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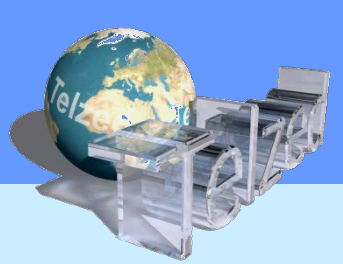

Regional Seminar on Economic and Financial aspects of telecommunications/ICTs
Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC)
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Initiatives to stimulate demand for broadband services and development of local content

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Context

- This presentation is a follow on from Session 2 where the strategic issues were considered
- In this session we look at practical measures to develop NGNs and how to increase the local content and demand that provide the economic benefits
- This session considers some of the “how” and “what” to do issues to meet the policy aims discussed in the earlier session

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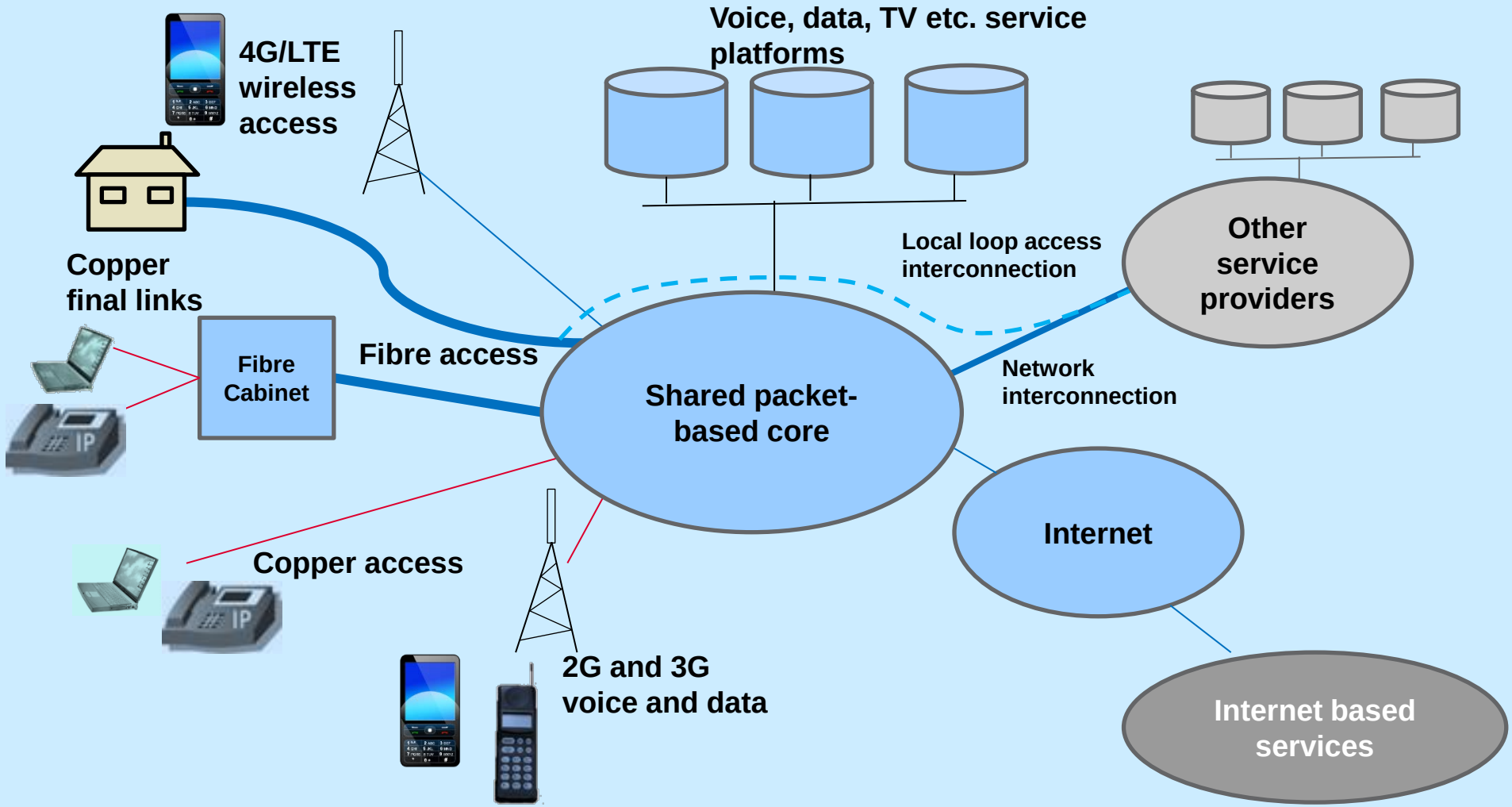
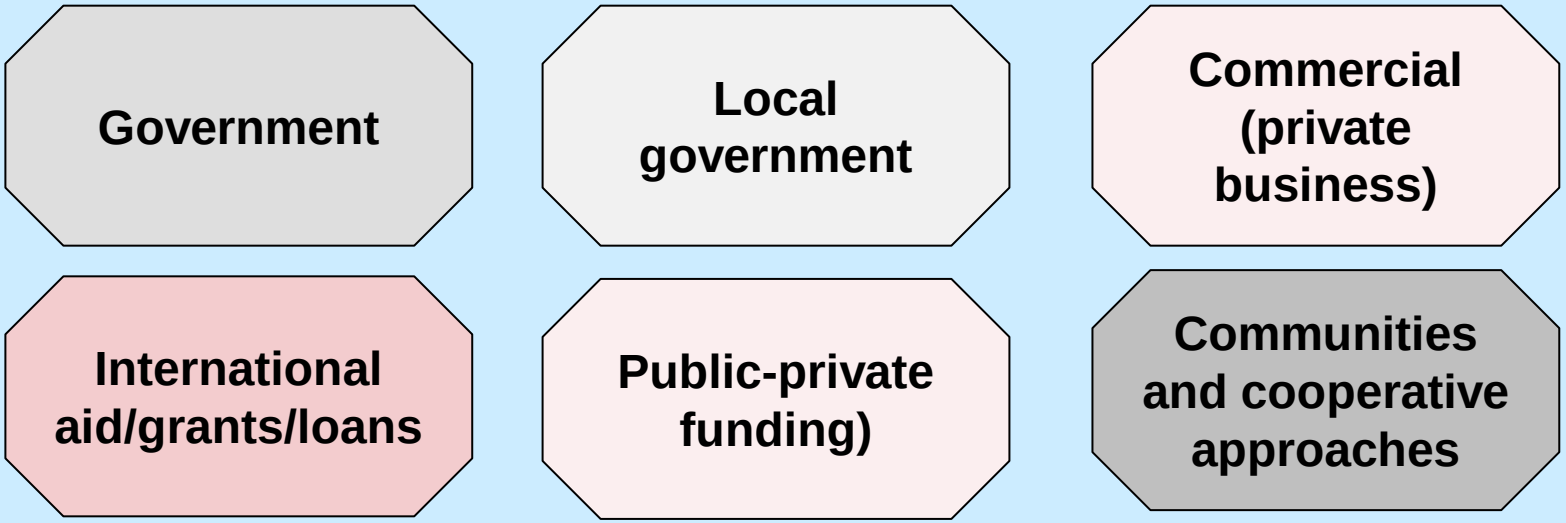
Agenda

- Funding
- Costs reduction and demand for a virtuous circle
- Some technical issues
- A little broadband is better than none
- Addressing the key parts of the value chain

