

nbn's initial submission to the ACCC's Market Study Issues Paper

November 2016





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1 Introduction

1.1 Overview

nbn welcomes the opportunity to participate in the ACCC's Market Study focusing on changes in the communications sector. Given rapid technological developments and structural change within the sector, **nbn** believes it is appropriate and timely for the ACCC to conduct research, including by engaging with stakeholders, on how these changes are impacting the sector and end-users.

The **nbn**TM network is now a fundamental part of the communications landscape of Australia. As at 30 September 2016, we have 3.2 million premises ready for service, of which 1.4 million have an active service, and we are on track to complete the roll out as planned. It is now time for the industry conversation to focus on whether downstream markets that use **nbn**'s services as inputs are delivering economically efficient outcomes. This needs to include consideration of the regulatory settings most likely to enable industry and consumers to maximise the benefits of the transformative infrastructure investment in the **nbn**TM network.

In this initial submission, **nbn** suggest a series of questions that should be explored in the Market Study using an evidence based approach.

nbn looks forward to further exploring the significant issues that are raised in this initial submission, and that will be raised by other stakeholders, with the ACCC as it progresses its Market Study. **nbn** views this submission as the start of an ongoing dialogue with the ACCC, industry and policy makers.

1.2 Approach to the Market Study

We note that the stated purpose of the Market Study is to:

...examine the changing communications landscape to test whether evolving markets are structured so that there can be confidence they will operate efficiently. The study will identify any potential issues that may prevent markets working effectively for consumers and where developments are leading to greater competition in a traditionally monopolistic sector.¹

nbn agrees that this is an appropriate purpose and scope for the Market Study. Additionally, **nbn** considers that it is important that the ACCC be guided by the following principles:

- The long term interests of end-users will be best served if downstream markets operate competitively.
- For downstream markets to operate competitively, infrastructure providers (such as **nbn**) must be able to supply downstream markets in the most efficient manner possible. Regulation should therefore seek to achieve outcomes, including commercial behaviour that would be expected from effectively competitive markets.

It is clear from the Issues Paper that the ACCC has already undertaken considerable work to identify some of the key trends and emerging market forces. This initial submission by **nbn** seeks to build upon that work. It assumes

¹ ACCC, Competition in evolving communications markets: issues paper, September 2016, p.4



continuing rapid technological development and changes in consumer preferences in order to identify areas where the ACCC should focus its attention to ensure that markets work effectively and that the regulatory framework does not limit or prevent efficient operation of markets.

We note that the ACCC is undertaking this Market Study at a time when the current regulatory framework does not yet fully reflect current Government policy (as the Government is in the process of implementing legislative reform) and that the Productivity Commission is also undertaking a major review of the future of the universal service obligation in the telecommunications market which will have implications for the ACCC's work.



2 A changing industry landscape

As detailed in Volume 1 of the National Broadband Network Market and Regulatory Report,² **nbn** was a policy solution that resulted from a failed tender process for the construction of a next generation broadband network and reflects the commitment of successive Australian Governments to improve the availability of high speed broadband for all Australian households and businesses.

Although it is important to recognise the historic origins of **nbn**, much has changed since **nbn** was established, and there should be no presumption that **nbn**'s role in the communications sector should not evolve from that which was initially appropriate to the particular circumstances of its creation. Rather, **nbn** should be expected (and allowed) to respond to incentives to invest in ways that would allow it to efficiently meet the needs of its customers and thereby facilitate the efficient operation of related markets. It is important to note in this context that **nbn** is a commercial entity and is required to earn a rate of return consistent with its funding arrangements with the Government.

The **nbn**[™] network is a significant investment in transformative infrastructure that is intended to make a major contribution to Australia's future productivity growth and innovation capability.³

This objective may be frustrated if regulatory settings do not evolve as the market structure changes. This Market Study provides an important opportunity to review those settings having regard to rapidly evolving technological developments, changing consumer preferences, structural change within the sector, the policy landscape and product innovation.⁴ In the following subsections we briefly note some of the key trends of relevance for the Market Study.

2.1 Key technological demand and supply factors

Since the inception of **nbn**, technological developments have enabled a proliferation of consumer devices (including smartphones, tablets, High Definition smart TVs and wearables), accompanied by an explosion of applications and services (including non-linear TV programming, multi-user gaming, cloud based processing and storage). Over the next 3 to 5 years, growth in the variety and number of these devices and services is expected to continue unabated; UHD (4K and 8K) smart TVs, augmented reality / virtual reality, automated home devices and vehicles, digital agriculture, commerce, manufacturing and transportation are just some of the areas anticipated to experience growth in the transition toward the internet of things (IoT).

