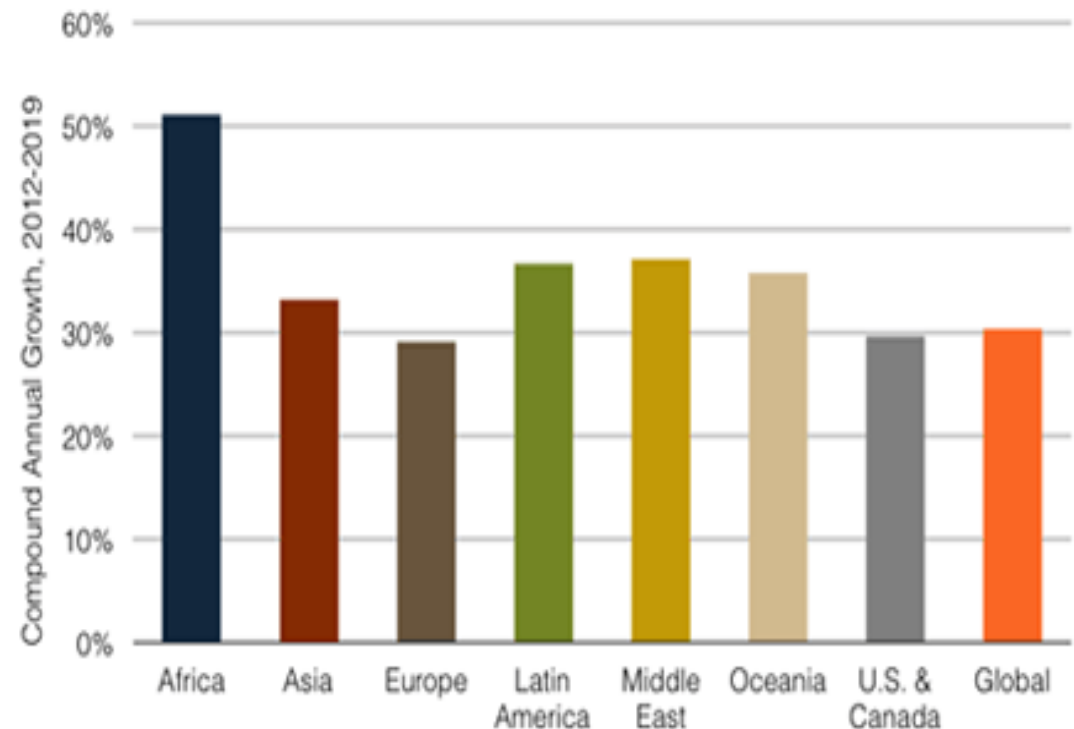
International bandwidth grew at an annual rate of 53% between 2007 and 2012

Growth in Africa's International Bandwidth Will Lead the World 2012-19, But.....

- Bandwidth will grow more than tenfold, at an annual rate of 51% - Faster than Latin America or the Middle East
- Africa's international bandwidth will reach 17.2Tbps in 2019
- But this capacity will still be less than Canada alone!

(37million people in Canada vs 1.27 billion people in Africa in 2019)

Projected International Bandwidth Demand Growth by Region



Source: TeleGeography

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What Are the Constraints To Greater Network Usage?

- Costly services curtail use
- Limited network coverage especially excludes rural
- Unreliable services stop people from trusting in the Internet's day-to-day dependability and use it less
- Inappropriate interfaces increase barriers to entry (foreign language/design)
- Lack of relevant content reduces demand
- Services not designed for people with disabilities exclude millions
- Lack of ICT literacy
- Lack of public access facilities

