

Senate Select Committee Inquiry on the National Broadband Network – Call for Evidence

An interim response by the Australian Industry Group.

Introduction

The Australian Industry Group welcomes the opportunity to provide input to the Senate Select Committee on the National Broadband Network. As a membership organisation representing businesses with over 750,000 employees in a range of industrial sectors, we have member companies that are active participants in the delivery of ICT products and services; as well as those that are everyday users of broadband.

Given the potential importance of high-speed broadband to business productivity and efficiency we recently undertook a major survey of our membership in order to gauge the level of commercial interest in a national high-speed broadband network. Our research showed clearly the Australian industry both wants, and needs, a truly national, truly high-speed, broadband network.

Broadband is already playing a powerful role in driving business productivity and economic competitiveness, and the deployment of a high-speed network stands to magnify such benefits over the coming years. As evidenced by Australia's strong productivity growth in the nineties, the effective deployment of ICT and rapid adoption of Internet technology can have a profound economic effect. Ai Group believes that high speed broadband is a key piece of economic infrastructure that stands to help Australian industry prosper and grow in a highly competitive, 21st century global economy.

[Please note: The views contained in this document are an initial response to the Committee's work, and further information will be provided in advance of the Committee's full report, due in March 2009].

Our Research

A total of 526 Chief Executive Officers, representing companies with sales revenue of more than \$82 billion, and employing around 215,000 people, responded to our '*High Speed to Broadband*' survey - an indication of the importance Australian industry place upon this matter.

The survey's principal objective was to measure industry demand for a 'world class' broadband service and from it a clear set of results emerged. Internet access has been viewed as a business fundamental for some time. However, the advent of high speed networks has increased both the appetite for, and commercial application of, such technology. Our survey confirmed that broadband is already being used as a tool to drive the productive capacity and

innovative behaviour of many Australian firms and that its potential to add commercial advantage in the future is significant.

The overwhelming majority of Australian businesses already have some form of internet access, but the absence of an effective, and truly national, high speed broadband network has meant that many have failed to take advantage of the new applications and next generation services available. Business efficiencies, productivity gains and other commercial benefits have been lost as a result.

The Federal Government's intention to build a National Broadband Network over the next five years is recognition of both Australia's current performance, and the potential economic gains stemming from a widespread increase in ebusiness intensity. Its deployment is something that Australian industry overwhelmingly supports. Other key findings were:

1. Two-thirds of Chief Executives (66%) believe their business will benefit greatly from a faster broadband network.
2. Over 93% of companies indicated that the internet has had a positive impact on their efficiency/productivity.
3. Almost three quarters of all businesses (73.5%) indicated that they were likely to upgrade to high speed broadband, if available.
4. The desire for high speed broadband is highest among firms located in regional areas. More than three quarters of such firms indicated they were likely to upgrade their connection, more than their metropolitan counterparts
5. Reliability of service is the dominant factor influencing the uptake of high speed broadband. Almost half of companies ranked this as the most important issue affecting their decision.
6. A quarter of all companies indicated a willingness to pay a premium price for their business to gain access to higher speed broadband.
7. The ability to download large data files was considered the most important benefit of a faster network, with 90.5% of respondents regarding this as very or moderately important.
8. A faster broadband network is likely to result in considerable increases in all areas of business activity for Australian firms.
9. Small firms are more likely to lack the skills and capabilities to take advantage of the commercial opportunities that will arise from a faster broadband network.
10. The proportion of businesses with internet access via broadband connections had more than doubled in three years to reach 90.0%.
11. A significant proportion of survey respondents, 39.2%, indicated that they were unaware of their current internet connection speed.
12. Internet access is seen as highly important to the business operations of 85.1% of respondents.
13. 69.9% of firms surveyed indicated that they believe that internet provides their business with a 'strategic advantage'.

Our Principles

As the Committee will be well aware, there is considerable debate around how best to deliver the Government's stated policy objective to establish a National Broadband Network (NBN). These arguments have been well voiced, both publicly, and within Ai Group's membership as we have members directly involved with both the main consortia bidding to run the NBN, as well as a wide cross-section of broadband users (both metropolitan and rural based).

As a key driver of productivity, Ai Group believes that the rollout of the NBN should be seen not as a debate over the application of technology but rather as an instrument of economic policy. As such, we believe that a principles based approach must be adopted when considering the way forward. Ai Group believes the following principles must therefore underpin any decision on the future structure/operation of the NBN. The rollout of the NBN must:

- Promote competition.
- Promote investment.
- Promote access and inclusivity.
- Promote flexibility.
- Promote fair and open markets.
- Provide a strong regulatory framework without excessive regulatory intervention.

