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ITU Workshop on Internet Investment
Doha, Qatar, 6 November 2012

Streamlining Broadband Investment

An Overview : Dr Ross Patterson
Chairman

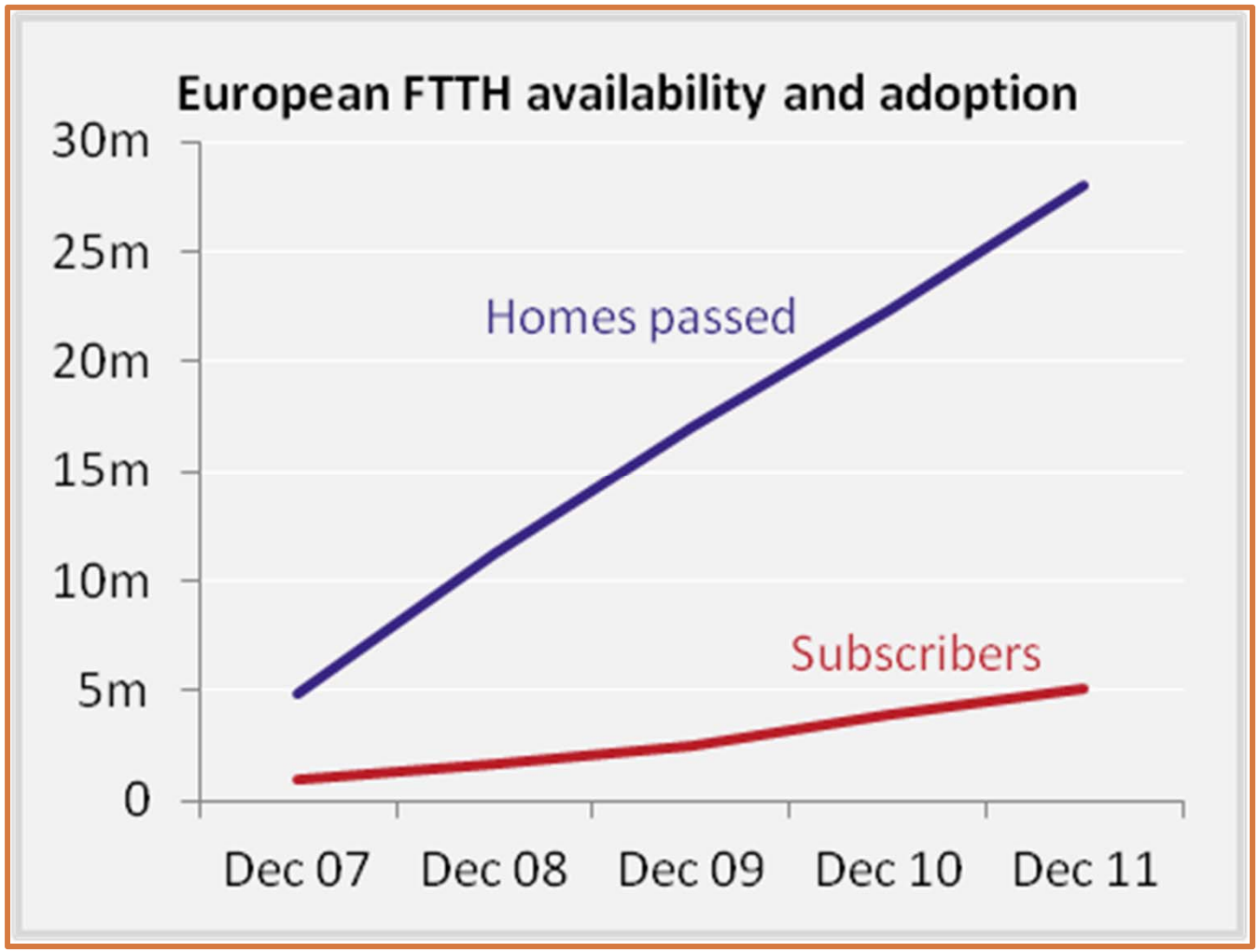
Lessons for the Region : Stewart White
Managing Director & CEO

