

Submission for the Joint Standing Committee on the National Broadband Network

Mid-year NBN assessment

The rollout of the NBN has been gathering pace, but many problems remain. Most of the issues mentioned below have been addressed by me at various Senate Inquiries over the last decade. The fact that they have not been addressed and/or resolved it is an indication that politicians have so far failed to deal with them.

Key issues in relation to the current state of affairs of the NBN:

1. As a nation, we embarked on the NBN because we saw it as essential infrastructure for the country – critical for nation-building in relation to e-health, e-education, e-business, smart cities, smart buildings, and smart energy.
2. This requires, above all, an affordable and ubiquitous service for all Australians; otherwise some of those essential new services cannot be distributed equally across the country. Few organisations will build large scale healthcare, education or commercial applications that can only be used by a small amount of NBN users.
3. All experts agree that the best infrastructure technology for this is FttH (the PM is also on the record as acknowledging this).
4. The lifespan of most of the FttH infrastructure is estimated to be at least 30 years in contrast to that of the FttN active electronics boxes, which will only last between 3 and 5 years, and needs expensive maintenance since it is vulnerable to interference and outages. Such lifespan makes FttH infrastructures appealing to “Patient Money”-low risk- funds like pension funds. While the aging and replacement for faster boxes when demand keeps growing to Gigabit/second speeds makes the expensive short lifespan FttN solutions interesting to -high risk- commercial companies who can exploit scarcity. FttH works without outages and can be upgraded to higher speeds for many years to come.
5. Unfortunately, politics has got in the way (as it has in so many other current national projects) and as a result we are now ending up with a second-rate, cobbled-together network that will not be able to deliver on the abovementioned national interest aspects.
6. The fact that nbn is increasing its number of FttC connections is an indication that it understands this problem. FttN is inferior to FttC/FttH and customers are worried about getting an FttN connection because they understand others will get the superior service. Interestingly and telling is that there are little or no complaints from the 1 million plus FttH connections.
7. Also, HFC will eventually need to move to FttH, and so expensive upgrades to HFC are not warranted. This mismatch of technologies will create inequality, especially in relation to some of the more essential, higher quality broadband services such as healthcare, education, government services, smart cities, etc that are increasingly becoming available.
8. Cities that understand their transition towards smart cities all indicate that they need deep fibre networks (Gigacities) for all of the social, economic and environmental functions of their city.
9. The problem with FttN is that not only is it an inferior technology – being based on old copper infrastructure – its operation and maintenance costs are significantly higher than those associated with FttC/FttH.
10. Cost was given by the current government as one of the reasons it wanted to change the policy from FttH to FttN. FttN was stated to cost around \$25 billion (this has already risen to around \$50 billion). While old technologies are increasing in costs, FttH is getting cheaper on a year-on-year basis. For example, other countries such as New Zealand are now showing that in many cases it is cheaper to deploy FttH than it is to use FttN (even cheaper than FttC).
11. To prop up the failing NBN project the CVC and the broadband tax are being used to address the precarious financial situation of the project. This will only make it less affordable and, as price is so critical, RSPs will try to keep the residential costs of the NBN as close as possible to the budget that customers are prepared to pay for their service, which will further depreciate the quality of the service that users are provided with. This has already led to a significant increase of complaints to the

- TIO and a statement from the telcos that they will be unable to guarantee a fixed quality (measured by speed) NBN service.
12. If the FttH network had been rolled out as originally planned the blame game we are now seeing between the RSPs and nbn would not have happened. Because FttH delivers what it promises any reduced bandwidth seen by the customer would immediately be identifiable as the fault of the RSP.
 13. All of this is totally counterproductive to the original plan to use the NBN to maximise the economic and social benefits delivered by a high quality broadband infrastructure.
 14. The other key reason for the shift in policy was that FttN would be faster to deploy – it was originally promised to be finished in 2016. This reason is now also clearly discredited.
 15. Furthermore, a large number of premises is currently bypassed because it is time- and cost-prohibitive to link these premises at the current moment.
 16. Due to either technology or affordability issues many customers don't get a better service than they were receiving from their previous ADSL service. This is resulting in a relatively low voluntary take-up rate. Because of the abovementioned issues between RSPs and nbn this situation is unlikely to change any time soon.
 17. Furthermore, as many as a third of the initial connections are producing significant problems and inconvenience for customers, resulting in the very negative perception of the NBN that is also reflected in the many media reports across the political media spectrum.
 18. All of this is creating great confusion among the Australian people, partly due to a total lack of willingness to show leadership from the government or nbn – simply because it has become such a politicised exercise.
 19. It is shameful that politicians are using the NBN as a political football rather than a national interest investment that, at a technical level at least, needs rational solutions – not political ones. No other country in the world is developing its national digital infrastructure based on party politics.

The solution to the above problems would be a proper review by real experts – not by handpicked political appointees – based on an open and rational approach, and this should have bi-partisan support. Let the engineers and other experts decide on the best solution. This should lead to a long-term plan on how to fix the current situation and put us back on the road to digital infrastructure that is fitting for a modern economy and society and makes us competitive with our international trading partners. The role of politicians should be limited to provide the economic and social vision of Australia in 5, 10 years and beyond - in the context of the ever-increasing importance of digital ICT infrastructure – and should not include the prescription of engineering solutions.

Without any political will to address the issues as mentioned above the NBN remains a case of muddling along in the hope that nbn further increases its FttC/FttH rollout. As the FttH technology is politically tainted the maximum Australia can aim for under the current government is FttC. The more FttC connections that nbn can add to the current rollout of around one million premises the fewer problems it will create for the future.

Because of the mess created by politics it should be up to the politicians to give an honest and clear message to the Australian population and offer their vision on the importance of the NBN for our country, this in relation to affordability and the technology upgrades needed to eventually provide a ubiquitous high-quality national digital infrastructure that services all Australians.

But in reality, this is something that is unlikely to happen any time soon.

Once political sense finally returns to the NBN the writing off of at least 50% of the investment will be unavoidable, as that is the only way to provide the economic platform necessary to finally allow for the proper build-out of the NBN as it was originally intended. The more FttN that is added, the more that will have to be written off. The value of this MtM NBN will be significantly less than that of a properly build FttH network. As a side issue, Telstra will most likely be the eventual buyer of the NBN (at a bargain price) which will see this company receiving another massive benefit. This will then force the government to properly implement the structural separation, again as it was envisaged in the original NBN plans. Another possibility is that investment funds are becoming more interested in national infrastructure investments; at a bargain price, they also might



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be interested in such a purchase, this would also make it easier to address the competition issues involved in such an acquisition.

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*NBN uppercase is the network, nbn lowercase is the company.