We also fully endorse the 5 Best Practice Guidelines issued by the International Telecommunications Union Global Symposium for Regulators which state that Next Generation networks must include:

- Establishment of an effective regulator separated from operators;
- Adoption of clear and transparent regulatory processes;
- Regulatory flexibility and technology neutrality to promote technological innovation;
- Regulatory certainty for both incumbent and competing providers, so as not to stifle innovation;
- Regular reviews to remove undue regulatory barriers to competition and innovation.

International experience shows that many other countries are also grappling with the best way to renew their essential telecommunications infrastructure and deliver Next Generation Networks (NGN). Australia is not alone in this matter, though our nation's distinct geography and demographic map means that there are a unique set of challenges to overcome if we are to meet the Government's stated ambition of delivering high-speed broadband to 98% of Australians.

As stated previously, Ai Group believes it is imperative that Australia gets the pricing and access regimes for our National Broadband Network right. These are deeply complex issues that provide challenges for Government and industry alike; but it is clear that we need to ensure that the correct policy and regulatory framework goes hand-in-hand with any deployment of fibre on the ground.

We does not propose to go in to the various structural options available for the delivery of the NBN in detail as, no doubt, the Committee is already well aware of them. However, taking in to account evidence available from overseas, and research undertaken here in Australia, it is clear that whatever model is chosen will have serious implications for pricing, innovation and access, and as such needs to be very carefully considered.

Service Availability, Choice & Costs

Urban/Rural Split

As has been illustrated internationally, the commercial realities associated with rolling-out high-speed broadband networks have the potential to create divisions in the level of service provided between metropolitan and rural areas.

Understandably, market incentives push broadband providers towards those areas of a country where population density is at its highest. In sharp contrast, such incentives are unlikely to drive high-speed broadband uptake in rural or remote areas without targeted incentives. Recent OECD research endorsed this point making it clear that [in most OECD nations] *“the economics of deploying fibre is such that it would not be cost effective to provide fibre to all communities or geographic areas¹”*. As a result, cross-subsidization models are likely to be essential in order to finance high-speed broadband in remote areas.

It is also important to stress that a variety of technologies are available to deliver high-speed broadband, and whilst the deployment of fibre is commonly regarded as the best option for delivering truly high-speeds, other options are also available.

WiFi, 3G, and WIMAX technologies all do, or have the potential to, bridge the gap where economic conditions discriminate against constructing a fibre network. However, whilst being able to deliver modestly high-speeds (up to 20meg per second) most alternate technologies struggle to deliver superfast speeds particularly when shared by multiple users. So whilst there are viable alternatives to fibre available to meet the Government's commitments, the deployment of non-fibre based networks to ensure geographic coverage may have the unintended consequence of reinforcing a fundamental division between the speeds received by rural and metropolitan areas over time.

¹ Convergence and Next Generation Networks, OECD, page 24, March 2008.

As indicated, a variety of solutions will be required if high-speed broadband is to meet both public and commercial needs. On the issue of how best to ensure an effective service is available in remote/rural areas, debate within the European Union has included the consideration of 'geographic segmentation' model. This means that where independent market assessment has indicated that effective competition in the provision of high-speed broadband is taking place, then regulatory regimes are paired back in order not to constrain further development of products and services. Since such competition tends to occur in more densely populated urban areas, separate and distinct geographic markets are identified outside of these areas and targeted with a more intrusive set of regulatory conditions, and public incentives, in order to ensure the delivery of a more 'universal' service.

As seen in the United States, the economic drivers behind the delivery of Next Generation Networks (NGN) also suggest that there are incentives for network providers to integrate services in order to maintain or extend their established relationship with customers. As the OECD notes *"This raises questions regarding obligations for access to networks by service providers and issues of traffic prioritisation"*². In popular terms, arguments over how best to ensure fair and equitable access to the content delivered through high speed broadband networks has been dubbed the 'net neutrality' debate, with strong opinions being voiced from both sides. This is a highly complex issue, and whilst Ai Group fully understands the needs of the network operator (whoever that may be) to receive a fair revenue stream for the construction and maintenance of the network, we would nevertheless be concerned if traffic prioritisation as a mechanism for deriving such income constrained innovation in content delivery and use, or disenfranchised a large body of users by providing an essentially 'second class' service. As ever, the regulatory framework has a key role to play here though finding the right balance is both crucial and difficult.