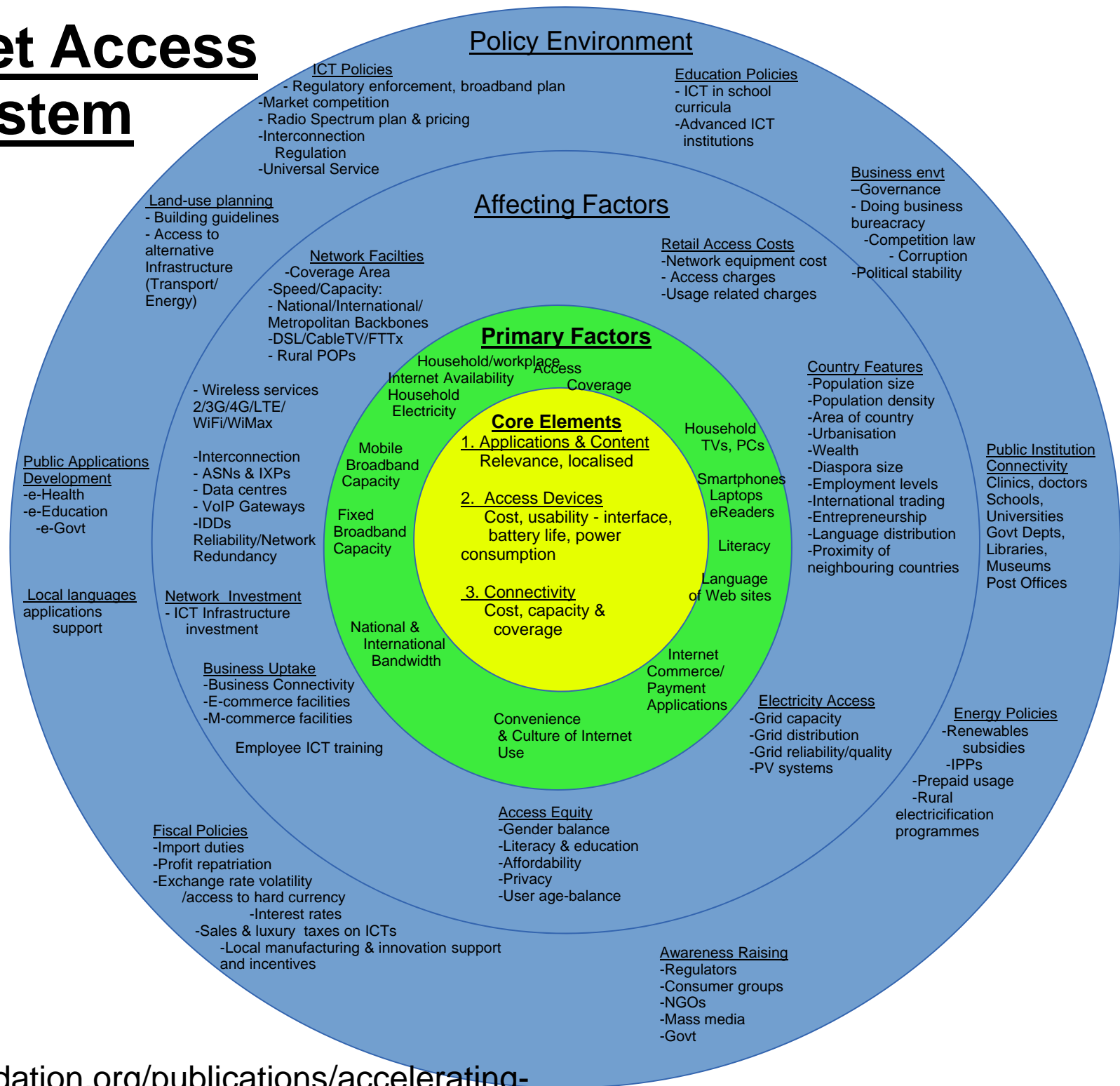
Low Quality Networks Have Significant Side-Effects

