

The Kingdom of Bahrain's Policy on the National Broadband Network

Regional Workshop on New Trends for Building and Financing Broadband: Policies & Economics, 24-25 September 2013

Mohamed Mahmood
Technical & Operations Director, TRA Bahrain
Mtayeb@tra.org.bh



Agenda

- 1 *Definitions – NGN and Broadband*
- 2 *Broadband Market Today*
- 3 *Policies related the NBN in Bahrain*
- 4 *Key Messages on NGN and NBN*



Next Generation Network (NGN) and Broadband

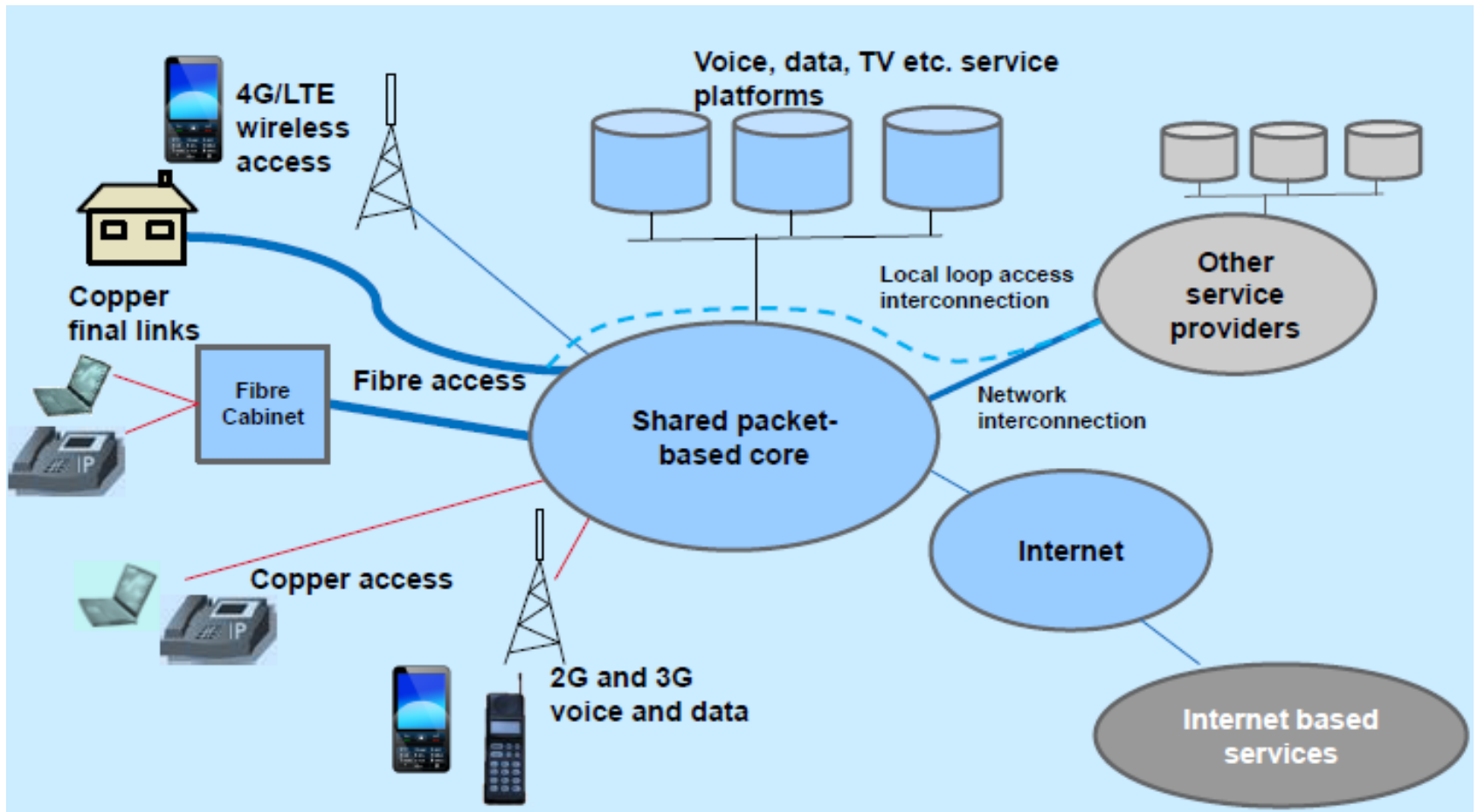
NGN A single packet based network that carry multiple services and it has three components being Access (*fibre, copper or wireless and combinations*) , Core (*IP & QoS based*) and Services.