Competition in telecommunications and broadband services

The OECD makes clear in its recent work on *'Convergence and Next Generation Networks'* that *"New technologies and services can bring significant benefits to end users but care must be exercised to maintain effective competition in telecommunication markets and to prevent the exertion of market power, which would reduce the benefits"*³.

International experience has also demonstrated clearly that competition policy is an effective tool to drive market access and innovation in telecommunications services. Ai Group agrees that pro-competition principles must underpin the rollout of Australia's NBN. However, competitive access to the NBN can take place in many forms and its application should not discount Australia's incumbent operator (Telstra) from being an integral part of any future network.

² Convergence and Next Generation Networks, OECD, page 14, March 2008.

³ Convergence and Next Generation Networks, OECD, page 4, March 2008.

How best to encourage competitive access is therefore the very difficult question facing policy makers? The wrong approach will compromise investment and consumer benefits and provide a major drag on Australia's business productivity. The right approach, on the other hand, should deliver a win-win of a vibrant ICT sector, more productive businesses across the entire economy and innovative content and applications being used by industry and individual alike.

"Investment requirements for NGN are high and, as for any investment, there are risks. Policies need to ensure that risks and uncertain returns are compensated while ensuring competition since, without competition, the benefits of high speed broadband and NGN will not be realised"⁴ - OECD

In order to achieve a positive outcome a mixture of regulatory, public policy and structural instruments are likely to be required. Past experience on voice regulation and interconnection should also not be forgotten as a source of learnings for high-speed broadband. In the main, regulatory intervention to ensure universal access, fair pricing and interconnection on voice was successful, and implemented in a way that allowed for the introduction of new competitors, and new products and services, over time.

Of course, in an ideal world, the establishment of the NBN would be organically complemented by the development of distinct, and separate, networks delivered by a variety of private sector partners. However, current economic conditions and Australia's vast geography, and relatively small population, mean that such a scenario is all but impossible. In such circumstances where competition in the core network is unlikely to occur, alternate policies to promote service-based competition become more important.

Many other governments are currently trying to drive the implementation of Next Generation Networks forward whilst trying to fathom the best way to balance the needs of incumbent operators against, economic conditions, and the desire to establish new markets with new entrants.

These international experiments are ongoing, but one learning that can be taken on board is the increasing importance of rights of way and access to ducts and poles for new entrants. As the OECD points out *"a large percentage of costs in rolling out new fibre networks are construction costs related to conduits and rights of way"*⁵.

Incumbents across the globe argue, with some degree of justification, that it is commercial madness for them to invest \$billions of capital expenditure on new fibre networks only for them to be 'handed over' to competitors. Naturally, the precise terms of such a 'hand over' are the important factor here.

⁴ Convergence and Next Generation Networks, OECD, page 6, March 2008.

⁵ Convergence and Next Generation Networks, OECD, page 25, March 2008.

Some governments have advocated in response that competitors should be allowed to 'piggyback' on an incumbent's network by selling both wholesale and retail services off it. Others have suggested structurally separating the incumbent's network so that the wholesale and/or retail arms of the business act independently of the incumbents other commercial operations.

Ai Group fully supports a fair and equitable return on capital for whoever constructs and maintains the core elements of the NBN. We also believe that it is possible for this to occur whilst also providing fair and competitive access to the Network. Strong and independent regulation will be required if this to occur, and other complementary policies may be required. However, we do not believe that it is either necessary, or appropriate, for government and/or regulators to intervene directly in the structural set-up of an established private sector company.

OECD analysis concludes that construction costs make up roughly 60-80% of the total costs of rolling out a fibre network. Such costs are likely to impact more on new entrants who do not have historic access rights or an established network of ducts and street cabinets. By ensuring that whoever delivers the NBN provides open access to duct and street cabinet infrastructure could greatly reduce the costs associated with new entrants entering the market, particularly in metropolitan areas.

Such a model is currently being driven by independent regulators in both Spain and France, and being considered across a number of other EU markets. The model acknowledges the financial constraints of building entirely separate networks, provides a degree of reassurance to incumbent operators whilst also providing genuine opportunities for competitive access by new entrants.