An Overview

Three critical preconditions to investment:

- A stable and predictable regulatory regime
- The investor is able to achieve an appropriate return on investment
- the investor is satisfied that there is likely to be sufficient consumer demand to enable an appropriate return on investment to be achieved

Chart of Uptake



Example of a Govt. demandside initiative

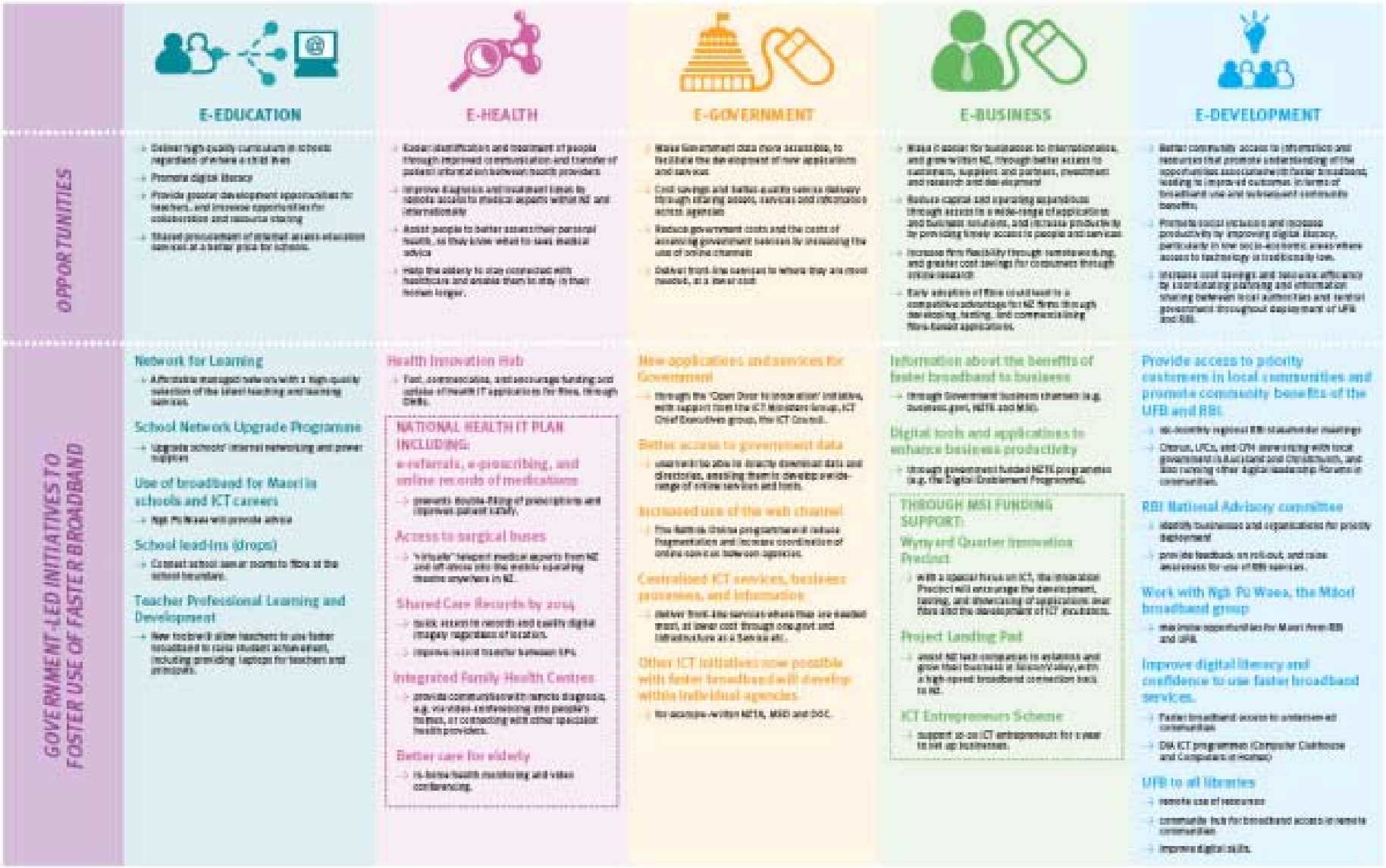


Figure 20: Five point government action plan for faster broadband (Source: MED)