Broadband

- Access to services at multi-megabits/s speeds.
- Can be over fixed lines or over mobile networks or fixed wireless access (FWA)
- Up to ~10Mbits/s using copper technology or 3G mobile
- > 10Mbits using LTE (4G)
- > 10 Mbits/s using fibre, might use copper or wireless for the last link to customer
- > 30 Mbits/s (all fibre)

Source: Telzed Limited

NGN & Broadband



Source: Telzed Limited

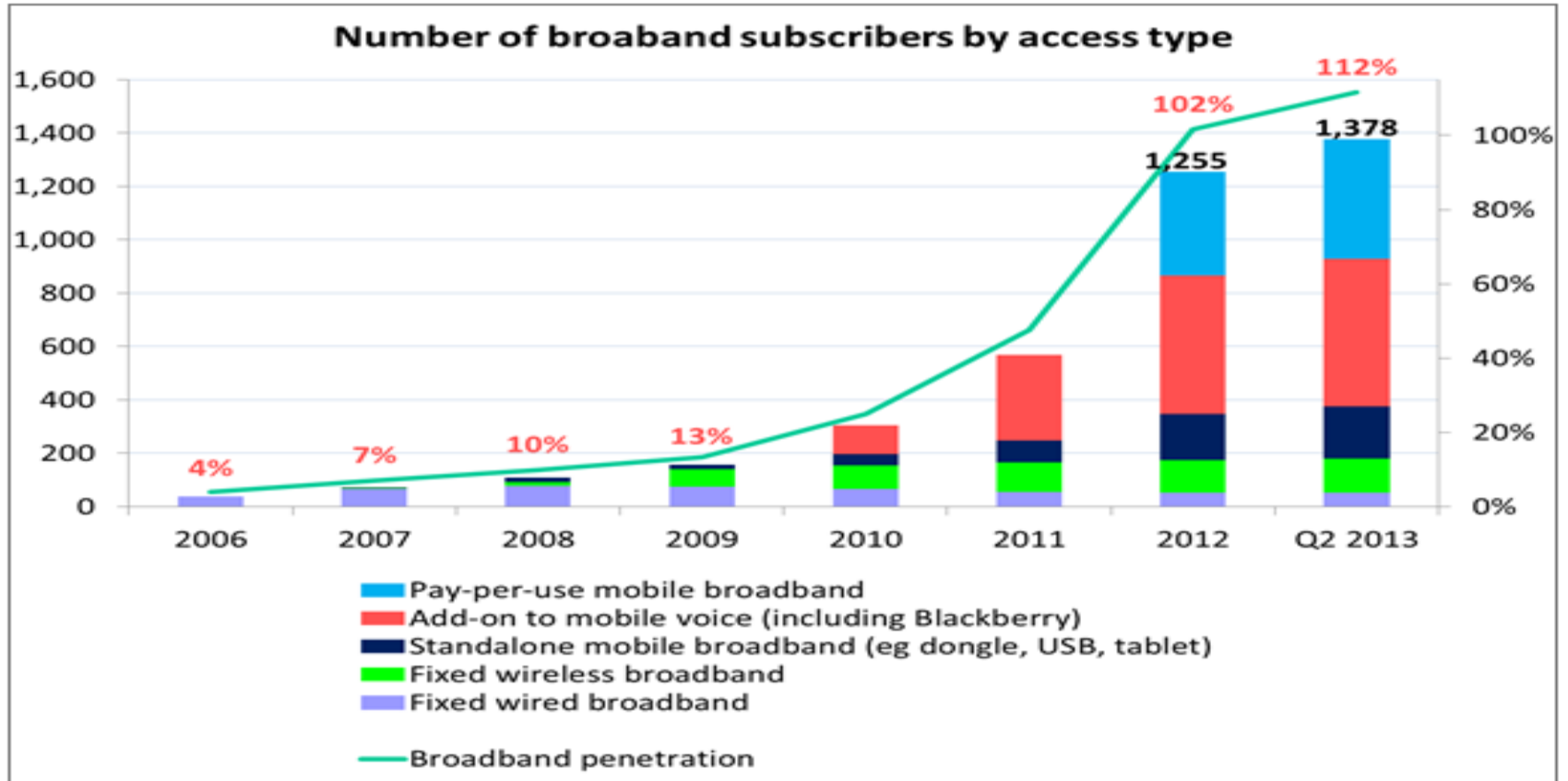
Benefits of NBNs

- ❑ Socio-Economics **Development**
- ❑ Broadband **enables the services** i.e. internet access, TV, voice, YouTube, Facebook, Video on demand, access to government services...etc.
