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The NBN Futures Forum

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Towards a National Broadband Strategy for Australia, 2020-2030

Abstract

On 24 November 2020, TelSoc hosted the fifth NBN Futures Forum, held online, to launch the first major report, Towards a National Broadband Strategy for Australia, from the NBN Futures Group. The report, which summarized nearly two years of deliberations by the NBN Futures Group, contained 13 conclusions that were presented and discussed at the Forum. These conclusions supported the view that broadband is an essential service for Australia's digital economy and society and that Australia's National Broadband Network (NBN) is central to broadband provision. They promoted the concept of an overarching National Broadband Strategy to achieve social, economic and governmental goals. In addition to the main speech presenting the report's conclusions, there were written statements from the Minister and Shadow Minister, supplementary remarks from two members of the NBN Futures Group, commentary from three panellists on consumer, policy and governmental perspectives, and

Introduction

The NBN Futures Project ([Holmes & Campbell, 2019^{\[5\]}](#)) has been organizing a series of public forums under the title NBN Futures to encourage debate, and potentially to build consensus, about the future of Australia's National Broadband Network (NBN). The forums are hosted by TelSoc (the Telecommunications Association Inc, publisher of this *Journal*). The first forum was held in July 2019 ([Campbell & Milner, 2019^{\[6\]}](#)), the second in October 2019 ([Campbell, 2019^{\[7\]}](#)), the third in February 2020 ([Campbell, 2020^{\[8\]}](#)), and the fourth in August 2020 ([Campbell, Smith & Brooks, 2020^{\[9\]}](#)).

The fifth forum, held online on 24 November 2020, was to launch the report, *Towards a National Broadband Strategy for Australia*, from the NBN Futures Group. The report, published elsewhere in this issue ([Holmes et al., 2020^{\[10\]}](#)), summarizes the deliberations of the NBN Futures Group in 2019 and 2020 on broadband access in Australia and the role of Australia's National Broadband Network (NBN). It argues for an overarching National Broadband Strategy for the decade to 2030.

The Forum was structured as follows:

- Introductory remarks by Mr John Burke, convenor of the NBN Futures Group;
- The main presentation on the report, focussing on the conclusions, by Dr Jim Holmes, President of TelSoc and a member of the NBN Futures Group;
- Short supplementary remarks by Dr Leith Campbell and Dr Murray Milner, members of the Group;
- A summary of written statements received from Australia's Minister of Communications (The Honourable Paul Fletcher MP) and the Shadow Minister (Ms Michelle Rowland MP);
- Brief comments from panellists Ms Teresa Corbin, Ms Deena Shiff and Dr Helen Haines MP;
- General discussion, introduced by Mr Allan Horsley, a member of the NBN Futures Group.

The remainder of this paper summarizes the content of each part of the Forum.

The NBN Futures Forum

The Forum was conducted online via Zoom. There were more than 80 people registered to attend and at least 54 of them were online for all or part of the session.

Introduction and context

Mr John Burke, the convenor of the NBN Futures Group, described how early discussions on the future ownership of NBN Co had led to a realisation that broader considerations were required and decisions about broadband, fixed and mobile, and the NBN needed to be put in a proper context. The aim of the Group was to promote discussion of broadband and NBN issues within the framework of a broader strategy to realise social and economic benefits. Previously, four Forums have been held and 10 related articles published in the *Journal of Telecommunications and the Digital Economy*.

He noted that there had been significant change over the past two years. The Covid crisis, especially, had changed perspectives about the value and necessity of broadband access in the home and for business. There had been new government initiatives, such as the formation of the Australian Broadband Advisory Council and the Digital Technology Taskforce, and new announcements from NBN Co about network upgrades and further support for wholesale prices. These initiatives were welcomed by the Group.

Finally, John Burke noted that the report to be discussed in this Forum was not a conclusion but, rather, part of a process to develop a broadband strategy and realise the benefits of broadband and the NBN for Australia.

Launch of the report

Dr Jim Holmes, TelSoc President and member of the NBN Futures Group, launched the new report, *Towards a National Broadband Strategy for Australia*, by outlining what is hoped to be achieved and describing each of the 13 conclusions in the report. The full report is published elsewhere ([Holmes et al., 2020](#)^[10]) in this issue.

