Migration Assurance Framework

Telecommunications industry guide

August 2017

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1. Introduction

The National Broadband Network (NBN) is a major upgrade to Australia's fixed line telephone and internet infrastructure, which will support all Australian premises to access high speed broadband and telephony services. The NBN will deliver reform of the industry via structural separation of Telstra's local access networks.

During the transition to the NBN, the Telstra and Optus local access networks are being progressively shut down as premises transfer their communications services onto the new NBN infrastructure.

The NBN is a wholesale only network that is being rolled out and operated on an open access basis by NBN Co Limited (nbn), a Government Business Enterprise, wholly-owned by the Commonwealth.

To guide the company through to the completion of the project, the Australian Government has issued a Statement of Expectations [1] which highlights several priorities for nbn, including operating commercially, engaging collaboratively with stakeholders, and importantly working with the telecommunications industry to enable a seamless transition of services for consumers and businesses.

As the network rolls out, nbn is delivering the underlying infrastructure and wholesale products upon which telecommunications retail service providers can then add and develop retail telephone and data services to offer directly to residential and business customers.

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[1] www.nbnco.com.au/content/dam/nbnco2/documents/soe-shareholder-minister-letter.pdf

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Migration of services to the NBN is complex, and involves multiple parties and interdependent processes.
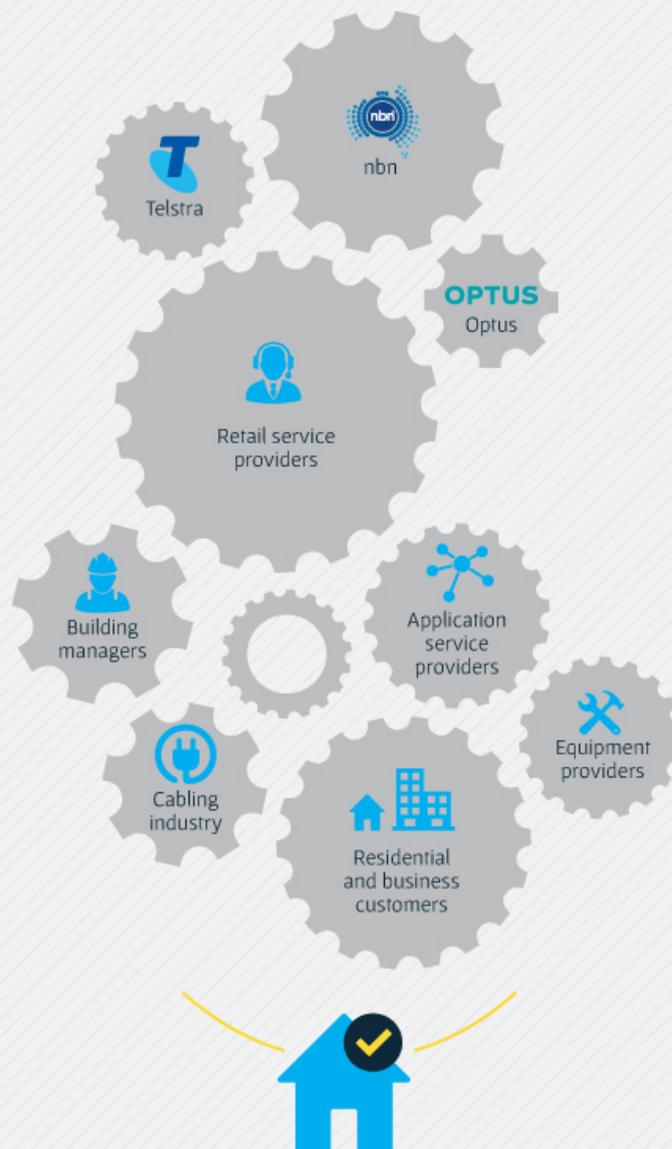
It is important that all parties are aware of their roles and responsibilities so that they can play their part in supporting a smooth migration experience for end users.

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Migration of services to the NBN

The NBN fixed line network, which will provide access to NBN services for the majority of Australian premises, is being rolled out across the country.

Once nbn declares an area to be Ready For Service (RFS), customers, whether households or businesses generally have 18 months to migrate their voice, broadband and over the top services to the NBN or alternative telecommunications network. This 18 month period is known as the migration window.

Most remaining broadband or telephone services on Telstra (i.e. copper local access networks) and Optus (hybrid fibre coaxial (HFC)) networks after the end of the respective migration window **will be** disconnected. The date on which this commences is known as the Disconnection Date. There are some very limited exceptions to this rule [2].

The end to end migration process involves multiple parties delivering interdependent activities or processes. All parties in that process need to be aware of their respective roles and responsibilities so that they fully understand and perform the actions required of them to facilitate the smooth migration of communications services.