- Expensive services divert large amounts of personal income - in Africa mobile broadband costs 36-58% of GNI
- Low speeds make it infeasible to take advantage of immersive multimedia learning tools, many types of research and commerce, or for entertainment
- Slow networks steal peoples' most valuable resource – their time - or they use the Internet less because it wastes too much time
- Low network coverage limits efforts to develop local content because they cannot reach enough people to be effective or sustainable:
 - Governments find it harder to justify putting resources into e-government applications because they will not be accessible to everyone
 - The private sector will only focus on service development for urban areas where coverage is good

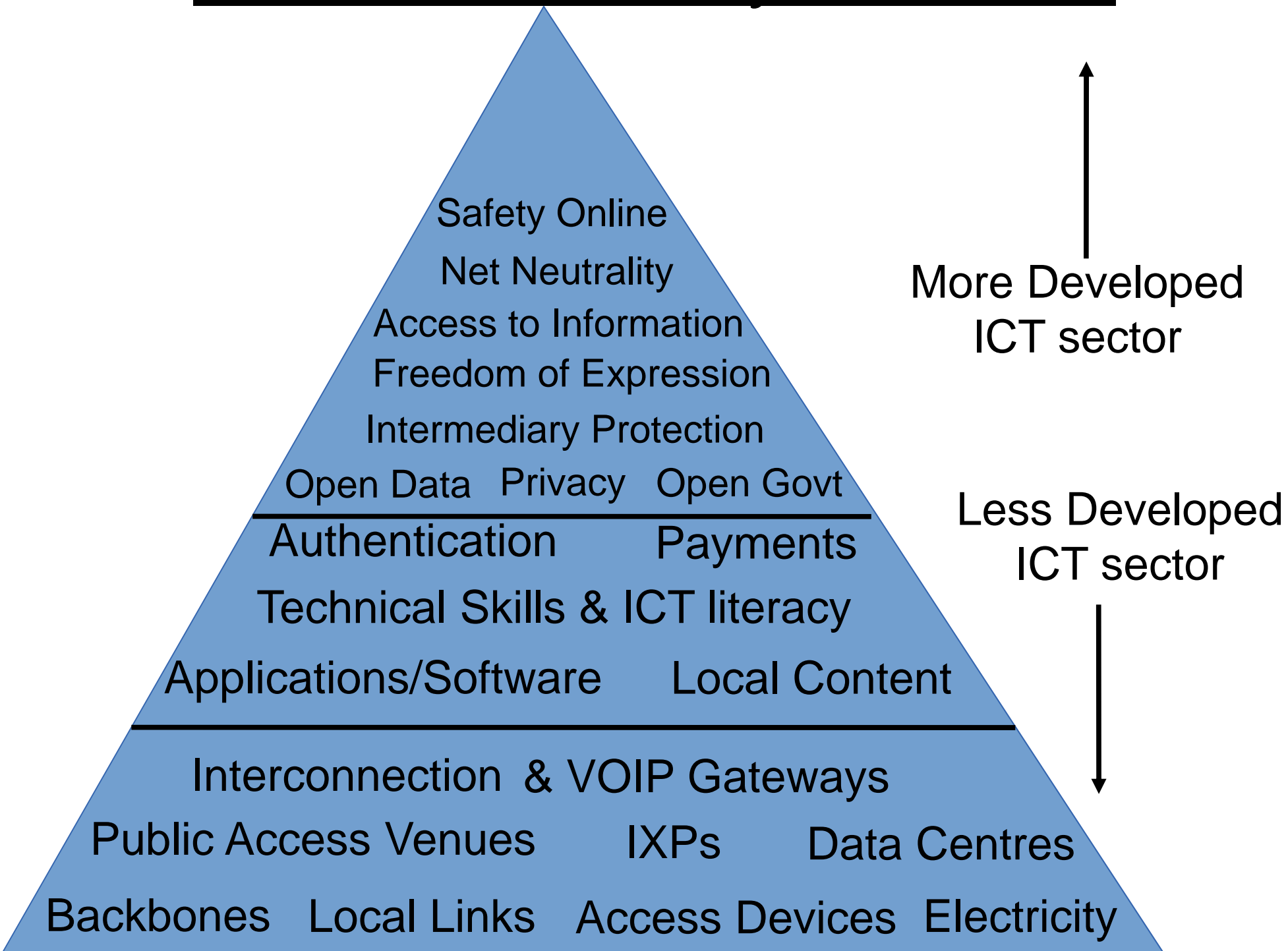
The Internet Access Ecosystem

'The success of deploying ICTs in countries depends on following an ecosystem approach'