Next generation networks – a reminder of the key structures

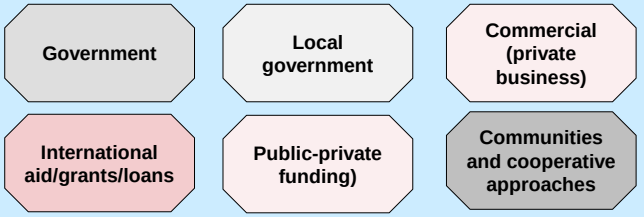


Funding of NGN is always going to be a problem



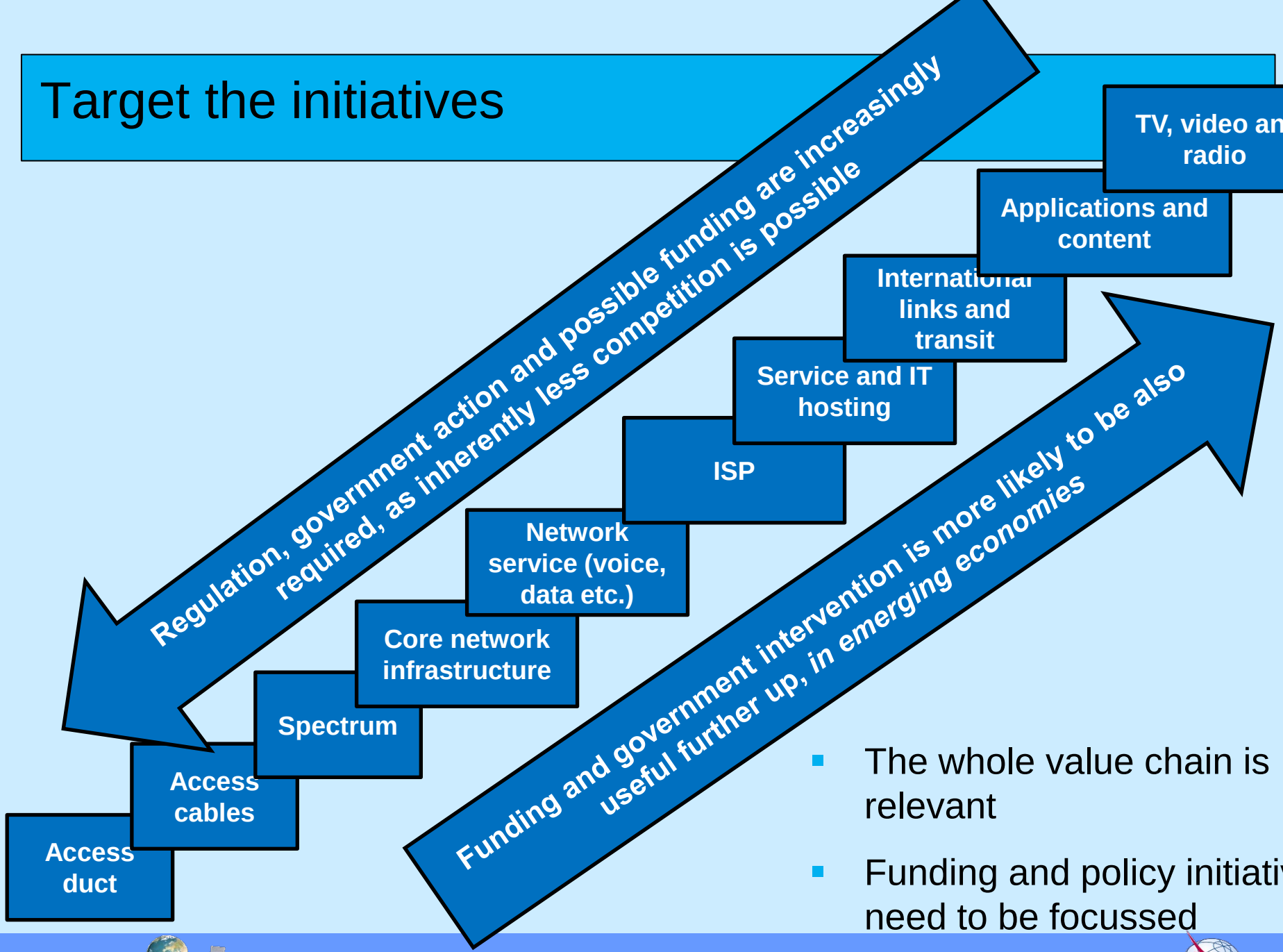
- Ideally free market and commercial business do everything
- Most countries have some aspects of government funding
- All methods have a role
- Getting the optimum mix of approaches and where to target the funding are the key initiatives that all countries have to address
- Less money available, increases the sensitivity