- ❑ In summary end users, service providers, network providers, national economy and government **benefit**.



Broadband Market Today

The growth of broadband subscribers and penetration have accelerated in the last few years mainly driven by the rapid uptake of mobile broadband (reflects popularity of Smartphones and Tablets)

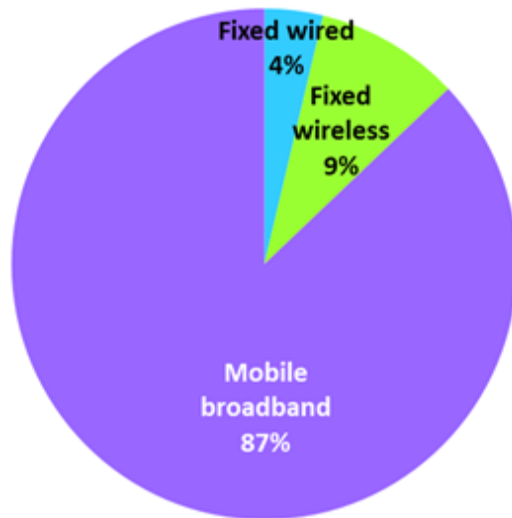


Source: TRA analysis based on operators data. Note that comprehensive Pay-per-use figures are not available for 2011 and earlier.

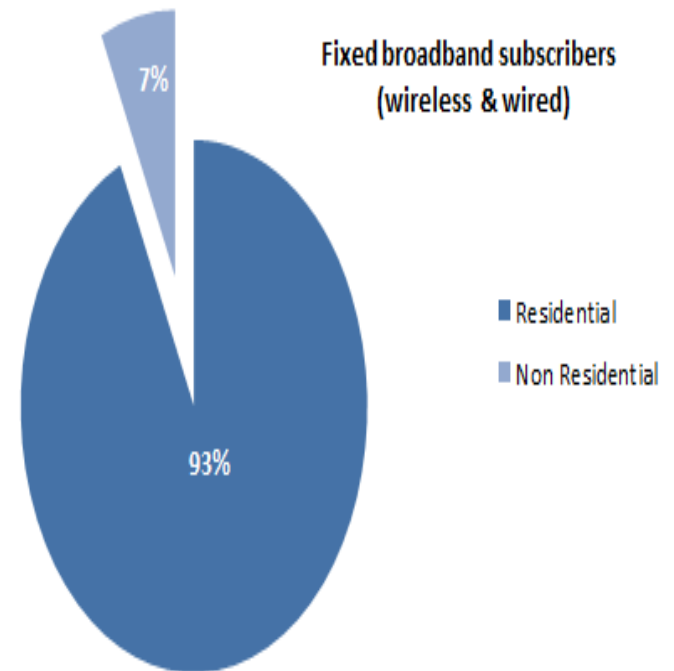
Broadband Market Today – Technology Mix in Bahrain

Most broadband subscribers use mobile broadband (tablets, smartphones, dongles, routers) followed by fixed wireless (WiMAX) and then fixed (ADSL & fibre).