He indicated that the Group hoped to achieve the following outcomes:

- A recognition of broadband as an essential service for Australia's digital economy and online society;
- The nomination of the NBN, which is central to broadband provision, as long-term National Critical Infrastructure;
- Ongoing support for the NBN including through continued investment in its development, so that it can realise its full potential for all Australians;
- An understanding of the role of 5G technology as both a complement and a competitor to NBN infrastructure;
- The development of a long-term National Broadband Strategy to achieve social and economic goals, through a coordinated whole-of-government approach and with engagement of all stakeholders;
- A bipartisan approach to the strategy so that it can continue beyond commercial planning and electoral cycles.

He suggested that the report specified only the minimal essential items that should be included in a National Broadband Strategy. There are multiple aspects, described in the annexes to the report, that are all interconnected and should be considered as a whole.

Jim Holmes then discussed each of the conclusions in the report. They are as follows (with emphasis added in the presentation):

Australia needs to have a *National Broadband Strategy* reflecting national broadband policy settings and providing long-term guidance for the development of infrastructure and services and for ensuring that all Australians enjoy the full potential social and economic value of broadband (fixed or mobile).

The National Broadband Strategy must:

- articulate that Australia is committed to continuously developing and maintaining *world-class broadband* infrastructure and services that will be provided to *maximise social and economic inclusion*, and to express in detail what this means at nominated points in the timescale covered by the Strategy;
- be *longer-term in its perspectives*, and initially provide a clear roadmap for the next 10 years;
- be broadly based and broadly supported, seeking the *bipartisan support* necessary for certainty, continuity and consistency across the life of multiple parliaments;
- be concerned to ensure that the network benefits from broadband investment – that is, benefits to society at large, not realisable at the enterprise level – are identified, assessed and realised;

emphasise the *demand-side aspects of broadband service*, and the need to maximise economic and social inclusion through policies that deliver high quality affordable broadband services to all areas, sectors and customer segments;
recognise that broadband infrastructure and services will be provided by *many vendors on many platforms*, but also that the NBN will have a central part to play for at least the next 5-10 years in Australia; and
establish a *Universal Broadband Service roadmap* with clear download and upload targets and intermediate milestones, while recognising that flexibility to address future unknown application innovation will be a critical success factor.

The National Broadband Strategy needs to outline the *policy and regulatory settings*. NBN Co should not enjoy any form of statutory monopoly in broadband access service provision, subject to the existing time-bound prohibitions on Telstra running their course.

The Strategy should make provision for *regular assessment of broadband needs and demand* to guide national policy. It is the role of the Strategy to ensure that social and economic development will not be unduly constrained in future by a lack of capacity.

We recommend that *all* premises connected via fixed network technologies should be upgraded to 100/50 Mbps service capability as soon as possible in the next five years and to 1000/500 Mbps service capability everywhere by the end of 10-years.

On this conclusion, Jim Holmes noted that the NBN Futures Group had not been able to discover detailed time-series data on broadband usage, needs and demand. He suggested that more work is required on understanding future household needs and the impact of broadband on future economic growth. The recommendation on upgrading service capability is in line with the Government's recent announcements but proposes extending this capability to all premises. The target of 1 Gbps may seem fanciful now but may seem insufficient in a few years' time.

The Commonwealth must be prepared to make *further investments in NBN Co*, especially in relation to *specific-purpose infrastructure development* programs that are needed for high quality broadband to be affordable in high cost areas and for currently underserved communities and population segments, e.g. to encourage greater decentralisation of population.

The Commonwealth must be prepared to promote and sponsor *applications development and research* to ensure the best possible working arrangements are in place in the residential, small business, enterprise and government spaces to bring about maximum benefit.

On this conclusion, Jim Holmes noted that the Government has taken some important steps in this regard, including the creation of the Broadband Advisory Council, which will focus on demand-side issues.

The *charter for NBN Co* needs to be clarified as part of the National Broadband Strategy and revised to reflect current industry needs and developments. In particular, its charter needs to explicitly reinforce its essentially wholesale role, but also be reviewed in the light of current circumstances and likely future developments. As part of that review the following extensions of the charter should be considered:

enable NBN Co to provide wholesale services *to industry verticals* and full participation in the *Internet of Things*;
enable the adoption of *new technologies*, such as 5G, and to become a *5G network wholesaler*; and

allow for the provision of *wholesale transmission generally*.

In pursuing the major objective of extending the social and economic benefits of broadband services, the Commonwealth should support programs *to overcome digital exclusion* and establish effective levels of *digital capability*, and to scale up the usage in a range of activities that has been demonstrated during COVID-19. These programs will require substantial research and project support.

