
AKHET CONSULTING EXPERIENCE & CAPABILITY NATIONAL BROADBAND NETWORKS

BACKGROUND - 'BROADBAND FOR SUSTAINABLE DEVELOPMENT'

Dr Hamadoun I Touré, Secretary-General, International Telecommunication Union (ITU) opened the WORLD TELECOMMUNICATION DEVELOPMENT CONFERENCE (WTDC-14) held in Dubai on Sunday, 30th March 2014, with the following words:

"ICTs – and in particular broadband networks – offer perhaps the greatest opportunity we have ever had to make rapid and profound advances in global social and economic development.

This is of tremendous and timely importance, as we approach the cusp between the MDGs [Millennium Development Goals] next year, and the beginning of the post-2015 development process. And this of course is why 'Broadband for Sustainable Development' has been chosen as the theme for WTDC this year.

Like you [Distinguished Delegates], I am convinced that by extending access to broadband, countries will quickly accelerate sustainable social and economic progress. By delivering efficiencies across so many areas – from education and healthcare to transportation, water and energy – broadband networks can quickly pay for themselves, creating a virtuous circle of investment, productivity and human development.

To help world leaders see the ways that broadband can accelerate the achievement of the MDGs, ITU and UNESCO launched the Broadband Commission for Digital Development in 2010, just a few weeks before we last met, in Hyderabad. In this context, and in the context of this Conference, it is especially gratifying to see broadband access growing so rapidly in the developing world – with penetration in the developing world in terms of mobile broadband growing an incredible 50% between the beginning of 2013 and the beginning of 2014."

Importantly he said that "the output from this Conference will be fed into the ITU Strategic Plan which will be endorsed by the ITU's Plenipotentiary Conference in Korea in October.'

All Members, whether Member States or the private sector, are therefore encouraged to work on the ITU Strategic Plan and as a consequence the own national broadband plans for 'Broadband for Sustainable Development'. Success requires clear focused leadership (often called "political will") for the implementation of any national broadband policy to ensure the full benefits of next generation broadband are enjoyed by all sectors of society.

Increasingly governments are proposing 'Smart Cities' that will be energy efficient, safe, secure, eco-friendly and sustainable - a full 'Digital Agenda' experience for all citizens. Relevantly given the WTDC-14 is being held in Dubai is the *Dubai Action Plan* – which will set the agenda for telecommunication and information and communication technologies development over the next four years and links to the existing initiatives announced by H.H. Sheikh Mohammed bin Rashid Al Maktoum for Dubai Smart City and also the mGovernment Initiative.

The recently published World Bank Report *Broadband Networks in the Middle East and North Africa - Accelerating High-Speed Internet Access* (launched at the offices of the Telecommunication Regulatory Authority of the UAE (TRA) in Abu Dhabi), observed in the Introduction that:

"(m)ost countries in the Middle East and North Africa (MENA) have identified broadband as a critical input to broader efforts in nation building and the transition to a knowledge-based economy. There is growing consensus that broadband Internet is a prerequisite for a modern economy and fosters sustainable economic development and job creation. Furthermore, it is strategic to the goals of enhancing job opportunities and reducing poverty in the region. The objective of this study is to assess the status of development of broadband in MENA, to identify key bottlenecks to broadband expansion, and to offer suggestions on how to accelerate investment and diffusion of broadband connectivity through supply-side measures."

The MENA Region experience is relevant to other parts of the world such as sub-Saharan Africa or Central and South East Asia, as it represents countries in different stages of economic, social and ICT adoption, from least developed to industrialised ones. The Report notes that 15 out of 19 MENA countries have adopted a national broadband plan and that:

“... it is crucial that national broadband policies should be well formulated according to the stage of broadband market development of each individual country with emphasis on those areas that are the most relevant for that stage. This enables the government to introduce adequate and, just as importantly, timely regulatory and policy measures which may effectively contribute to further market development while taking into account the specific situation of each country.” (Page 31)

Where on this continuum each country sits will be a major factor in determining the appropriate national broadband policy. For example, some countries that have relatively poor fixed network infrastructure can leapfrog costly build requirements through sharing existing infrastructure such as oil, gas, water and railway networks. For example, Algeria utilises the fibre assets of Sonatrach's oil and gas backbone infrastructure (enabling regional and international access); Sonelgaz's electricity and gas distribution fibre network and SNTF's railroad fibre network in addition to the telecoms assets of Algeria Telecom and Djazzy; and in Oman the Oman Broadband Company is utilising the fibre assets of Haya Water.

WHY AKHET?

Akhet has unparalleled experience in the creation of the right policy for and implementation of NBNs. Its principals have been involved in the development of the Singapore (state funding of private sector participants), New Zealand (public private partnerships) and Australian (state owned and operated entity) models. We have also advised and have experience of policy development and implementation in Kuwait (a proposed PPP of the fixed network assets of the Ministry of Communications); Oman (policy advisory and workshops for the Ministry of Transport and Communications as well as expert panel to the newly created government owned Oman Broadband Company); and Qatar (policy and regulatory strategy review for ictQATAR and related issues for the incumbent) We are accordingly well placed to assist policy makers, regulators and operators in the formulation, design and implementation of an effective and successful NBN policy for their jurisdiction.

It is clear from our experience, both in original policy implementation and subsequent operational and policy review in Singapore, Australia, New Zealand and other jurisdictions, that there are many different ways to implement NBNs. Simply put, there is no “one size fits all” NBN model, which is particularly true in a country like the UAE, which enjoys one of the highest FTTH penetration in the world.

