Within cooee

Mitch Brook examines the progress of the National Broadband Network rollout and what it means for regional and remote businesses and consumers.

Illustration by Tomso at *www.illustrationroom.com.au*.

Communication is vital to business. It's a universal need that applies equally to regional areas and capital cities, but businesses based outside Australian urban centres often find themselves left by the wayside when it comes to communications technology and upgrades.

While greater population density and investment benefits cities such as Sydney and Melbourne, regional towns should not be forgotten. After all, what would the big cities be without the produce and products of regional businesses supporting them?

The disparity between communications technology in regional areas and big cities is the driving force behind the most significant Australian communications project of the 21st century to date: the National Broadband Network (NBN). The Federal Government is in the throes of a national rollout of a fibre network augmented by wireless and satellite coverage that will allow regional businesses and consumers to connect with the rest of Australia and the world, ideally at faster speeds and lower costs.

The government is not the only investor in communications infrastructure, however, and the NBN project won't be finished for many years yet. Regional populations will still need to rely on existing services to get by until it's their turn for NBN connection.

THE NETWORK TO CONNECT A NATION

Regional internet access and mobile communication have long been neglected. While major and capital cities continue to receive upgrades to communications networks, regional and remote areas lag behind, with slow connection speeds, patchy coverage and high costs. But the government has enacted legislation that aims to mitigate this inequality of access, with NBN Co, a wholly commonwealth-owned company that will provide new and faster infrastructure, now well into the process of connecting all Australians to high-speed broadband.

"The NBN is not just about faster internet – it's about an upgrade to the infrastructure that will underpin the ➔

delivery of vital applications that Australians will need over the coming decades. This is a great step forward in preparing our country for the future and helping to address some of its biggest challenges in healthcare, education and business," says Michael Quigley, CEO of NBN Co.

The government's stated aim of the NBN project, which is expected to cost about $36 billion, is to provide wholesale infrastructure to 100 per cent of Australians through telecommunications providers. The new high-speed fibre network – a faster and more versatile network than the copper lines it will replace – will link 93 per cent of Australians to super-fast broadband services. Four per cent will be linked by fixed-wireless (similar to current mobile networks), while the remaining three per cent will be connected by satellite coverage.

As NBN Co supplies the infrastructure for broadband connections across the country, existing service providers will continue to offer data connections across the new network. These providers include telecommunications companies such as Telstra and Optus. While this ensures market competition and avoids a government or single-corporation monopoly of service in newly connected regional areas, there are still problems to be resolved.

BLOCKS IN THE NETWORK

An important issue is the Liberal Opposition's position on the current plan for a nationwide broadband system. While the former Coalition government originally proposed the plan, the NBN is a Labor Government initiative. If the Opposition wins the next election and reviews the plans for the network, the significant expenditure already incurred may be lost.

The Opposition argues that the NBN is a waste of money, and that this over-capitalisation in a government monopoly on infrastructure is likely to lead to steep prices for consumers. Its spokesman for communications and broadband, Malcolm Turnbull, told a telecommunications summit in April, "A heavily capitalised government monopoly is not going to reduce prices. The reverse is far more probable." Such a large and widespread network is expensive to implement and it is feared the cost will be passed on to NBN-connected Australians.

Furthermore, the legislation for the rollout requires NBN Co to prioritise new housing estates. Some areas are seeing an unequal connection rate as rapid developments, such as housing estates built quickly to accommodate growing populations in mining towns, draw connections as a priority, with established settlements crying out for faster broadband connections, as they have for years.