Proportion of broadband subscribers by access type at the end of Q2 2013

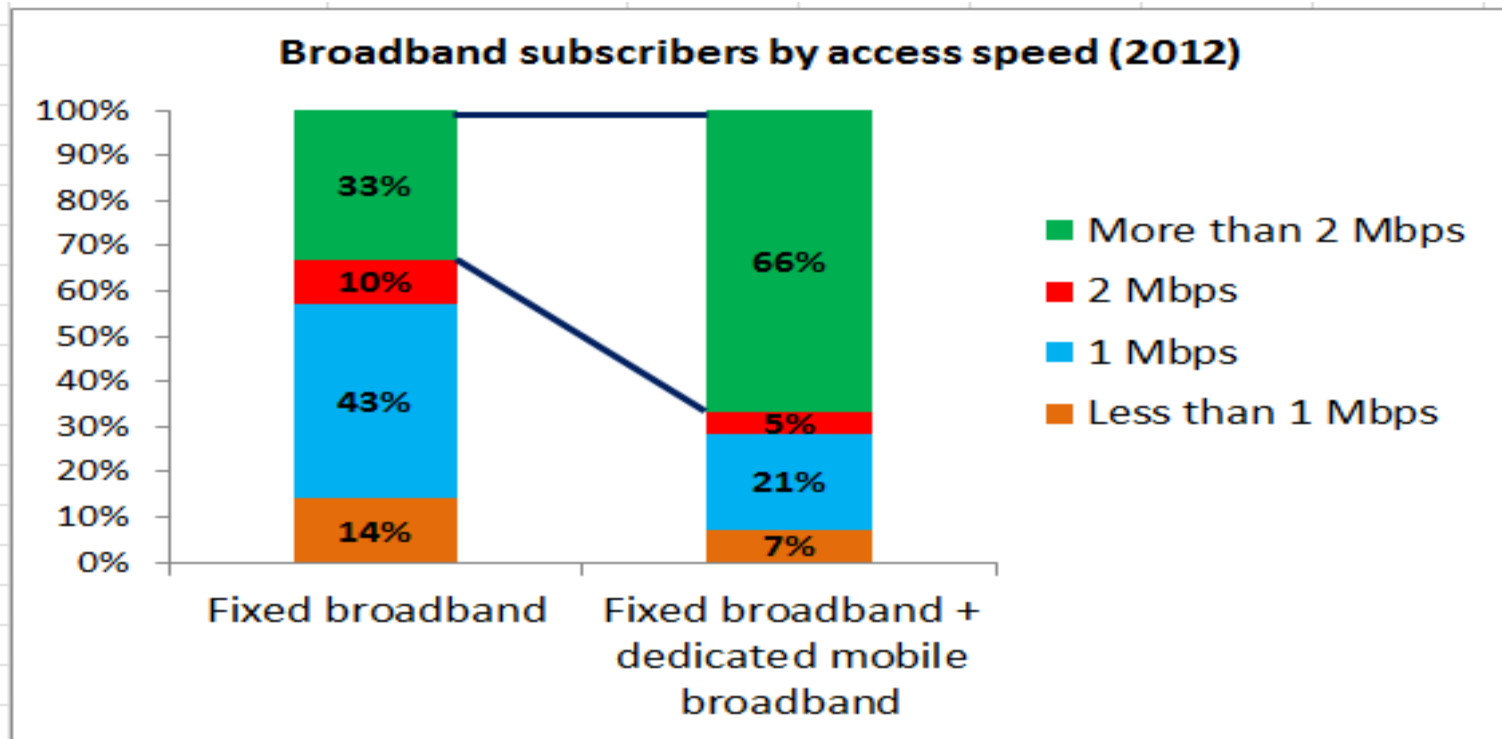


Fixed broadband subscribers (wireless & wired)