CSTD report to the Secretary General



An ICT Heirarchy of Needs



Network Infrastructure Deficiencies

- Missing optic fibre links between neighbouring countries – either no link at all, or only 1 link. At least two or more physically independent links are required for reliability and competitive pricing
- Monopoly international submarine cable landings - at least two or more independent submarine cable landings are required for reliability and competitive pricing
- Lack of fibre deployed on alternative infrastructure (transport, energy and water networks)
- Many congested microwave links from mobile base stations to backhaul and backbones due to increases in data traffic
- Poor network interconnection - lack of or poorly functioning IXPs
- Lack of interconnection between IP networks and public voice networks (mobile and fixed)

Main Policy Constraints

- Market dominance by telcos – incumbent fixed and mobile operators
- High entry barriers for new providers, few tiered licensing regimes – no small scale operator licenses
- Low levels of passive infrastructure sharing requirements
- Lack of 'dig-once' land-use planning rules
- Limited success with Universal Service Funds - low management capacity, unclear goals

Additional Policy Constraints

- Limited availability of radio spectrum (restrictive and expensive licenses)
- High taxes on access services and equipment
- Lack of enforcement capacity among regulators
- High cost of rights of way
- Deficient electricity infrastructure
- Limited support for public access facilities
- Limited investment in human capacity building – from ICT literacy to higher level ICT skills

How To Achieve 'full' Internet Access

- Eliminate barriers to entry for new Internet providers, and small-scale local operators
- Efficient Interconnection – with other Internet providers & CDNs (IXPs), and with PSTN/Mobile networks for VoIP calls (DIDs, E1s)
- National fibre backbones – wholesale carriers & infrastructure sharing regulations, price caps on rights of way fees
- Effective Spectrum management – affordable, rapid allocations, more spectrum innovation
- Low cost access devices – financing schemes, minimised import duties
- Public access facilities e.g in libraries
- Online payment systems – national and international funds transfer
- Local content – e-government and incentives for private players
- Internet Intermediary Liability legislation to support local hosting
- Effective consumer protection – against spam, fraud, hate speech and privacy breaches (esp against women and minority groups)
- Subsidy mechanisms for public access, remote and marginalised communities/groups

Public Access Needs More Attention

New research shows that mobile access and residential broadband has not replaced the need for public access

- There is continued demand for venues with high-speed broadband, large-format screens, technical support, advice on information access and a secure and welcoming space outside the home
- Libraries are often key in performing this function
- More than 230,000 public libraries (73% of the world's total) are located in developing and transitioning countries



Key Actions for Stakeholders

Governments:

- Cease protecting incumbents (fixed and mobile) and open the market to more competition and self provision
- Increase access to radio spectrum for WiFi, TVWS, mobile
- Ensure passive infrastructure sharing (masts, ducts) is provided as utility infrastructure like any other – water, energy etc
- Adopt targets for access (price, quality and coverage)
- Invest in ICT human resource development
- Support public access facilities – libraries, schools, post offices
- Push for SDG goals to include ICTs

Key Actions for Stakeholders 2/2

Private sector:

Collaborate with government in provision of network infrastructure in 'unprofitable' areas

Support public access facilities in libraries, schools etc as corporate social responsibility goal

Public and CS organisations:

Push for better service, build public awareness of needs and potential

International community:

Support best practice information sharing

Support skills transfer and ICT human resource development

Thank You!

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