Figure 1 details a number of key demand and supply factors that are expected to influence the market over the short to-medium term.

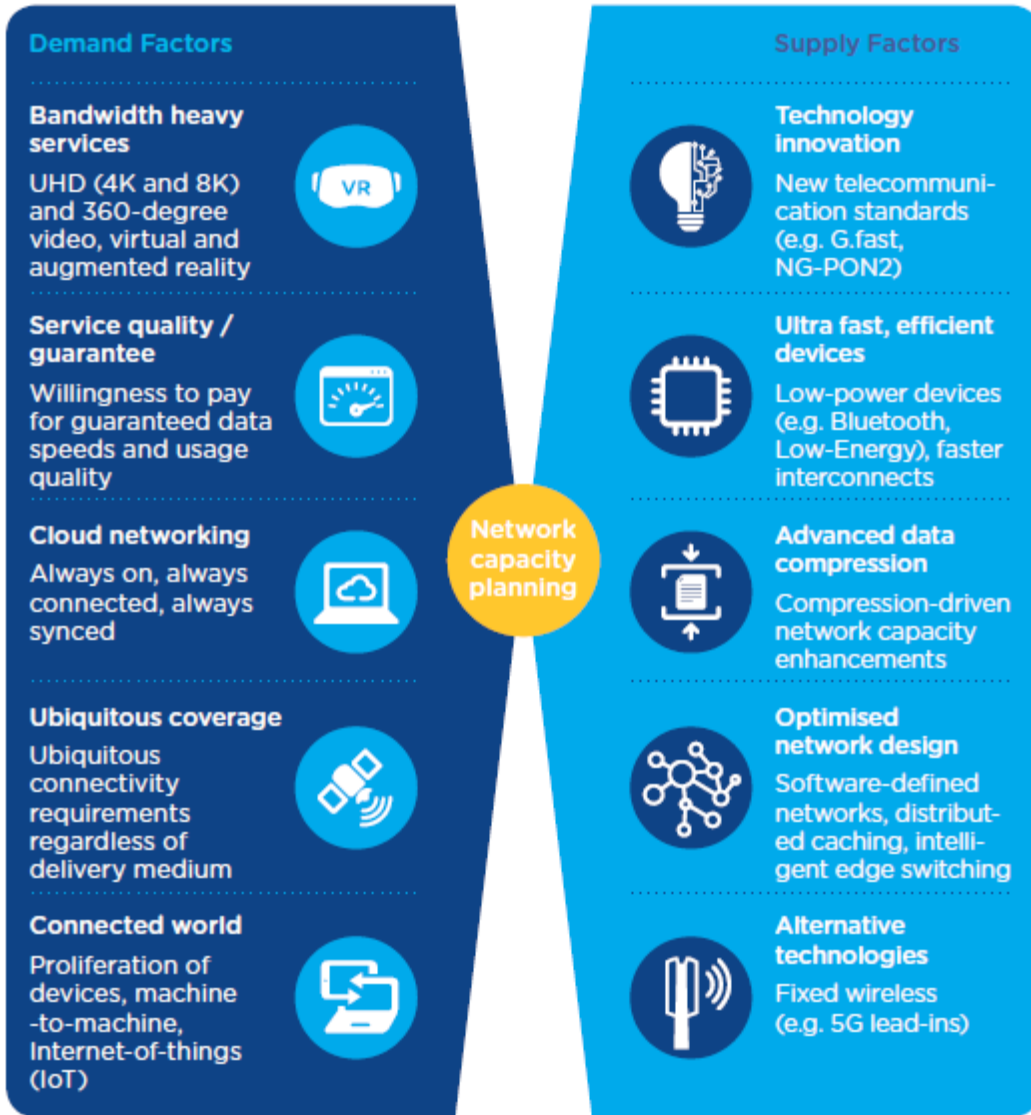
² See Independent cost-benefit analysis of broadband and review of regulation, Volume 1 – National Broadband Network Market and Regulatory Report, section 3.2

³ See for example Senator Fifield, Minister for Communications, *nbn 2017 Corporate Plan Launch*, Radisson Blue Hotel, Sydney 26 August 2016