Optimum Regulatory Model

Open Access

- Non-discrimination
- Transparency
- Monitoring
- Enforcement

Open Access Models

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Mandated Wholesale Access

Accounting Separation

Functional Separation

Structural Separation

State Owned Network Companies

Policy and Regulatory themes

Policy and Regulatory issues for consideration

No one-size-fits-all

Coverage (100%? 90%)

Speeds (Fast, Superfast)

Take-up (demand side stimuli)

NGN deployments require Government intervention:

- key tool for productivity and growth
- revenues not necessarily comparable to high capital costs and deployment time

Government initiatives:

- Tax incentives and loans, co-investment, subsidies, grants
- Enabling regulatory frameworks

Market characteristics decide level of intervention:

- market structure
- level of economic prosperity
- population to land mass
- plus technology neutrality
- fixed vs mobile/mss
- technology mix

No one-size-fits-all in terms of each of the markets and some of these markets are moving at different speeds

Optimum Regulatory Model

Open Access

- Non-discrimination
- Transparency
- Monitoring
- Enforcement

Is price regulation needed where take up is low?

Conclusion

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To streamline investment in broadband, what is required is:

- a stable and predictable open access regulatory regime;
- which allows an appropriate return on investment;
- together with programs to encourage uptake of broadband through - proactive education, health and government services initiatives.

Lessons for the Region

There is significant consumer and enterprise demand for broadband-enabled communication services in GCC.

Consumers want fast, reliable, and easy access to Internet and emerging 'over the top' services (from TV to education and healthcare services)

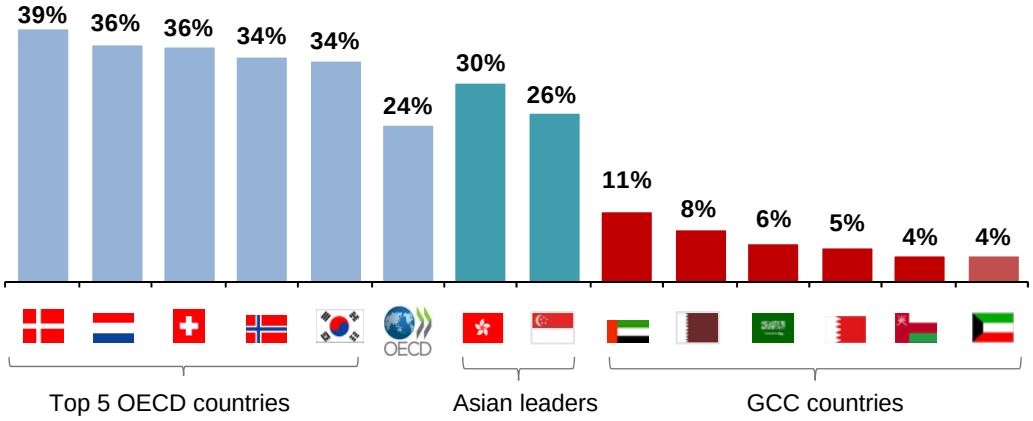
Businesses seek improved access to GCC national, regional and new international markets for products and services, and to capture operating efficiencies through video-conferencing (telepresence) and enabling 'home-shoring'

GCC and other regional Governments wish to promote social inclusion, drive GDP growth and foster innovation and entrepreneurship through ICT investment