In speaking to this conclusion, Jim Holmes acknowledged the work of the Australian Digital Inclusion Alliance towards developing a roadmap and its recent submission to the Government. He also referred to the previous Forum discussing digital inclusion and telehealth (Campbell, Smith & Brooks, 2020 ^[9]).

NBN Co should be set goals in *anew Statement of Expectations for NBN Co* covering the next 5-year period, and this statement should be reviewed at regular intervals to guide NBN Co's rolling investment and operating plans.

NBN Co must take action to deliver the *efficiency gains associated with its transition* from a mostly construction organisation to an ongoing operational entity following the completion of the initial NBN rollout, and also:

Address the 100,000 premises outstanding at June 2020;

Implement over the next 5 years the capacity uprating plans outlined in its Corporate Plan; and

Develop cost-effective capacity uprating plans for Fixed Wireless and Satellite access, including, for Fixed Wireless Access, the use of aerial fibre and other means to support more effective wireless nodes.

On this conclusion, Jim Holmes noted that the plans for uprating Fixed Wireless and Satellite services should look beyond the needs of rural and remote households to cover a range of regional and remote industries.

NBN Co should publish much *more detailed dissections and analysis* of its existing and forecast costs, consistent with its role as an accountable public enterprise in a quasi-monopoly position, to facilitate a broader discussion on its performance, plans and options.

NBN Co should undertake a number of *initiatives to improve its medium-term financial position* and its ability to fund capacity improvements and technology upgrades, including:

securing new revenues through effective programs to connect a substantial portion of the *4 million premises that are ready to connect but remain unconnected* as at June 2020;

plan and implement over the next 5 years (2021-2025) *uprating the capacity of the technologies in the MTM* [multi-technology mix] to meet the service capacity targets referred to earlier; and

establishing *private loan facilities* at lower cost and extinguishing its Commonwealth loan facilities before June 2024, and expanding debt financing as a source of capital, as appropriate.

There is a strong case for *NBN Co remaining in public ownership* for as long as it retains a central role in the provision of National Critical Infrastructure-based services. NBN Co should remain in public ownership for *at least 5 years* to enable it to develop into a sustainable enterprise. Thereafter, ownership might be reviewed in the light of changing circumstances as required.

Jim Holmes indicated that , following release of the current report, the NBN Futures Group will continue to promote constructive public discourse on the issues raised, including engaging with Government and other leaders to commit to a robust bipartisan plan for a strong and successful broadband future for Australia. The Group's agenda for 2021 included considering Universal Service requirements for Australia in the era of 5G and the NBN.

Supplementary remarks

Two members of the NBN Futures Group made short supplementary statements. Dr Leith Campbell drew attention to the annexes of the report dealing with access technologies and 5G. He suggested that an early upgrade to 100 Mbps downstream for the NBN was achievable everywhere, but only with the participation of other parties, which would raise issues of accountability and regulation. On 5G, he outlined the reasoning that led to the conclusion that NBN Co could become a 5G wholesaler and would, in any case, benefit from 5G advances.

Dr Murray Milner spoke about the seemingly “bipartisan” approach to broadband policy in New Zealand. He pointed out that there had not always been policy alignment between the two major parties but the combination of incremental steps and fortuitous timing of success had led to continual broadband enhancements over the past 15 years.

The broadband policy had been started in 2006 by the Labour Government with the operational separation of Telecom New Zealand and a related policy of driving Fibre to the Node (FTTN) to 80% of premises by 2011. This was a low risk venture. While the National Party opposition agreed with the government that the quality of broadband access needed improvement, it had a more ambitious policy of Fibre to the Premises (FTTP) to 75% of premises through a Public-Private Partnership. When the Nationals came into government in late 2008, they continued the FTTN rollout while beginning in parallel the FTTP policy through a new entity, Crown Fibre Holdings. By 2016, the FTTP rollout was showing success and it was extended to cover 87% of premises by 2022 and, in addition, a Rural Broadband initiative was begun. By the time the Labour party came back into government in 2017, the FTTP rollout was about 80% complete. The new government has continued the policy to completion.

Considering the situation in Australia, Murray Milner considered that, despite the partisan history, there is an opportunity to align the policies of the major parties by building on the success of the NBN, taking positive incremental steps to further enhancement, and properly managing the risks.