⁴ See ACCC, *Competition in evolving communications markets: issues paper*, September 2016, p.4



Figure 1. Key technological demand and supply factors



2.2 Changing consumer preferences

The ACCC has highlighted the current and future consumer trends that it considers will continue to shape the telecommunications market. nbn’s view on consumer preferences aligns with those captured in section 4 of the Issues Paper. Looking ahead, consumer’s demand for connectivity will be characterised by the following key trends:

- **Data demand expected to grow at ~6-10x every decade**, driven by greater penetration (both users and devices) and emergence and adoption of high-bandwidth applications.
- **Throughput requirements will increase** (download & upload), particularly in the home, as end-users look to use multiple sets of devices and applications simultaneously (multi-device streaming) and in some cases continuously (e.g. IoT).
- **End-users seeking seamless connectivity** for themselves and their devices across all locations.



- **Increasing heterogeneity of demand**, both amongst users but particularly as between different services. This heterogeneity relates to speed, but also to latency, resilience and to many other dimensions of ‘quality’.

The technology and connectivity ecosystem will evolve rapidly, requiring network operators to actively and continuously anticipate demand across fixed and wireless use cases – for both residential and business users. In addition to dimensioning networks to accommodate increasing demand, and facilitating consumer transition between fixed and wireless networks, operators will need to offer different levels of quality of service over common assets.

2.3 The policy landscape

Evolving Government policy continues to drive industry change. Specifically, the Government’s response to the recommendations of the *Independent cost-benefit analysis of broadband and review of regulation* (referred to as the Vertigan review), once implemented, will result in a policy framework that seeks to:

- promote competition at both the retail and wholesale/infrastructure level;
- treat industry players consistently under the regulatory framework; and
- require vertically separate new fixed line high speed broadband access networks (which control ‘last mile’ connections to residential premises).

Ahead of the foreshadowed legislative changes being made, significant competition is already emerging at the infrastructure level. In particular, **nbn** faces direct competition from existing network operators that are extending and upgrading their networks within the fixed line footprint and from new entrants. In new developments, **nbn** faces competition for the market (i.e. contestability) for the build and operation of superfast broadband networks. Unlike its competitors, **nbn** is unable to ‘cherry pick’ low cost and higher revenue areas and is required to serve areas even if they are loss-making.

Accordingly, while **nbn** will be the operator of Australia’s sole ubiquitous fixed line superfast broadband network, it faces direct competition from a range of other networks (including fixed and fixed wireless) which provide a degree of competitive constraint. As a result, in many areas and facets of behaviour **nbn** would not be considered to have a substantial degree of market power.

The *quid pro quo* for creating an environment that promotes competition at the infrastructure level is that all players should be allowed to compete on a level playing field. **nbn** should not be unduly constrained in responding to competitive entry.

2.4 Substitutability and complementarity of wireless technologies

The ACCC’s Issues Paper has raised the important issue of fixed line to mobile substitution. Another important area of substitution is fixed line to fixed wireless substitution – given the increasing prevalence of fixed wireless



networks servicing residential premises.⁵ **nbn** also considers that the review should consider those areas where fixed wireless and mobile technologies will continue to play complementary roles (particularly outside the home) and how these networks can be best leveraged for the long term benefit of end-users.

2.4.1 Fixed to mobile substitution

As outlined in the Issues Paper, there is evidence of substitution between fixed line and mobile voice services in Australia. Not only have fixed line voice services in operation decreased significantly over the last few years but this has also corresponded with an increasing number of Australians relying solely on mobile phones.

While the ACCC considers that the evidence for substitution between fixed line and mobile broadband services is less clear than for voice services, **nbn** considers that this Market Study is an appropriate opportunity to consider this issue. **nbn**'s Corporate Plan assumes that take up of mobile only products will be around 15-16 percent of premises.⁶

In a recent survey of the economic literature over the past decade, CEG observed the progression between fixed and mobile networks being initially found to be complementary to being found to be traffic and access substitutes. CEG stated:

The empirical literature indicates that fixed-mobile voice substitution has increased considerably over the past decade at a very fast pace. When mobile was first introduced, it had an apparent complementary effect on fixed-line telephony since it expanded the available communications network. As mobile penetration increased, however, mobile telephony eventually had a substitutive effect on fixed-line telephony, starting with substitution in terms of traffic before leading to substitution in access.