There are inevitable conflicts between the options



- All free market = no tension
- But probably not enough investment
- Any government or external funding can create conflicts with the free market and other investment decisions
- Danger: objections to government-help can stop any NGN/broadband
- What is suitable in one region may not work in another: city versus rural. But action in one region can impact another
- Central/external funding may make services affordable in one area, but this price expectation cannot be matched in another
- There is always (?) going to be a digital divide
- Getting some broadband is surely better than everyone getting nothing

Target the initiatives



- The whole value chain is relevant
- Funding and policy initiatives need to be focussed

Local initiatives

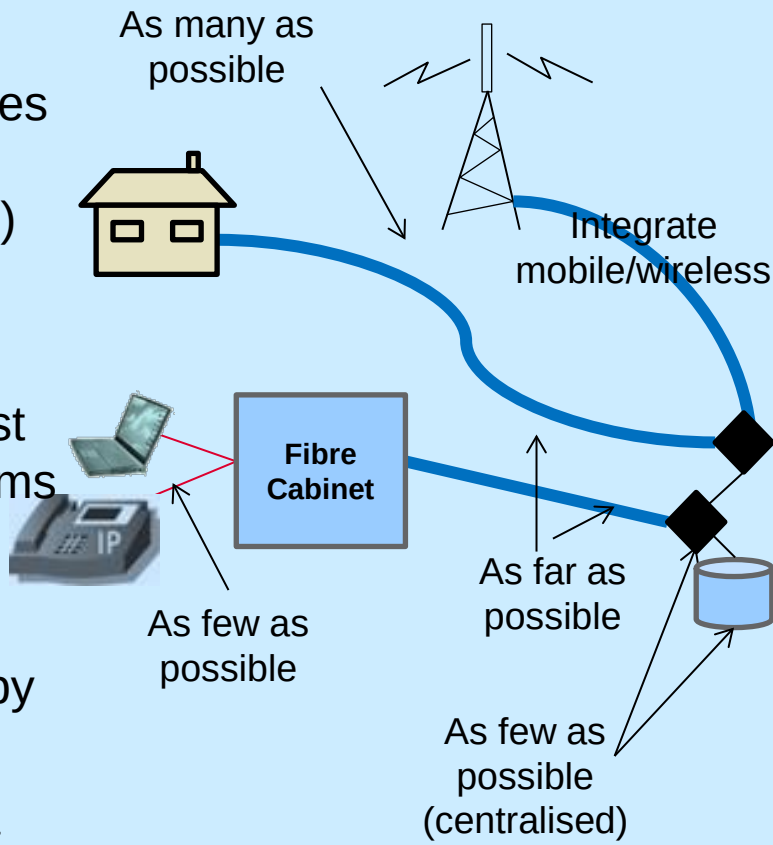
- Communities can act together
- Cooperatives, or local businesses can emerge address local needs
- Must not allow the telcos to move in and undermine their local investments
- Use innovative approaches: wireless, microwave, wifi, optical line of site, satellites, copper, fibre etc
- Many techniques have been used. “Mix and match” to fit the situation
- Need backhaul services *up to* the ISP/Internet. This in contrast to the (more common) regulated access *down to* the customer for ISP/altnet

Example initiatives at the bottom (underground!)