Furthermore, through this model there is an additional role that local and State governments can play in opening up public infrastructure (ducts/cabinets etc) for fibre rollout. Such a move would further reduce costs to new entrants, and provide opportunities to widen access outside of major metropolitan areas,

Convergence & Regulation

Who delivers the NBN, and how best to ensure competitive access, have understandably been dominating discussion around the network. However, the need for convergent regulation is another important issue that has tended to receive far less attention.

One of the main attributes of a NBN is its ability to carry a wide range of data, at high-speeds, whilst allowing a significant degree of inter-activity. Already we are seeing the convergence of established technologies over broadband and mobile networks. A high-speed NBN will accelerate this process still further and brings

with it the potential for further competition and innovation across a range of new services.

In such an environment the strong regulatory framework required to deliver the NBN must not be seen as purely a broadband issue. The regulation of the NBN has implications for all existing telecoms, broadcast and Internet regulations, as well as content and access, regulations. It is no understatement to claim that Australia is considering implementing a 21st century network alongside 20th century regulation. Whilst technologies and usage patterns converge, regulatory structures do not and we would urge the Government to take the opportunity provided by the NBN to initiate an enhanced, truly converged, regulator and regulatory framework.

Consequences for Productivity, Investment, Economic Growth, Cost of living & Social Capital

Australia's established communication networks are key components of its economic and social infrastructure. The NBN will add to that, but it will be crucial for Australia's economic development not because of what it is, but because of what it enables Australian businesses and society to do. As evidenced by Ai Group's research broadband infrastructure already supports considerable economic activity, and its development is seen as crucial to industry's future prospects.

Procurement

Another potentially significant benefit arising from the rollout of the NBN is the economic stimulus provided by the construction of the network, and related procurements associated with its delivery and maintenance. Ai Group believes it is important that domestic suppliers have fair and equal opportunity to bid for all aspects of this work; and we urge the Government to look at the procurement process associated with the NBN on the basis of long-term 'whole of life' costs rather than narrow, short-term fixed costs. Ai Group does not, in any way, advocate a protectionist approach (by either direct or indirect means) but it is our view that every legitimate step should be taken to maximise local content, wherever appropriate to do so.

Skills

Ai Group evidence suggests that businesses of all sizes currently lack the skills required to maximize the benefits of high speed broadband, whilst others remain in the dark over what high speed broadband can do for their business. While these problems are particularly acute amongst smaller companies - our survey showed that almost a third (29.6%) of small firms indicated they have a low degree of ICT skills; skills which they felt would prevent them from seizing commercial opportunities arising from the deployment of the National Broadband

Network - there is also evidence of skills gaps across a much wider range of businesses. Ai Group believes it is imperative that the skills needed to release the full economic benefits of the NBN are embedded throughout every part of industry; with our research findings reinforcing the need for investment in next generation training to go hand-in-hand with the development of a next generation network. Ai Group is ready to help in this process, having already worked successfully with Government in the delivery of the successful Enterprise Connect scheme.

Public Service Delivery

In addition to the benefits identified in Ai Groups' survey, high speed networks have the potential to deliver enormous benefits in other areas such as the environment, health care and education. At present this is an area where Australia lags behind its main competitors and it is the view of Ai Group that additional work should be undertaken by Government to consider the rollout of targeted e-health, e-education, Green ICT and smart transport strategies to leverage the benefits of the NBN.

However, the use of high-speed broadband to deliver more efficient public services does raise inevitable questions over universality of service. Currently universal service provisions apply only to established fixed voice networks and in a world where an increasingly amount of public and private sector services are delivered online further consideration needs to be given to whether, or not, the current model is likely to meet future needs.

Resilience

The NBN also needs to be both secure and resilient. Given public concern over how personal data is stored and used it is important that public confidence is delivered through the deployment of relevant security systems and processes. Serious attention also needs to be paid towards adopting more resilient systems to counter potential cyber-attacks.

Conclusion

Ai Group believes that the rollout of the NBN provides Australia with a significant economic opportunity; and whilst there may be ongoing debate over how the National Broadband Network should be built and operated, we believe there is little debate within Australian industry over its future importance to our economy.

It is also our view that that now is not the time for delay. With recent World Economic Forum data showing Australia 29th in terms of cost of broadband, 19th for the number of high speed broadband subscriptions and 23rd for access to digital content, it is imperative we deliver the NBN to its publicly announced timetable.

Ai Group believes high speed broadband network is urgently needed by Australian industry, with our country and our economy standing to benefit disproportionately from its deployment.