A customer should not be expected to navigate the migration process. However, they need to take initial action as migration does not happen automatically. Working through their choice of retail service provider, customers will need to choose the services to migrate to the NBN or an alternative telecommunications network before they are disconnected from their existing host network.

Customers are encouraged to migrate their services to the NBN as early as possible in the migration window to ensure service continuity.

The telecommunications industry has the collective responsibility to work together and support households and business customers moving their services to the NBN with no or minimal disruption.

Role and principles of the Migration Assurance Framework

The Migration Assurance Framework (MAF) establishes principles that guide the migration process and sets out the agreed roles and responsibilities of all telecommunication industry parties for a seamless service transition to an NBN fixed line service for consumers and businesses.

The framework has been developed in close collaboration with the telecommunications industry.

Industry parties have agreed to apply the framework and work together to safeguard continuity of service. Industry have also agreed to a set of operating principles and have committed to:

* working closely to coordinate all industry led activities in the migration process so that it is seamless to the customer.
* accurate, timely and consistent information between all parties, to allow for transparency of any identified migration issues. nbn have agreed to work together with retail service providers to develop consistent customer communications messaging, relating to industry obligations including through their call centres.

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[2] For example, Special Services (mostly business data products) may not be subject to these migration rules. It is important for all business customers to discuss with their retail service provider which of their services may need to migrate ahead of disconnection. For more information on services to be disconnected refer to www.nbnco.com.au/connect-home-or-business/information-for-home/will-it-work-over-the-nbn/what-services-will-be-switched-off.html

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- encouraging early migration to enable service continuity for customers and assisting customers who wish to continue using fixed line services in the migration window to understand they need to initiate action to migrate to the NBN before the Disconnection Date.
- working together to manage the transition of all required services from the existing Telstra and Optus copper and HFC networks. These migration processes and solutions should provide a framework that allows for the management of unforeseen changes or challenges and allow for industry and customer driven solutions where possible.
- keeping informed on any new access technologies being introduced. nbn have agreed to provide wholesale products to retail service providers well before the migration window commences so that retail service providers can develop their own retail NBN-based products and services. nbn will also make available product technical specifications (including limitations) so retail service providers can evaluate the suitability for their services to be migrated.
- making available NBN products to customers as soon as practicable so that customers can migrate once an area is declared Ready For Service. If a retail service provider does not intend to provide services over the NBN, or provide capabilities to support existing over-the-top services, they have agreed this is to be communicated clearly to their customers in a timely manner to inform their choice.
- consistency with the broader regulatory and contractual framework, which includes Telstra's mandatory disconnection obligations.

It is important to note that Telstra's disconnection obligations currently only apply to the existing NBN fixed line access technologies (ie fibre to the premises (FTTP), fibre to the node (FTTN), fibre to the basement (FTTB), and HFC) as there are no mandatory disconnection for Telstra's fixed line networks in NBN fixed wireless and satellite footprints.

For the non-fixed line areas, Telstra will continue to offer a standard telephone voice service to a customer's premises under the current Universal Service Obligation[3].

The MAF is intended to drive active industry involvement without imposing undue costs or regulatory burden. However, if industry or parties in the end to end migration process are not adhering to their roles and responsibilities and this results in high instances of poor customer service or continuity concerns, the Australian Government may look to regulatory and legislative mechanisms to improve migration processes and the customer experience.

Updates to the Migration Assurance Framework

The MAF's predecessor, the Migration Assurance Policy (MAP) which focussed on migration in NBN FTTP areas, was released in February 2016 following extensive public and industry consultation to inform and refine the draft framework.

The migration experience for FTTP areas is now mature and operating with high customer satisfaction. Migration in the FTTB and FTTN areas commenced in March 2015 and September 2015 respectively with initial implementation challenges having been resolved. Migration in HFC areas began in June 2016. Learnings from these migrations have helped industry to continue to improve their processes and have also informed this updated MAF.

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[3] http://www.acma.gov.au/Industry/Telco/Carriers-and-service-providers/Obligations/universal-service-obligation-obligations-i-acma

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As the number of premises migrating to new NBN services per week continues to grow in 2018, nbn, retail service providers and other participants in the end to end process have committed to addressing new issues as they arise as part of a program of continuous improvement.