However, there are a number of common over-arching principles can be identified when any government is considering appropriate national policies and regulatory/competition framework to build and sustain a national broadband network, either on a stand-alone basis or in partnership with the private sector to increase competition, encourage universality of services and at affordable prices:

- the separation of the network business from the business of providing downstream services;
- open access obligations on the network business; and
- financial arrangements to achieve the structural or functional separation of network and retail businesses in what was formerly a single vertically – integrated operation.

The specific implementation of this framework has varied from jurisdiction to jurisdiction, depending on the economic, political and market conditions in each jurisdiction. An analysis of the reasons for the different approaches is very instructive in assisting a jurisdiction that is considering implementing an NBN to design the optimal structure and regulatory framework for its market.

The unique advantage that Akhet provides is that its principals were intimately involved in the development of three quite different NBN frameworks: Singapore, New Zealand and Australia as noted above; and likewise the differing approaches in Kuwait, Oman and Qatar. Each principal maintains up-to-date contact

with developments in each of these jurisdictions and also in other countries and speak on such issues regularly at various policy fora.

THE AKHET TEAM

The principal members of the team are:

- **Dr Ross Patterson**, as New Zealand's Telecommunications Commissioner between 2007 and 2012, oversaw the implementation of functional separation of Telecom New Zealand in 2008, and structural separation in 2011, as part of the Ultrafast Broadband Initiative. He is currently advising Chorus, the structurally separated network operation of the former Telecom New Zealand, on regulatory matters.
- **Stewart White** was an advisor to the Australian Government on the creation of their National Broadband Network, including analysis/benchmarking of open access regimes and enforcement in a range of jurisdictions, and advised Telecom NZ in relation to both functional and structural separation. He also advised British Telecom in relation to their separation undertakings, and was lead partner advising the Privatisation Board of Kuwait on the PPP of the Ministry of Communications fixed network and its fibre upgrade as well as advising in Qatar and Oman.
- **Andrew Haire**, as Deputy Director-General (Telecoms & Post) in Singapore between 2000 and 2010, not only directed the first competition framework, but importantly oversaw the implementation of that country's National Broadband Network, and developed the governance model and policies that allowed for a substantial injection of government funding into an existing competitive market.

As a consequence of this extensive multi-jurisdictional experience, and from advising governments, regulators and operators elsewhere, we recognise why decisions were made, the trade-offs involved, and what options were considered but not pursued. Most importantly, because of our experience, we are able to identify the key critical components of a successful and effective NBN implementation. Our experience ensures that mistakes or misdirected decisions are avoided, and informed decisions are taken based on the lessons learnt in Singapore, Australia, New Zealand and later implementations.

CRITICAL INVESTMENT CRITERIA

Our experience and research tells us there are three critical pre-conditions to broadband investment:

- A stable and predictable regulatory regime;
- No regulatory impediment to an investor achieving an appropriate return on investment; and
- Any investor is satisfied there is sufficient consumer demand to enable an appropriate return on investment to be achieved.

The regulatory choices tend to be determined by the governance model factored against state funding or commitments. This can be seen in the continuum of regulatory models which have been adopted, from the wholly market driven private sector roll out in Hong Kong relying on market forces with little regulatory intervention, to at the other extreme the wholly state funded owned and operated NBN Co in Australia. Between these two extremes lie private sector roll outs with some state funded incentives, where the regulatory regime has separated the network and services operations and imposed non-discriminatory open access obligations on the network. The role of regulation is to deliver stability and predictability of decision making and enforcement of those decisions. If market forces are insufficient to ensure a return on broadband investment, government policy should be directed at either creating the **necessary incentives for private investment, or alternatively to undertaking the investment itself in whole or in part.**

CRITICAL NBN DESIGN ISSUES

There are a number of key design decisions necessary to create an effective NBN policy. For each decision comes a wide range of options. The question in each case is which of the range of design options meets the Government's policy objectives.

The key design decision points are:

- NBN vehicle and market structure;
- NBN service(s);
- NBN technology; and
- NBN products and pricing.

In addition it is necessary that the appropriate policy and regulatory regime is in place to ensure fair and robust competition. Depending on the level of any state funding or other subsidies, this would usually include:

- setting appropriate roll-out targets;
- process, the form, and then the manner by which obligations of non-discrimination & transparency are imposed;
- process of independent oversight and monitoring of the open access obligations including bitstream access;
- process of, and responsibility for, investigation of alleged breaches of the open access obligations;
- enforcement and penalty regime where a breach has occurred or there is a reasonable likelihood that such a breach will occur;
- appropriate action to enable provisioning on non-discriminatory and transparent terms of existing infrastructure of public utilities to be shared as part of any national broadband infrastructure;
- transparent and technologically neutral spectrum allocation procedures;
- measures to reduce deployment costs through facilitation of duct access, rights of way and other necessary permits to facilitate network roll-out;
- appropriate data/privacy protection with recognition of concerns about cybersecurity/national security framework; and
- forming the demand side policies to supplement the NBN implementation.

AKHET WORKS WELL WITH STAKEHOLDERS

Akhet has considerable experience of working seamlessly with governments, regulators and operators. We have managed a number of major “key stakeholder engagement” programmes related development and implementation of communications plans. We also work with Ministers, policy makers, regulators, senior executives and in-house advisors as well external professional advisors as part of multi-cultural and multidisciplinary teams with, for example, accountants, economists, engineers and lawyers.

Further information, including CVs and references, can be provided on request. Please refer as well to our website: www.akhetconsulting.com.

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