Statements from the Minister and Shadow Minister

The Minister and Shadow Minister had both provided supportive statements. The Minister noted the benefits of ubiquitous broadband to economic sectors such as agriculture, construction, education, health, tourism and media. These are the sectors that the Australian Broadband Advisory Council had been asked to consider. The Minister described the current strong state of NBN Co, noting its ability to handle the surge in demand caused by the Covid pandemic. He noted that the newly announced network upgrades, to cost \$4.5B, would be financed without further Commonwealth contribution. He suggested that NBN Co had been given the ability to adapt to new technological advances and that a demand-driven approach would be the basis of future network planning. The policy is to create a leading digital economy by 2030.

The Shadow Minister welcomed the report and encouraged policy experts to continue the discourse about future planning. She noted that policy and investment certainty would be required for the continuing enhancement of broadband capabilities. She advocated a dual approach of supply-side and demand-side consideration. Noting that the NBN rollout had never been an end in itself – rather, it was a means to an end – she suggested that the end result should be a vibrant and interconnected nation.

Brief comments from panellists

Three well-known panellists had been invited to comment on the report.

The first was Ms Teresa Corbin from the Australian Communications Consumer Action Network (ACCAN). She indicated that the NBN has become pivotal to ACCAN's concerns, with frequent interactions with the ACCC, the Department of Communications, NBN Co, and Retail Service Providers. ACCAN's policy is that there should be trusted, inclusive and available communications for all Australians. In this regard, she supported the need for a broadband strategy and the designation of the NBN as critical national infrastructure. At the genesis of the NBN policy, ACCAN had proposed that no consumer should be worse off during the transition and that there should be a competitive and fair market in broadband. Now, 10 years further on, ACCAN is developing an assessment framework to evaluate if the NBN is meeting its requirements.

Teresa Corbin described four aspects of the assessment framework. The first, related to the digital divide, proposes affordable, guaranteed access to data and voice services. There should be equitable access to broadband, not necessarily just fixed broadband, to improve overall social inclusion and to support SMEs. The second aspect is regulation appropriate to an essential service. There should be minimum network standards in terms of speed, reliability, latency, jitter and packet loss. There should be pricing measures including a government-subsidised low-cost service. ACCAN supports the Statutory Infrastructure Provider regime, which commenced in July 2020, and the Regional Broadband Scheme, which is to commence in January 2021. ACCAN is also seeking greater clarity on a future universal service obligation. The third aspect is competition. ACCAN desires strong retail competition for network access, with transparency in pricing to prevent anticompetitive behaviour. The fourth aspect concerns the Budget: when NBN Co is eventually sold, ACCAN is concerned that the revenue received should be balanced by the long-term interests of end users.

The second contributor was Dr Helen Haines, Independent Member for Indi in the Australian Parliament, a member of the parliamentary Joint Standing Committee on the NBN and a member of the House Select Committee on Regional Australia. Her electorate covers 29,000 km² of regional Victoria. As an Independent member, she supports bipartisanship and collegiality as a means of developing good public policy through collaboration. Her predecessor had founded the Indi Telecommunications Action Group, which she has continued, dealing with mobile blackspots and NBN connectivity. She works with the Ovens and Murray Digital Futures Group to strengthen digital connectivity and digital literacy in the area. She cited several examples of groups and businesses whose growth has been limited by inadequate NBN connectivity. On health, in which she had worked, she noted that telehealth had been taken up during the Covid crisis but most consultations were undertaken by telephone, due to poor access to the NBN or affordability issues. In all this, she claimed, a broadband strategy is a missing link. She had been surprised to learn that the regular assessments of usage and demand did not separate out data on regional and rural access. The NBN was an important integrator of services and its availability is a key attractor of young people (Gen Y and Gen Z) to regional areas.