There is some evidence that the advent of DSL broadband, which was a significant development which increased the bandwidth capability of fixed-line networks, might have resulted in a slowing of access substitution, but the recent and ongoing developments of 4G and 5G mobile technology may in turn result in further access substitution in fixed-line and mobile telephony. The most recent empirical studies (discussed below) shows evidence of access substitution between fixed and mobile networks.⁷

2.4.2 Fixed to fixed wireless substitution

There is already clear market evidence of competition between fixed line and fixed wireless networks in certain segments of the Australian market. For instance:

- Spirit Telecom offers high speed residential services using fixed wireless technology in competition with fixed line operators; ⁸ and
- Superloop has signalled its intention to acquire BigAir and scale up to a gigabit wireless end-user service that would bypass the **nbn**TM network.⁹

⁵ Much of industry debate has tended to conflate these access technologies but it is an important distinction: the role of the technologies and the extent to which they will place competitive constraints on fixed line networks is expected to differ

⁶ **nbn**, Corporate Plan, 2017, p. 39

⁷ CEG, Issues with Universal Service, A report for **nbn** co, July 2016

⁸ <http://www.spirit.com.au/fibre-faster-nbn/>



These companies have built their business models around the assumption that fixed wireless networks do, and will, compete with **nbn** going forward.

2.4.3 Complementary technology

There is increasing evidence that mobile networks are relying on fixed networks to keep pace with the demands of consumers. This has led the OECD to conclude that fixed and mobile networks are both competitive and complementary. With respect to their complementary nature, the OECD has noted that:

*Mobile networks increasingly rely on fixed broadband networks to meet consumer demand for high-speed data and will do so more in the future.*¹⁰

The relevant OECD report argues that fixed to mobile convergence offers consumers potential access to their data and services anytime and anywhere. Once a service is accessible using the internet, it is independent of the underlying network, meaning that, in principle, it could be used on either a fixed or a mobile network. This differs significantly from the traditional situation where services were tied to a particular network.

At the same time, the increasing demand for mobile services drives operators to bring fixed networks (that can carry higher data rates than the mobile network) even closer to where the consumer will be, so that a wireless/mobile service is only accessed in the last few hundred metres. This trend is growing at a very fast pace with the increase in smart phones and applications that interact with the cloud.

What this complementarity means is that fixed to mobile substitution needs to be thought about differently. Rather than mobile technology leading to end-users 'cutting the cord', substitution needs to be considered as a reduction in the demand for call minutes and network traffic, as well as connections. In this sense, mobile technology will provide a competitive constraint to next generation networks in terms of their ability to charge for traffic and usage (and not just connections).

⁹ Comms Day, Superloop to buy BigAir to create gigabit bypass to **NBN**, 14 September 2016,

¹⁰ OECD, Working Part on Communication Infrastructures and Services Policy, Fixed and Mobile Networks: Substitution, Complementarity and Convergence, 8 October 2012, p. 5



3 What do these changes mean for the efficient operation of markets?

The long term interests of end-users will be best served by effective competition and the efficient operation of markets at all levels of the communications sector. In downstream markets, the long term interest of end-users will be best served by the promotion of vigorous competition. At the wholesale level, the operation of networks that display natural monopoly characteristics need to be regulated in a way which achieves efficient outcomes and promotes desirable investment.

3.1 Maximising competition in downstream markets

nbn believes that current retail pricing trends and service offerings in Australia's fixed broadband markets require careful examination.

The theory of perfect competition assumes that for any given product all firms face the same cost and that they earn a normal profit (or zero economic rents). It follows therefore that when firms in a perfectly competitive downstream market are faced with an increase in the marginal cost of an essential input the price of the downstream goods will rise. In a competitive market, the slope of the demand and supply curves are critical to the level of pass through. Other things equal, the less elastic is demand, and the more elastic is supply, the greater the extent of pass-through. In the case where supply is perfectly elastic, the cost increase will be fully reflected in the price rise (100% pass through).

Where competition is less than perfect one may expect that the downstream firms could only sustain the higher cost input without rising final prices if those firms were previously earning economic rents. In general, a more competitive market will result in a greater degree of pass through of industry-wide cost increases.¹¹ Where such outcomes are observed it is likely that one or more firms in the downstream market has a degree of market power.