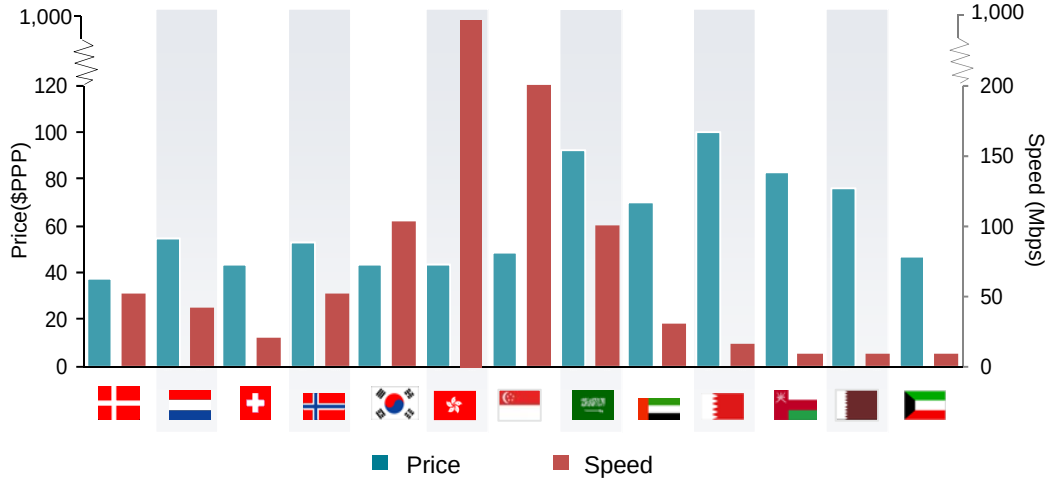
Telecoms operators wish to offer high-speed Internet access and advanced broadband-enabled services to consumers and enterprises

The current lack of pervasive, affordable broadband constrains service growth in GCC

Limited GCC broadband penetration today vs others



Broadband prices are relatively high and access speeds low



Key constraints today

1. **Low broadband penetration** means many consumers cannot access basic Internet services, hindering development of content and cloud-based applications

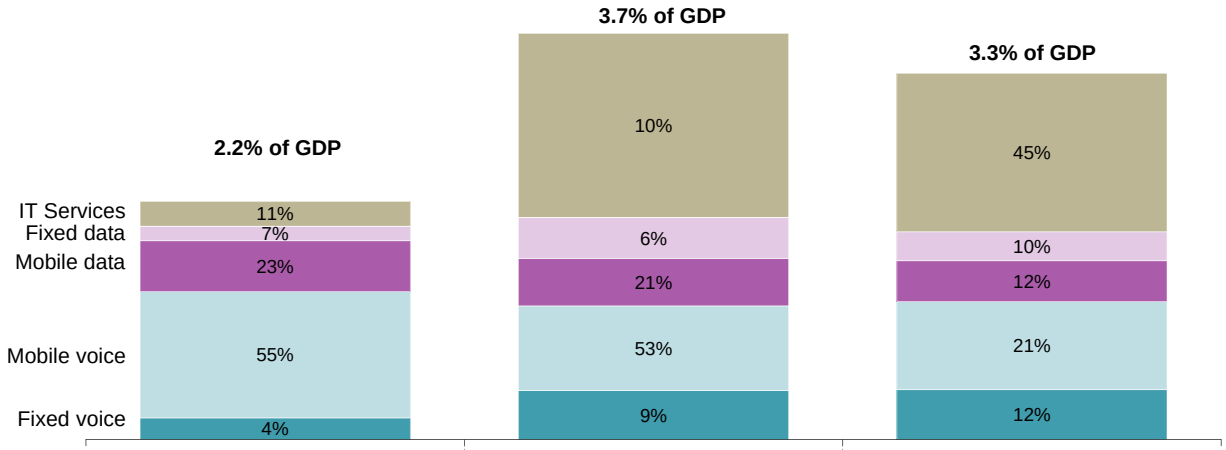
2. **Low speeds** limit high bandwidth, low latency application usage (e.g. e-education, e-health, video streaming, telepresence)

3. **High broadband prices** constrain take-up rates

Source: Organisation for Economic Co-operation and Development (OECD); ictQatar; Economist Intelligence Unit (EIU)