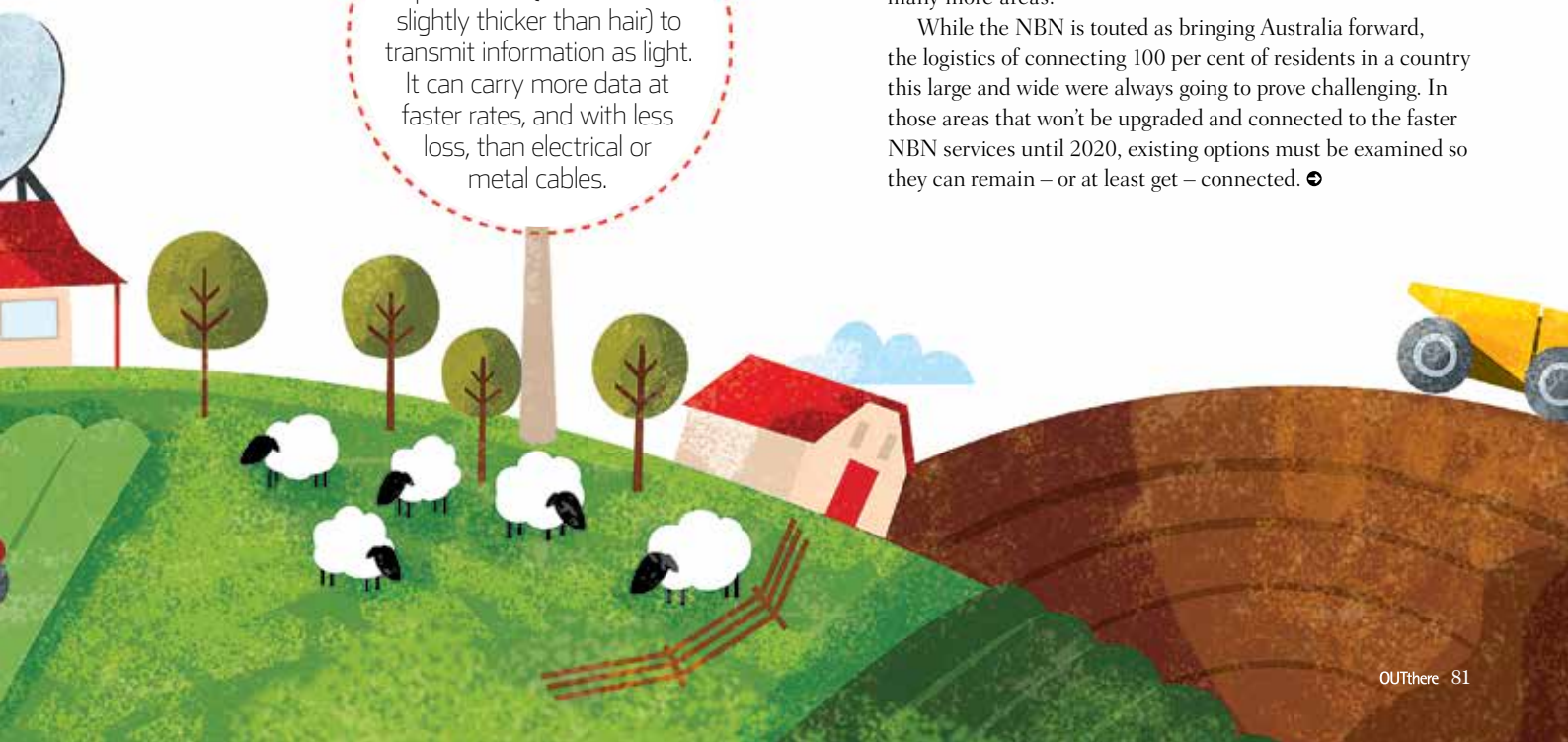
Others who have weighed in on the debate say that by the time the project is finished, wireless technology will have superseded the wired technology of the rollout, making the NBN technology obsolete before completion. However, action is required now to connect Australians to vital communications services. There will always be another technology around the corner, so waiting for new developments could mean eternally delaying the introduction of the infrastructure.

The NBN Co website has an interactive map that enables those interested to check when their area will be connected to the faster broadband. It indicates areas already connected, areas where work has started and areas where work will start in the next one or three years. It's estimated that once work starts, services will be available within 12 months. Among the first-release areas are Townsville, Armidale, Kiama, Brunswick and Willunga, and work has begun in many more areas.

While the NBN is touted as bringing Australia forward, the logistics of connecting 100 per cent of residents in a country this large and wide were always going to prove challenging. In those areas that won't be upgraded and connected to the faster NBN services until 2020, existing options must be examined so they can remain – or at least get – connected.

FAST FACT

The fibre network uses optical fibre (silica strands slightly thicker than hair) to transmit information as light. It can carry more data at faster rates, and with less loss, than electrical or metal cables.



THE NEXT GENERATION

While the NBN project promises to deliver fast internet to all Australians, its implementation will take place over the next decade, meaning some Australians will be waiting for the faster connection for another 10 years – and that's if the project runs to schedule. To mitigate this, the NBN Co has launched an interim satellite service for those without access to city-comparable broadband, and is aiming for a 2015 completion of new fixed wireless and satellite services.

Telstra and Optus both offer good coverage on their mobile networks across the country, with Telstra saying its Next G network provides coverage to 99 per cent of the population and Optus saying its 3G network delivers to 97 per cent. One or both of these networks cover most populated areas. Those areas that don't have direct coverage are encouraged to boost signal strength with an external antenna attached to a compatible handset.

Of course, knowing this coverage exists is not the same as experiencing it on the ground, and it doesn't take into account the fact that coverage can be blocked by buildings or geographical features, or that the number of users can slow the network.

The remaining percentage of Australians without Telstra or Optus coverage are those in regional and remote parts of the country where population density is not high enough to make extending coverage economically viable. They must therefore rely on satellite coverage to connect to the internet.

When it comes to regional communications policy, which can be fraught with debate and contention, policy-makers and telecommunications companies must balance the requirements of cities and regional areas to efficiently manage coverage and profits.

The sheer scale of the NBN project means it won't be without its challenges. While some Australians will have to wait longer than others for the faster internet, it will eventually be within cooee for all of us.

2.2 BILLION

Is the amount of people around the world connected to the internet, almost a third of Earth's population. The internet has no central governing body, but is governed independently in each jurisdiction.

ACCESS FOR EVERYONE

The NBN will provide broadband access to all Australians:

93% will be connected via a fibre network
4% will be connected via fixed-wireless
3% will be connected via satellite.

The NBN will provide wholesale infrastructure to telecommunications companies, which will then sell their services to consumers and businesses.

It is estimated the NBN will cost about $36 billion and take 10 years to complete.

For more information about the NBN – its aims, the rollout and an interactive map of its progress – visit *www.nbnco.com.au*.