A number of downstream RSPs have asserted that deployment and migration to the **nbn**TM network is resulting in reduced margins for RSPs. It is correct, that the **nbn** provides RSPs with a measurably different cost structure than is the case when unbundling Telstra's copper local loop (one that is more similar across RSPs). Recently, a number of firms have exited the market (via merger activity) while other firms have invested further in order to gain greater economies of scale and scope and thereby seek to offset the cost impacts of the **nbn**TM network. It is worth noting that despite claims of reduced margins there are no instances of failed firms or firms that are unprofitable. This suggests that existing downstream RSPs were previously earning economic rents and have capacity (at least in the short term) to absorb reduced margins. **nbn** notes the widely divergent views that have been expressed on this by industry and urges the ACCC to ensure that its consideration of competition in downstream markets is evidence based.

¹¹ In the Cournot setting, an increase in the number of firms will result in a greater degree of pass through of industry-wide cost increase in circumstances where the demand curve is not too convex. See Seade, J. (1985): 'Profitable Cost Increases and the Shifting of Taxation: Equilibrium Responses of Markets in Oligopoly', Warwick Economic Research Papers No. 260



To the extent that firms in downstream markets were earning economic rents, the ACCC should seek to identify the sources of such rents. Such rents may arise from market power in:

- the downstream retail market for fixed line broadband services;
- upstream markets for the supply of non-local access network infrastructure services such as backhaul services. Such an outcome would be expected in markets characterised by a high degree of vertical integration; and
- related downstream markets in which firms are horizontally integrated.

Given that the long term interest of end-users will be best served by vigorous competition between RSPs in downstream markets, to the extent that there is enduring market power in any of these markets, the long term interest of end-users will not be promoted.

The present market structure is suggestive of market power being held by the large RSPs and this current market structure is likely to be of material concern to new entrants and smaller RSPs, whose commercial operations could be adversely affected by the behaviour of the large RSPs. This is obviously a concern that needs to be considered as part of the Market Study.

3.1.1 Vertical integration and the efficient operation of markets for other network inputs

All things being equal, the rollout of a wholesale only open access network should lower barriers to entry and provide opportunities for expansion for those competing in retail communications markets. However, the delivery of these services to end-users requires multiple inputs. For example, the delivery of broadband services over **nbn** requires that RSPs connect to **nbn**'s points of interconnect, via either their own or leased backhaul infrastructure or via services provided by an aggregator. Accordingly, despite **nbn** lowering barriers to entry in respect of the local access network portion supplied by **nbn**, increased competition in downstream communications markets will not materialise if there are significant and enduring barriers to entry in other relevant wholesale markets (i.e. the market for backhaul services).

Despite the intervention of **nbn**, important wholesale network inputs required to connect to the **nbn**TM network and compete in downstream markets are still characterised by high sunk costs and are controlled by vertically integrated firms which also operate in downstream retail markets.

3.1.2 Vertical integration and competitor margins

The form of structural separation being undertaken in Australia is unique and bespoke. In particular, despite relinquishing control over the 'last mile' infrastructure, the incumbent operator still controls significant upstream network inputs (i.e. backhaul). Furthermore, Australia's entire competitive backhaul infrastructure is controlled by vertically integrated firms which compete in downstream retail fixed line broadband markets.

This market structure, coupled with the current form of **nbn**'s non-discrimination obligations, raises the potential for margin squeeze, in which vertically integrated upstream firms with market power seek to earn abnormal profits by raising their upstream prices. In doing so, the integrated firm raises the costs of its downstream competitors and receives increased upstream revenue while reducing the level of competition for its affiliated downstream firm. The extent to which there is potential for such conduct should be considered as part of the Market Study.



3.2 The efficient operation of wholesale markets

The regulatory regime should not restrict the use of the network in a way that detracts from, or makes more difficult, the achievement of the intended social and economic benefits. Furthermore, it should not prevent network operators operating in a commercially rational way that would be consistent with competitive market outcomes.

In this regard we note a number of aspects of the existing regulatory regime which detract from the efficient operation of wholesale markets. These should be considered as part of the Market Study and include:

3.2.1 Importance of aligning objectives

For network operators restricted to the provision of wholesale services, RSPs are fundamental to markets responding efficiently to growing demand (illustrated in the ACCC's diagram of the communications supply chain¹²). RSPs must be able to send the right signals to **nbn** and other wholesale-only network operators, so that the network operator is able to respond by providing the wholesale inputs that RSPs require. This relates both to:

- product – the types and quality of broadband services that are demanded by end-users; and
- pricing – the amount consumers are willing to pay for their product/data demands.

