

NBNCo Network technology

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nbn is committed to providing access to fast, reliable and affordable broadband services throughout Australia. We currently plan to do this by utilising a mixture of the following technologies, using the best fit solution for each area. We call this our multi technology mix (MTM).

Our goal under the multi-technology mix model is to utilise a range of technologies that provide our customers, phone and internet service providers, with access to very high speeds. At a minimum our goal is for everybody to have access to a service that provides 25Mbps downstream by 2020, but ultimately, **nbn** aims to deliver at least 50Mbps download speeds to 90% of fixed line premises by 2020.

For each service area, we consider whether:

- Existing infrastructure can be used to deliver the required bandwidth to premises
- Delivery partners have available construction capacity
- Network complexity can be reduced by consistent use of technologies within a particular area
- Advances in technology may mean an alternative approach may be preferable

Our multi technology mix approach means that most households and businesses:

- already served by the Optus or Telstra Hybrid Fibre Coaxial (HFC) cable networks, will receive fast broadband over an upgraded HFC network;
- where fibre-to-the-premises (FTTP) technology has been deployed or is in advanced stages of being built, will remain part of the FTTP rollout; and,
- where fixed wireless or satellite technologies are earmarked for deployment, will remain part of the Fixed Wireless or Satellite rollout.

All other communities are likely to receive fast broadband over fibre-to-the-node (FTTN) and, in the case of multi-dwelling units such as apartment blocks, fibre-to-the-basement (FTTB).

Fixed line

Fibre optic cable technology will replace some of the existing copper wire and HFC networks which use electricity to transfer data to run telecommunications services in Australia.* Fibre is inherently capable of supporting high bandwidth, which can bring a wealth of benefits including; multiple users being online at the same time and at the same fast speeds, short download time, quick upload time and a smooth online experience**.

The fibre may run to the premises, or to nodes/pillars in neighbourhoods. Fibre is inherently capable of supporting high bandwidth, which can bring a wealth of benefits including; multiple users being online at the same time and at the same fast speeds, short download time, quick upload time and a smooth online experience**.

Fixed wireless

Fixed wireless technology can transmit data at fast speeds using radio signals instead of cables. This technology uses fixed transmission towers or base stations to communicate 'over the air' with **nbn**TM supplied equipment within the home or business. Line of sight from the tower to the equipment at the home or business is essential. Australia is a vast country with complex geography and fixed wireless technology enables us to provide access to services over the **nbn**TM network in locations that are difficult or not cost effective to reach with fixed line technology.

Satellite

Satellite equipment is installed at the home or business in order to transmit and receive data via a satellite, named **Sky Muster**TM, orbiting the Earth. This technology makes sense for Australia as it enables us to connect homes and businesses in the hardest to reach, primarily rural and remote areas.