The migration process in FTTN and FTTB areas requires coordination between retail service providers and nbn as the current copper network must be cut-over to the NBN at the point of activation. Simply put, the two networks generally cannot operate in parallel. This means that the transition process must be closely managed to support service continuity to the customer and emphasises the importance on each party performing their roles and responsibilities identified in the MAF. The Communications Alliance has produced an industry guidance note on the migration to FTTB/N—*Comms Alliance Industry Guidance Note (IGN 008) NBN FTTB/N Migration Processes.*

The MAF recognises that there are already a range of commitments and obligations in relation to migration and disconnection which are implemented through regulatory, industry and commercial agreements such as Telstra's Migration Plan, the Definitive Agreements between nbn and Telstra, the Subscriber Agreement between nbn and Optus, nbn's Wholesale Broadband Agreement, Communications Alliance guidelines (Industry Guideline G652:2016 NBN Migration Management), and the Australian Consumer Law (Schedule 2 to the *Competition and Consumer Act 2010*) and other applicable legislation and instruments. The MAF does not seek to reproduce or modify those documents and obligations, but rather draws out elements of the migration process that are important for supporting service continuity. For the avoidance of doubt, the MAF does not amend Telstra's Migration Plan, the Definitive Agreements between nbn and Telstra, the Subscriber Agreement between nbn and Optus, or nbn's Wholesale Broadband Agreement.

The MAF will be updated as required over time, including to reflect further migration experience and any new learnings from the migration of premises serviced by nbn's fixed line access technologies, including NBN fibre to the curb (FTTC) technology. It will continue to be open to any part of industry to propose improvements to this framework.

2. Policy basis

Why is migration needed?

The Australian Government has committed to delivering high speed broadband to all Australian homes and businesses over the NBN by 2020. At the end of June 2017, nbn had reached the half way mark of the network rollout, passing 5.7 million premises.

Ubiquitous, fast broadband has the potential to unlock greater innovation and productivity across all sectors of the economy which makes timely completion of the network and seamless migration of services so vital. For consumers and businesses to reap the benefits of this national technology upgrade and the productivity advantages it can offer, their data and telephone services need to be migrated to the new network.

As the scale of the NBN rollout increases, there is a corresponding volume of residential and business premises that need to be migrated from the existing fixed line networks.

The process of migrating services to the NBN is initiated by customers choosing a retail service provider after considering a plan that suits their needs and placing an order for broadband and/or telephone services with the chosen retail service provider. Generally, once the NBN service is operational at a premises, the underlying local access network service is permanently disconnected shortly after. At the end of the 18 month migration window, Telstra is required to disconnect all remaining services as per its contractual arrangements with nbn.

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Service continuity for customers

Australians rely on their telephone and internet services for everyday activities.

Service continuity is paramount in the context of safety critical services such as medical alarms, monitored fire alarms, and lift phones, some of which may currently run over the top of telephony services in Telstra's and/ Optus' local access networks. Industry is responsible for the migration process and will take account of these services, and those who rely on them. Failure to migrate these services to the NBN or an alternative telecommunications network prior to their Disconnection Date may present risks to health, safety, or otherwise cause unnecessary disruption to the customer's everyday lives. As a result, industry parties involved in the migration process will work actively to facilitate migrations early in the migration window and well before the scheduled mandatory Disconnection Date recognising customers (or in some cases, building managers) must initiate migration. Users of safety-critical services should speak to their service providers and equipment providers for advice on migrating.

The successful migration of telecommunications services is also reliant on the customer understanding what actions must occur to complete the migration before their services are disconnected. nbn, retail service providers and, where relevant, application service providers are responsible for providing relevant information to customers to inform them of the disconnection process and risk, and the steps they need to take and when to successfully migrate their services. In some circumstances, this may be challenging for some customers. For this reason, the MAF also identifies types of customers who may need extra support to migrate before the Disconnection Date (see section 6.2).

The MAF is not intended to confuse the need for the customer to contact a retail service provider of their choice to place an order which commences the migration process to the NBN or to an alternative platform before the Disconnection Date. Similarly, any third-party service operating over the top of the former telephone service or the NBN remains the responsibility of the customer of that service.

3. Industry Information

The process of migrating services to the NBN is multifaceted and requires coordination between multiple parties in the end to end process. A successful migration process is therefore underpinned by two critical components:

a)   **A clear allocation of roles and responsibilities**

All parties involved in the migration process must be clear about their roles and responsibilities and play their part in the correct sequence. Ongoing co-operation, commitment and resources are required from all key stakeholders. The MAF outlines the high level roles of key players in the migration process.

b)   **Information sharing and data stability**

To support the migration and disconnection process, transparent arrangements relating to information flows, and access to reliable and consistent data, needs to be available and supported by industry. The flow of information between all industry parties in the end to end process should be, where possible, all-inclusive and allow for transparency of migration issues that are identified. All parties should aim to make shared data accurate, timely and fit for purpose.

The MAF outlines the key responsibilities each industry participant has in this regard. In particular, the sharing of data, while respecting confidentiality and privacy, will help facilitate the early and smooth migration of customers.