- Digging is expensive
- Shared digs
- Force ducts to be installed
- Share infrastructure – trenches, pipes, cables and civil works
- Relevant for access an inter-city
- Build a new road, housing, railway, water etc. – and cost to add in NGN provisions is small
- One cable in a community is far better than none

Get “radical” with the local loop thinking

- Telcos are based on copper local loops of ~5km maximum. This led to many local exchanges (or remote concentrators). Only in city areas were sites driven by the maximum numbers of customers possible into one switch (needing *even* more sites)
  - Result: a legacy of a lot of sites, and legacy mentality
  - But emerging economies often have limited past networks, so: can by-pass the migration problems encountered elsewhere
- Get rid of the local sites
- Few limitations on numbers of customers served by a single service platform
- Long distance fibre and “simple” transmission to a very few central sites
- Lower costs!



Example initiatives further up the chain

- Share mobiles infrastructure
- Do not use mobile as a simple source of tax/revenue: at least be *sensible* with any actions
- Mobile is now for everyone, not just the rich! In many countries the fixed players never met the consumer's needs
- Allow masts and infrastructure to be shared and community access to infrastructure
- Consider an underlying mobile network provider and allow MVNO service provision – sharing of networks
  - Allows competition at the *service* level
- Allow/encourage backbone providers

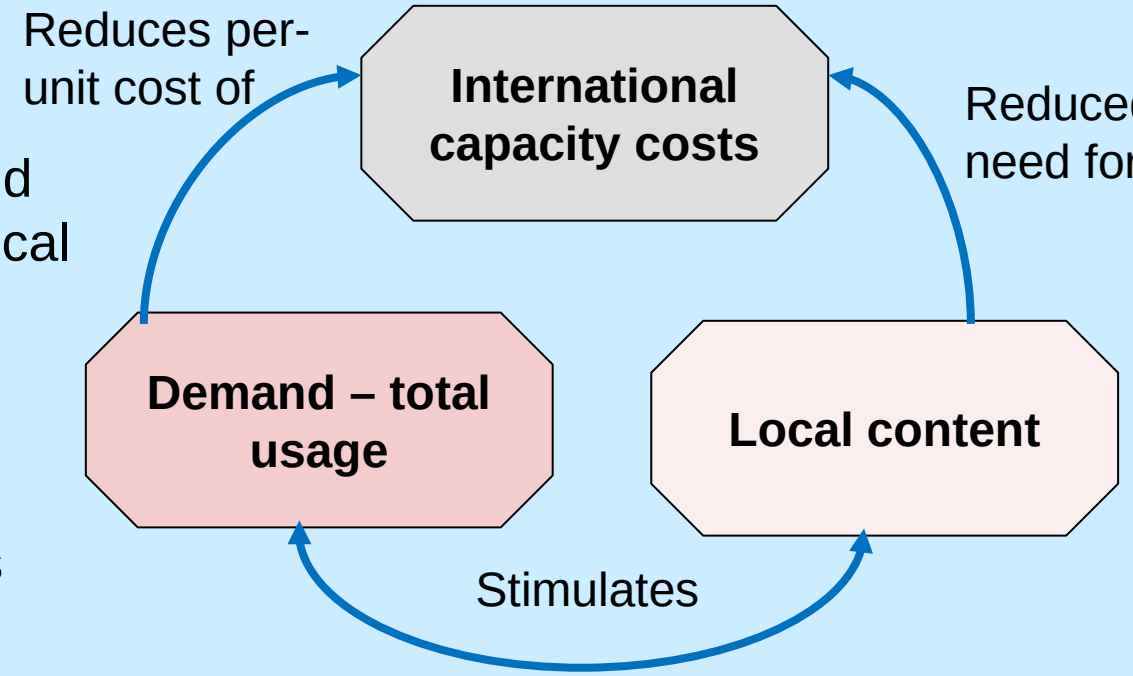
Tax revenues rise from general economy improvements. Do not tax telecom/broadband/services without good reason

International capacity and local content

- International capacity and IP transit is expensive in emerging/remote economies
- Most Internet content is initially overseas – increases the cost to each customer
- More local content reduces the international cost-contribution. Huge benefits to end users from local language content
- More international volumes reduce the per-unit costs
- As demand increased Content Data Networks emerge – service providers move their servers to be closer to the customers. This reduces the dependency on (and cost of) the international portion of the total service cost