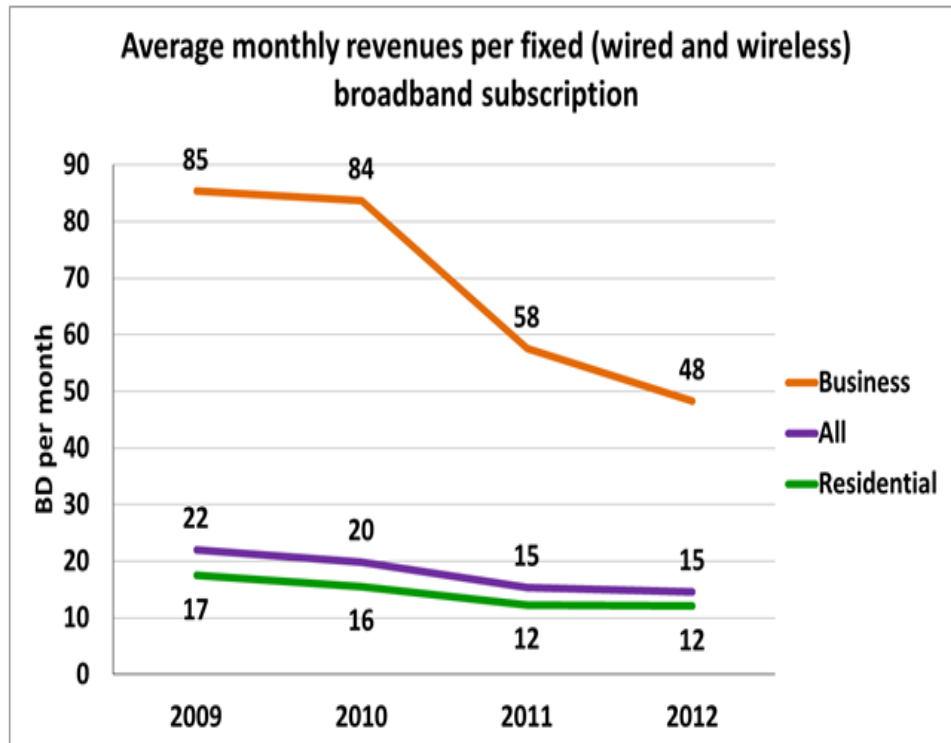
Source: TRA analysis based on operators data

Broadband market today – Speed



Source: TRA Bahrain

Broadband market today – Average Revenue Per User (ARPU)



Source: TRA analysis based on operators data

As a result of competition which resulted in reduction of the broadband prices, ARPUs have dropped significantly - by 19% for Business and 2% for Residential between 2011 and 2012

The Third NTP – Ultra Fast Broadband (UFBB)

Requires the creation of a fixed NBN providing wholesale services to operators on a non-discriminatory basis is created.

Based on fibre optic cables 1 Gbit/s & beyond to businesses 100 Mbit/s for the majority of domestic premises

Government will provide funding or enter into arrangement, if and to the minimum extent necessary

Time limited exclusivity could be granted if NBN is built with its own resources

Government requires that affordable and appropriate UFBB services (in addition to voice services), are made available to all that reasonably require them

Only wholesale services at Layers 1 & 2 to licensed operators

Wholly separate entity for the NBN. Deals with all Licensed Operators equivalently

government driven project

The Third NTP – Ultra Fast Broadband (UFBB)

Government

to publish proposals related to the scope, nature, and conditionality to be applied to any intervention in the creation and operation of an NBN, including security, funding, universal service, governance requirements, together with associated processes for its creation & operation

TRA

- ❑ to advise the Government as to the market impact of any potential decisions by the Government on NBN (with or without Government support); and
- ❑ Determine appropriate regulatory safeguards and remedies as stipulated in the telecommunications law (with Government)

Actions required as per the 3rd NTP related to the NBN

Key Messages on NGN and NBN

NGN, NGA and Broadband

- Future is broadband
- Fibre access is the desired but fibre-mobile solutions are sensible
- National wealth is related to Internet and Broadband usage
- The % increase in GDP with a percentage increase in broadband, increases with penetration
- For building successful broadband, there is need to have a policy and a plan – cover aim, targets, how to get there and what need to be done.
- Emerging economies may need more intervention and external finding than developed markets.
- Funding of NGN is always a problem; there are a number of funding options and countries should choose the one suite them
- There is always going to be a digital divide
- Getting some broadband better than nothing
- Mix and match technologies (fixed and mobile) to meet and stimulate demand
- Backhaul and sharing of infrastructure are key elements of broadband
- More local content reduces demand (cost) for international capacity and increases benefits to end uses (local language content). This needs more focus on security, copyright and
- Until every operator has an NGN, there will need to interconnect with traditional TDM-based networks

Study on broadband, strategic & economy issues, NGN and NGA

- Prepared by Dr. Roger to support ITU's initiative on broadband, strategies, challenges and benefits
- The study can be found at <http://www.itu.int/en/ITU-D/Regulatory-Market/Documents/NGN%20strategies-final-en.pdf>

Thank You