The third contributor was Ms Deena Shiff, the chair of the Australian Broadband Advisory Council, which was set up in July 2020 and has just published its first report describing its work program for the next six months. The report reflects on what has been learnt from the Covid crisis. On the whole, the network has been remarkably resilient. Broadband, however, has not just been about fixed access but also about mobile services and access. A focus of the Council is on national infrastructure needed to deliver the same capabilities in the regions as in cities, to ensure that there is no geographical digital divide. There is a need for further evidence on what is happening in regional Australia. The Council will help to establish more local planning tools to drive delivery of the digital skills and digital capabilities that reflect the aspirations of regional areas. There will be a focus to drive productivity in sectors with high, but difficult to realise, potential. Two sectors have been identified for initial attention: eHealth, starting from telehealth but expanding to provide capabilities matching desired health outcomes; and agritech to exploit new digital capabilities for agriculture. In reflecting on weaknesses shown up by the Covid crisis, the Council has identified digital inclusion, which has become even more important than before, and digital skills as in need of attention. For the currently unconnected and the requirements for vulnerable groups, the Council will consider affordability issues, but also the role of public Wi-Fi as a potential means of connectivity. To improve digital skills, the Council will collaborate with the Digital Skills Organization and others to develop a pathway curriculum for upskilling, reskilling and life-long learning. The focus will be on regions and SMEs to identify pilot initiatives and digital clusters, where people can learn from one another.

General discussion

Mr Allan Horsley, a member of the NBN Futures Group, offered some reflections on the report and the topics that had been discussed in the Forum. He identified five issues of vital importance. The first is that the NBN is a piece of critical national infrastructure. As a critical piece of infrastructure, like electricity, gas or water, the NBN should have clear definitions of availability and reliability, especially during emergency periods and at times of heavy traffic. The second important issue is applications development. There have been recent rapid developments in telehealth, home schooling and working from home, for example. Further development is required to make them robust and have longevity. This could be accomplished by a government-funded research and development program. The third issue is inclusion, where a really practical program is required to improve digital skills. Here, an education program delivered through municipal libraries could be funded. The fourth vital issue is bipartisanship. Allan Horsley reflected on the 10 years of policy alignment that occurred in Australia from 1987, as the telecommunications sector was opened up to greater competition. Finally, the fifth issue concerned coordination of Commonwealth government initiatives on delivery of government broadband services. There was little evidence of such coordination and Allen Horsley suggested that a subcommittee of Cabinet would be appropriate to oversee this issue.

A question had been asked about the market failure that would lead NBN Co, a government-owned enterprise, to expand into wholesale 5G and wholesale transmission. Leith Campbell explained that it was less about market failure and more about technology change and competition. As an importer of technology, Australia will gain equipment, systems and processes that address the fixed-mobile convergence concerns of the big telcos. For NBN Co, this will lead to greater automation of processes and will open up new opportunities. If NBN Co became a 5G wholesaler, it would enliven competition in the Australian mobile market. If NBN Co were to enter the wholesale transmission market, it would simplify the provision of services for some retail service providers and increase competition in broadband.

Reg Coutts, Vice-President of TelSoc, remarked that it had been a mistake to politically “weaponise” the NBN from the beginning. He believed then and now that the only path to success was through bipartisanship. His main point, however, was that mobiles, especially with 4G, has always been part of the broadband picture. A combination of fixed and mobile broadband would be needed. It would not be possible to do everything just with wireless and mobile. He suggested that Australia was unique in the world in debating if all broadband provision could be mobile.

In concluding remarks, John Burke outlined four topics that the NBN Futures Group would pursue in 2021, among others. The first is universal service, especially to clarify the issues of aspiration and guarantee. The second is rural access technologies, on which a future forum is planned. The third is digital inclusion, to understand the scale and cost of various programs. The final topic is continuing consideration of ownership of NBN Co.

Finally, John Burke suggested that attendees should take away three messages about a broadband strategy: it should be long-term; it should be bipartisan, so that it survives beyond a single electoral cycle; and it should emphasise demand-side social and economic benefits.

Conclusion

This was the fifth of a planned series of forums related to the future of the NBN. The release of the report, *Towards a National Broadband Strategy for Australia*, is a major milestone in the deliberations of the NBN Futures Group. It is hoped that, with further discussion and lobbying, it will lead to the development of a national strategy for guiding and coordinating the continuing enhancement of broadband provision in Australia to the benefit of the digital society and the digital economy.

Australia has found itself in a unique position where most of the fixed broadband access is in the hands of a government-owned commercial entity, while mobile broadband is provided by competitive commercial operators. Navigating the way from here to “create a leading digital economy by 2030” (the Minister’s aspiration) will require coordination between the actions of government and commercial providers if no-one is to be left behind and the full benefits of a digital society are to be realised. An overarching and agreed strategy supported by a whole-of-government approach is a vital guide for this coordination. Recognising the NBN as a piece of national critical infrastructure will be important to ensure that it continues to meet the needs of Australians in all circumstances.

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