International ICT market structure

ICT market revenue as a proportion of GDP, selected leading markets 2011(%)



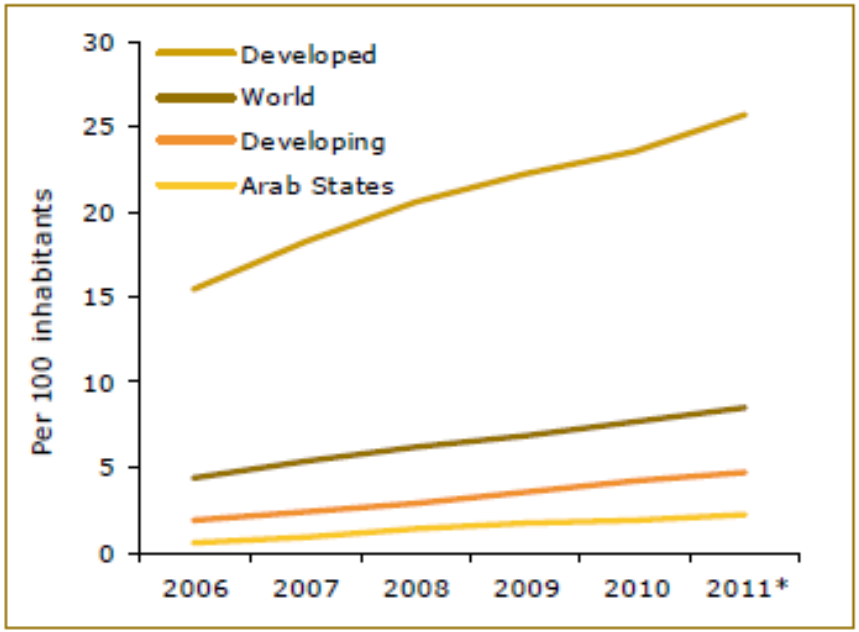
Penetration KPIs	GCC Average	OECD Average	EU Average
Mobile (per inhabitant)	177%	103%	128%
Fixed line (per household)	83%	79%	75%
Fixed broadband (per household)	35%	68%	66%

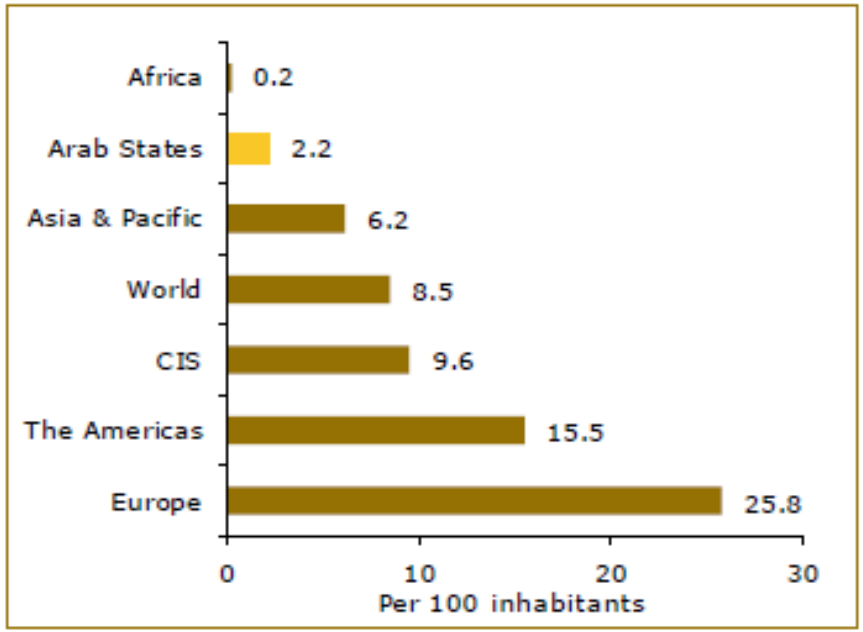
Notes:
(a) IT services includes consulting, development and integration, hardware maintenance and support, IT management, process management and software support;
(b) The fixed data and internet figure for OECD and EU countries includes consumer fixed broadband, leased lines, legacy packet data and IPVPN;
(c) OECD countries exclude Estonia, Iceland, Luxembourg and Slovenia;
(d) EU countries excludes Bulgaria, Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, Romania and Slovenia;
(e) Mobile broadband includes technologies enabling high-speed packet access: WCDMA, HSPA, LTE, CDMA2000 and WiMAX. It excludes GPRS, EDGE, GSM and CDMA2000 technologies.