Network operators cannot be agnostic to the success of their customer RSPs. They must (including for the efficiency of their own operations) work with customer RSPs to enable these providers to make investments that drive greater use of the network, and in turn, deliver better outcomes for end-users. In addition to promoting competition between existing customers, network operators need to support new entrants and niche players. These service providers can often provide greater opportunities for innovation and investment in new services.

3.2.2 Non-discrimination obligations

The existing non-discrimination obligations that apply to **nbn** and superfast broadband networks restrict network operators providing services to downstream customers in the most efficient and commercially rational manner.

Initially the non-discrimination obligations were seen as important to prevent **nbn** favouring larger network operators to the detriment of competition. In the current and developing market environment, they are more likely to impede the ability of **nbn** to facilitate and promote new entrants and smaller RSPs and to price to prevent socially inefficient duplication of natural monopoly infrastructure.

Careful analysis should be undertaken to consider whether there are already other appropriate regulatory and competition law safeguards that would mitigate the risk of **nbn** favouring larger network operators and whether the regulatory focus should instead be on providing strong incentives for wholesale only network operators to maximise demand via differential pricing and service offerings that best meet their customer needs, maximise output and promote competition in downstream markets.

Under the existing regulatory framework, different RSPs face different incentives and have varying abilities to duplicate and bypass the **nbn**[™] network. To the extent that duplication of natural monopoly infrastructure may

¹² See ACCC, Competition in evolving communications markets: issues paper, September 2016, p.11



be privately profitable but socially inefficient, it is not in the long term interest of end-users that **nbn** be restricted, by its regulatory framework, from being able to respond to the threat of duplication of its network.

An efficient and commercially rational network operator needs to be able to price its services to create efficient build/buy decisions for relevant industry players. This is particularly important in **nbn**'s case, where competing infrastructure is owned by vertically integrated operators who can leverage their presence in the retail segment.

Overly restrictive non-discrimination obligations can also inhibit efficient interaction between a network operator and its existing or potential customers – and place the network operator at a disadvantage in comparison to networks that do not face the same constraints. They may also have the unintended consequence of protecting existing market shares by restricting operators such as **nbn** from facilitating and promoting new entrants at the RSP level.

3.2.3 The need to maximise the benefits of the **nbn**TM network

It is commercially rational and efficient for a multi-product firm to seek to exploit economies of scale and scope. This is especially so where the firm faces large upfront fixed costs with low and declining marginal costs. Furthermore, from an economy wide perspective, social welfare will be maximised by multi-product firms exploiting fixed investments to maximise output. Outcomes consistent with this conventional wisdom will not be achieved if **nbn** is prevented from fully exploiting the economies of scope inherent in, and made possible by, next generation broadband technologies. In this regard, there is simply no justification for 'legacy' thinking that contends that **nbn** should be precluded from competing with private investments, developing products other than last mile connectivity services or seeking the custom of parties other than traditional RSPs. As **nbn** faces direct competition and is required to operate as a commercial entity, **nbn** must be able to respond accordingly within appropriate regulatory settings.

A failure to provide flexibility for **nbn** to operate in a commercially rational and efficient manner may dampen **nbn**'s incentive to invest in a manner that allows it to efficiently meet the needs of its customers and to facilitate competition in relevant markets. Structural separation of the access network has addressed many concerns with respect to historical anticompetitive behaviour. Nevertheless, there are significant vertical externalities within the communications supply chain, meaning that coordination between functional layers will yield greater welfare for end-users. It is important to recognise that many of these externalities can be internalised through contracts, without requiring vertical integration.¹³ **nbn** considers that efficiency could be improved by allowing **nbn** and downstream RSPs to enter arrangements to facilitate investment by RSPs that enhance the quality of services to end-users and that regulation that prevents this from occurring should be removed.

3.2.4 Regulatory asymmetry

A key feature of the legislative reforms of 2010 was the attempt to establish regulatory symmetry between all fixed line superfast broadband networks serving residential and small business customers. This was a departure from previous approaches to telecommunications access regulation in Australia, which required the incumbent network to supply wholesale services on regulated price terms and conditions. For various reasons, the regime established in 2010 has been heavily criticised and does not in fact achieve its intended objective. Current

¹³ Maskin, E. and Tirole, J., "Unforeseen Contingencies and Incomplete Contracts", *Review of Economic Studies* (1999) 66, 83-114



Government policy is to amend Parts 7 and 8 of the Telecommunications Act in a manner that will result in an even greater degree of asymmetric regulation. Specifically, all **nbn** eligible services (both business and residential) will be subject to regulation, whereas for other superfast broadband networks, only residential services of speeds greater than 25 Mbps will be regulated.