International capacity and local content

- The user experience and benefits are greater if local language is used
- This reduced need to international capacity
- Local content increases demand



- Increasing demand reduces the international capacity cost
- More demand moves overseas applications, content, servers from overseas. Content delivery networks
- More demand reduces prices that increases demand for content and services and so on

Increasing demand and local content

IT support and secure sites & systems

TV, radio, education, healthcare and government services

Minimise costs with *possible* reduced-competition risks

- Move services to be available on Internet
- The sooner the move, then the greater the demand and the lower the cost, and the greater the demand
- Emerging economies might need to balance/sacrifice some aspects to get the demand up as fast as possible (see also earlier session paper)
- This suggests possibly more funding assistance and intervention at the higher levels of the value chain than typically seen in more developed economies

Education

- All types of education can be provided over broadband
- Major stimulus for broadband and clear benefits for remote access to specialists and skills
- Less commonly considered is education on:
  - How to develop service and content (IT)
  - How to install and build NGN/NGA
- Increasing NGN technical skills is an enabler that has wide ranging benefits

Resale and sharing

I saw on the village video that the market does not have these goods on sale

- Retail re-sale should be allowed
- Creates some “after market” competition
- Enables one user to share broadband with neighbours
- Multi-tenanted buildings need ways to share a single access point
- Allows broadband shops and Internet cafes
- Sharing is vital with low PC penetration in low GDP countries
- Allow systems and payments to be shared. Micropayments and transfer of mobile usage credits have already benefited many countries

I hate going home from the market while still having a full load

Some is better than none, then others will follow

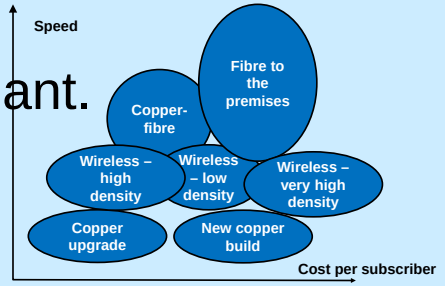
- Broadband is not wanted by everyone
- Not everyone can afford it
- But there are often a few who *can* afford it (or can group together to pay for it)
- Once the neighbours have something new/fun/better, then others want it
- See: mobile phones, iPhone, tablets and TVs
- Attitudes to what is needed and is thought to be vital, change
- This stimulates demand – and this kicks off further price reductions as more broadband is delivered
- Broadband is then less unaffordable

Do not hold back just because everyone cannot afford it

Politics & social engineering have a role to play

“Mix and match” technologies to meet and stimulate demand

- Mobile/wireless is likely to be more important in developing economies than more advanced countries
- Lack of existing fixed networks. Mobile is already dominant. See cost speed/cost difference
- Wireless needs *backhaul* – can integrate with FTTX
- Any existing copper – can link into to FTTC migrations
- Smart phones and tablets – mostly work over mobile or wireless. Cool/desirable. Many customers will not be able to afford more than one device. Broadband allows “offloading” of traffic on to fixed (fibre-based) networks



Need to think laterally and innovate solutions to fit the locality

Summary of some key messages

- There are synergies of more usage, benefits and lower costs. Getting the growth up to a level that starts to trigger the spiral of benefits is a key requirement
- Need focused intervention. The areas to assist with will vary by country and are typically different in emerging economies that developed ones. Few countries can afford to serve everyone
- Local initiatives should be allowed – one solution for everyone might not be possible. Something for some is better than nothing for all
- Be careful of taxes. Telecoms enables other business, so be careful/sensible!
- Education benefits *over* broadband are well known. Education on how to *use* IT is needed. Place stronger emphasis on NGN *build and installation* skills, not just *IT development* and services *supply/build*
- Some simple planning rules on digging, duct, infrastructure sharing with utilities will help reduce costs

Questions and enquiries are always welcome

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