Source:
(1) Gartner;
(2) ITU;
(3) Wireless Intelligence;
(4) Ovum;
(5) Economist Intelligence Unit (EIU);

Fixed (wired)-broadband subscriptions

Fixed (wired)-broadband subscriptions*, 2006-2011** (left) and 2011** (right)

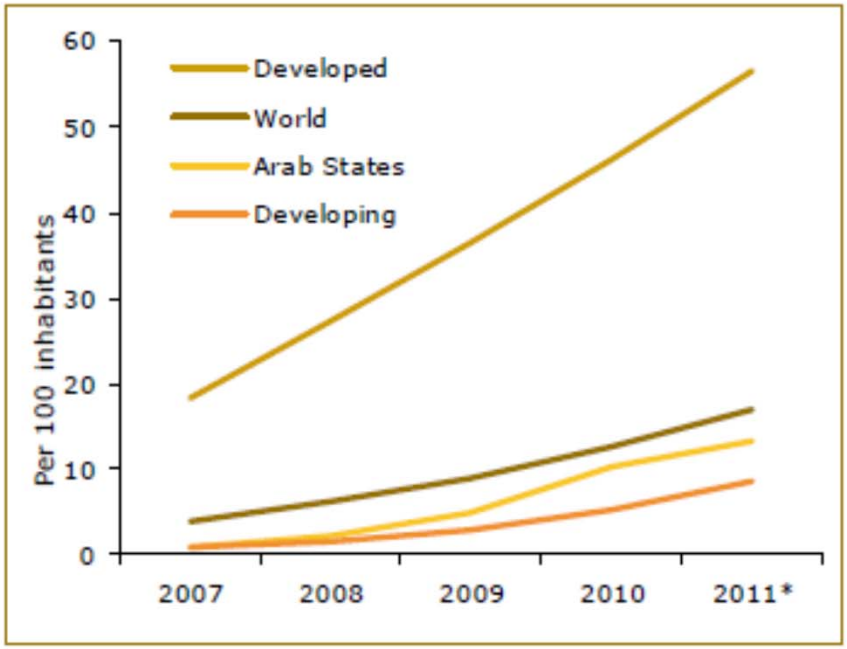


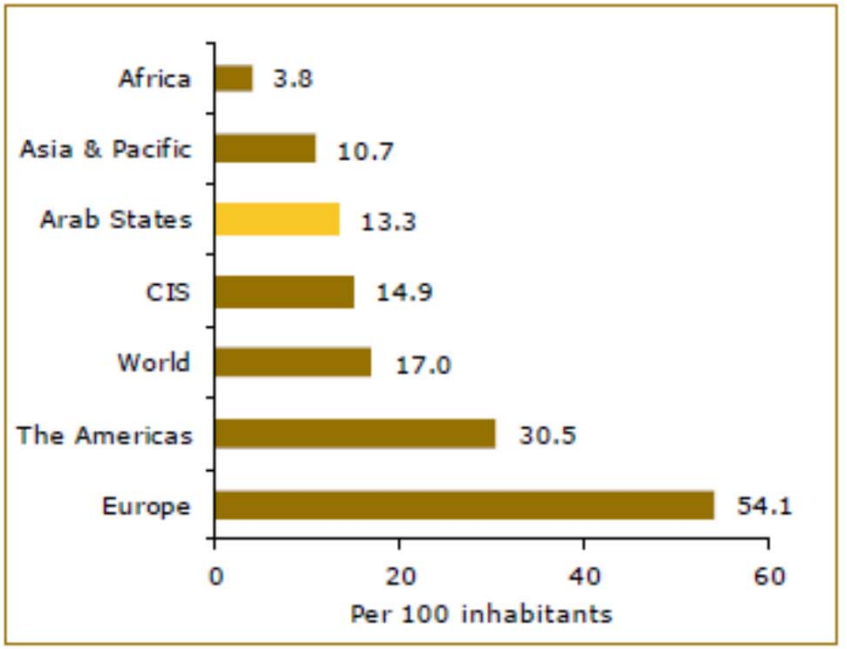


Note: *Data on fixed (wired) – broadband subscriptions exclude WiMAX subscriptions ** 2011 data are ITU estimates
Source: ITU World Telecommunication/ICT indicators database

Active mobile-broadband subscriptions

Active mobile-broadband subscriptions, 2007-2011* (left) and 2011* (right)