Consistent with the large body of economic literature that has examined the merits of symmetric versus asymmetric regulation,¹⁴ **nbn** submits that policy makers should seek to minimise the extent of regulatory asymmetry between **nbn** and other superfast broadband networks. In particular, in the market for business services where **nbn** faces competition from vertically integrated unregulated service providers, **nbn** is placed at a significant competitive disadvantage. This detracts from the long term interest of end-users and reduces social welfare in various respects, including that it:

- encourages potentially inefficient duplication of natural monopoly infrastructure; and
- dampens **nbn**'s commercial incentives to invest in, and develop, business services. This in turn reduces the extent to which **nbn** is able to exploit the economies of scale and scope inherent in its network and to maximise output. This is inconsistent with outcomes that one would expect from an efficient competitive market.

¹⁴ See for example Hoenig, S, 2011, Asymmetric Broadband Wholesale Regulation
<http://www.webmeets.com/files/papers/earie/2012/263/AsymReg2011Dec09.pdf>



4 Promoting the long term interests of end-users

It is appropriate for the ACCC to place the long term interest of end-users at the centre of the ACCC's timely examination of evolving issues in communications markets. The long term welfare of end-users is maximised through policies and regulatory settings that promote economic efficiency. Facilitating competition is highly desirable as it is generally the best way to encourage the economically efficient use of, and investment in, services that are desired by end-users.

In the context of the ACCC's Market Study, the objective of promoting the long term interest of end-users raises a series of important and timely questions about the Australian communications sector. In this initial submission, **nbn** has identified (non-exhaustively) a number of questions it considers to be of greatest significance, to assist the ACCC to identify and scope the more significant developments and issues for its consideration. These questions are as follows:

Question 1

Does the presence of structurally separated network owners operating on a wholesale only basis (e.g. **nbn**) change RSP business models, investment incentives and risk profiles?

Question 2

Given the extent of consolidation in downstream retail voice and broadband markets and the extent of vertical and horizontal integration by some players in the industry across fixed and wireless infrastructure, aggregation/backhaul services, retail service provision and content markets, are there instances of market power that cannot be addressed by the specific form of structural separation achieved by the establishment of **nbn** and the roll out of the **nbn**TM network, or by the manner in which Telstra has been structurally separated?

Question 3

Given the extent of recent consolidation in downstream retail voice and broadband markets, should further consideration be given to some of the current regulatory settings, including in response to the recommendations of the (now two years old) Vertigan Review. For example, **nbn**'s current non-discrimination obligations were justified on the basis that they would protect niche, nimble players that were not of significant scale or vertically integrated. Does this justification still stand?

Question 4

In a structurally separated environment, can outcomes for end-users be improved by facilitating coordination between functional layers in the supply chain?

Question 5

Across Australia, the total fixed line broadband penetration rate for households continues to grow, rising from 73 percent at June 2015, to 76 percent at June 2016.¹⁵ Data consumption per household on fixed line broadband

¹⁵ ABS, 2015 and ABS, 2016



services is also growing, with subscription video on demand services, such as Netflix, having a significant positive effect on data consumption. From March 2015 to June 2016, the average data consumption per household on the **nbn**TM network grew by around 59 percent to 137 GB (download and upload) per month.¹⁶

Whilst there has been a consistent growth in consumer data demands, the response from RSPs has been mixed and many RSPs are still focussed on selling services at the 12 Mbps and 25 Mbps speed tiers which are broadly equivalent to the speeds available on existing technologies. Recent market commentary observes this trend, noting:

*They've taken their existing product and moved that across to the **NBN**. It's not that the **NBN** can't give you faster speeds, it's because the incumbents have sold customers into that through lack of innovation¹⁷*

Is it to be expected that technological developments, changes in consumer preferences and increased demand for data downloads will drive greater demand for higher speed fixed line services? If so, why does the demand for higher speed fixed line services appear to be lagging the growth in demand for data?

¹⁶ **nbn**, Corporate Plan, 2017, p. 35

¹⁷ Mr Demos, MyRepublic Managing Director, "MyRepublic broadband start-up arrives in Australia with 100MBPS true **nbn** offering", Sydney Morning Herald, 3 November 2016