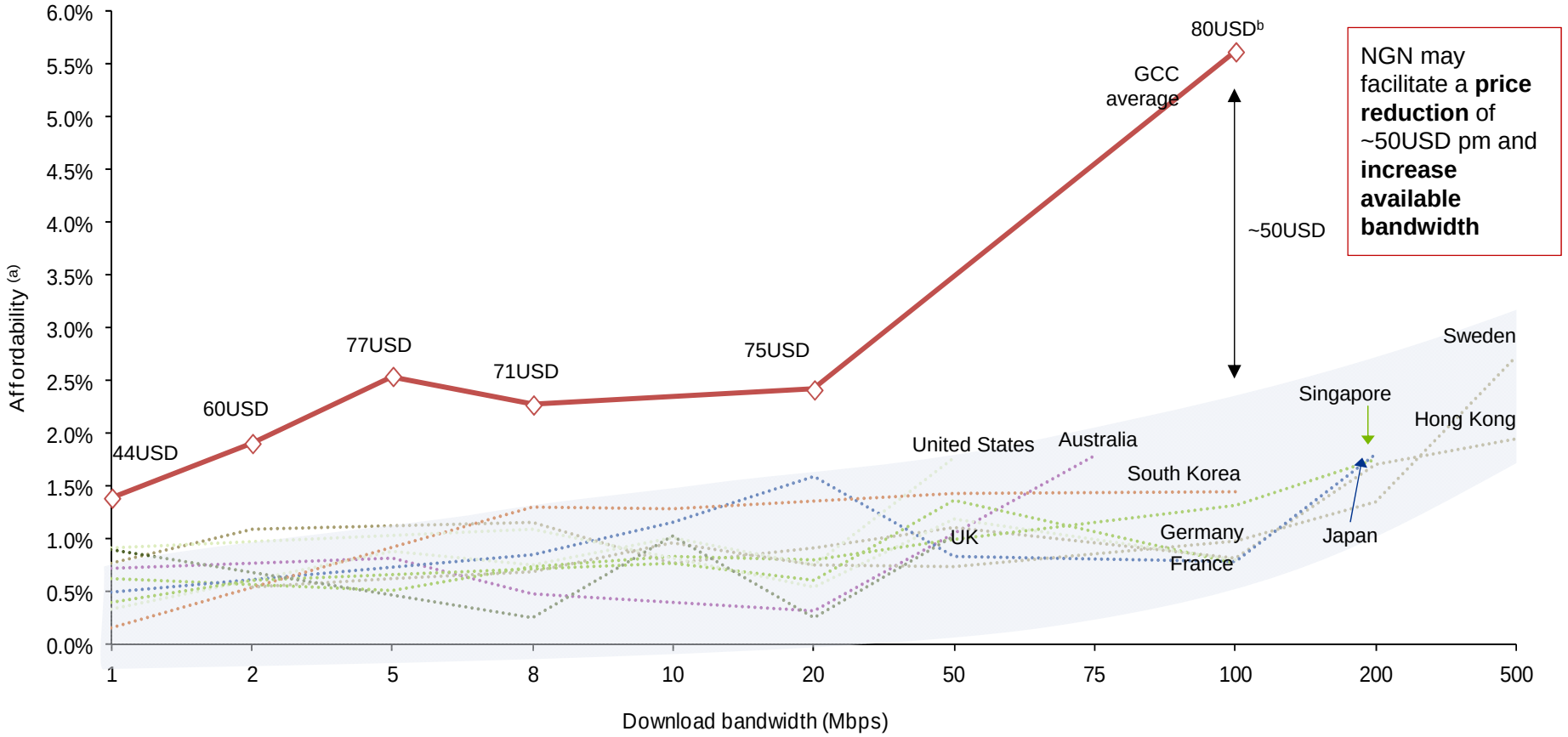




Note: *2011 data are ITU estimates
Source: ITU World Telecommunication/ICT indicators database

NGN insights: customer proposition

International broadband propositions: speed and affordability



Note: (a) Annual cost of broadband (the cheapest tariff for a given bandwidth) as a proportion of the average GDP per capita

(b) 100Mbps is only offered by Saudi Arabia

(c) GCC average only considers Saudi Arabia, Kuwait and UAE

Source: Telegeography; KPMG analysis

NGN in region

Investment on the rise

Middle-East & South Asia as regions been bullish promoting fibre networks - need huge capital requirements, thus progress been slow in some countries. Nevertheless:

- Qatar – in 2010 Qtel invested USD 165 Million in first phase of FTTH Project
  - Qtel plans to roll out a 100 megabits per second nationwide network with VoIP and television service by 2013
  - ictQatar consulting on Q NBN
- UAE - Etisalat invested more than USD 1.36 billion in deploying a FTTH network expected to be completed by end 2011
  - Around 56 per cent of premises in the UAE have been deployed with fibre-to-the-home (FTTH) technology by the end of 2011.
  - Abu Dhabi - Etisalat completed FTTH roll out for 85% of households in 2010 and 100% coverage expected by 2011
- India - telecom regulator proposed an investment of USD 6 billion to set up a national broadband network to meet its broadband target by 2015
- A number of countries consulting on appropriate national broadband policies – e.g. Oman
  - Raises important policy issues such as viability of infrastructure competition, NGN access and transparent ownership structure of NGN

NGN in region

Development of a modern communications network via a PPP and the telecommunication services for the Ministry of Communications Kuwait (1)

Project brief KPMG with Atkins and SNR Denton

- Development of a modern fixed line next generation network, with nationwide coverage in Kuwait;
- Assistance to realise the full potential of modern, affordable telecoms services;
- Generate benefits for the wider national economy including local job creation and improved productivity and securing the potential for Kuwait to develop its status as an international financial centre;
- Create a modern network by commissioning via a PPP, a qualified private sector partner to develop and manage the network; and
- Biggest telecom project in region for 2011/12.

Key roles

- Lead and financial advisor;
- Accounting separation of Telecom and other activities
- Review of current market size and structure, demand trends and fixed line KPIs, including primary research and international benchmarking;
- Feasibility study including options evaluation, financial modelling, valuation, and PPP modelling and planning;
- Assistance to secure procurement including management of the entire bid process until financial close;
- Stakeholder management; and
- Project administration during project implementation phase (at client's option).

Key issues include...

- Government monopoly on fixed line;
- Older wireline technology predominates in access network;
- Low broadband subscriber penetration with government controls (*Control is related to international links and backbone, which drives up cost)* and expensive internet access;
- No independent regulatory authority;
- Young, highly urbanized and growing population;
- Mobile subscriber penetrations increasing; and
- Tight timetable and delivery requirements.

"Those nations taking the first step in seizing the opportunities of next-generation broadband may not always be the most efficient nor always the most successful in deployment, but they will surely be better off than those nations that remain on the sidelines, paralyzed either by fear, cost or the unknown."

ITU *Confronting the CRISIS, ICT Stimulus Plans for Economic Growth*, 2nd edition October 2009

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