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The MAF's predecessor document, the MAP, outlined a number of new initiatives for improving information sharing between parties. These have since been implemented and include:

- Telstra is required under a carrier licence condition to provide nbn with its location identification data for all active Telstra local access wholesale services in nbn's Ready For Service regions, where the wholesale customer has not consented to Telstra providing this information. Active service data is now being provided to nbn on a consistent basis. This information assists nbn with managing the Medical Alarm Register and the Fire and Lift Register, and advising customers to migrate prior to the Disconnection Date.
- For the nbn Medical Alarm Register, most of the major monitored medical alarm application service providers have taken advantage of nbn's provision of a bulk-registration facility to provide data.
- nbn has provided a bulk-registration facility for monitored fire alarm and lift phone application service providers to provide data. Where nbn has received data containing the valid full national number (ten digit number including area code) of the related service, nbn has been able to complete the registration. Where nbn has not received data containing the valid full national number of the related service, it has been unable to complete the registration. nbn continues to encourage monitored fire alarm and lift phone application service providers, and building managers and owners to provide critical full national number information for related services.
- Telstra provides information to Telstra Wholesale customers on a best efforts basis, within a month of the last Ready For Service date in the month, regarding which premises are in nbn's fixed line footprint and may therefore be subject to disconnection. A list of services subject to managed disconnection is provided monthly by Telstra to its service provider customers from six months before the Disconnection Date so that service providers have clarity on which of their existing customers are subject to disconnection.

Once the two fundamentals of a clear allocation of roles and responsibilities and information sharing and data stability are in place, migration experience to date and feedback from stakeholders has shown that certain elements, or pillars, are required to support a successful migration process:

1. Serviceability
2. Product availability
3. Customer awareness and management
4. Installation and activation.

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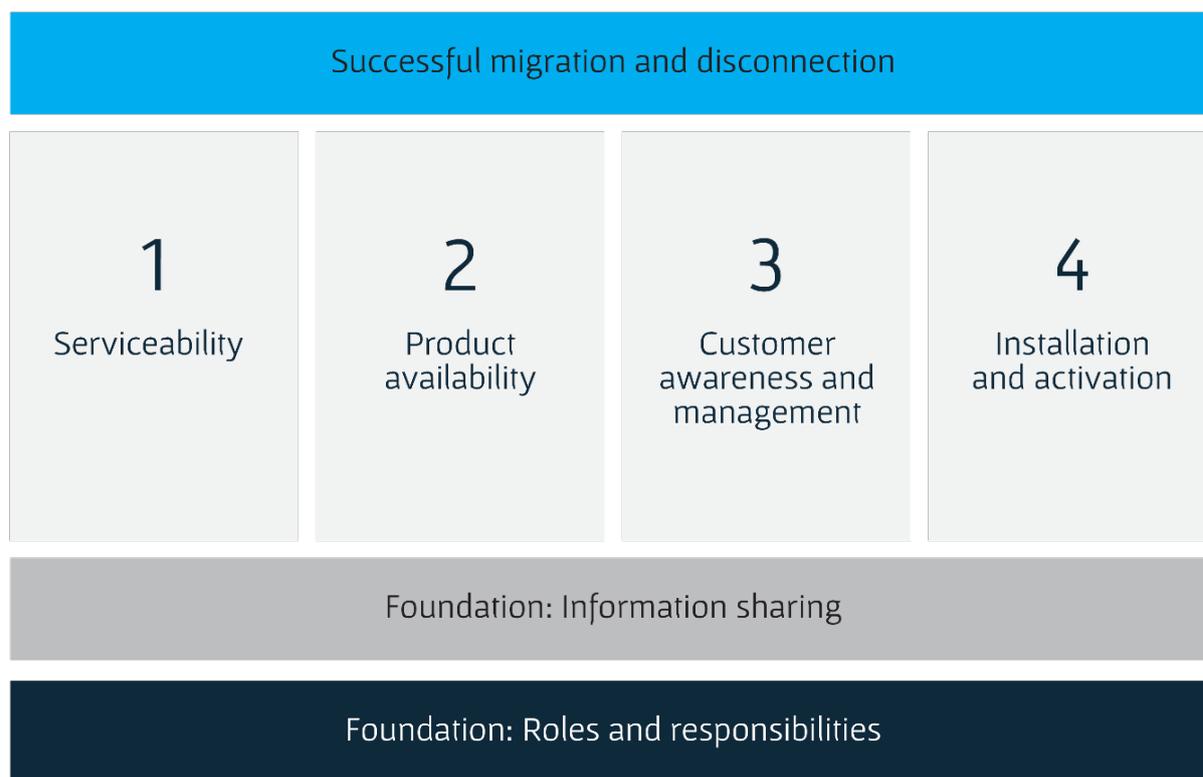
Pillar 1—Serviceability

The first pillar in the migration process is that there is an NBN service to migrate to. The NBN should be available at each premises in a fixed line rollout region at, or soon after, the Ready For Service date for the region. This allows the customer to place an order with a retail service provider and have the order completed within nbn's business as usual timeframes. Serviceability is a critical component in driving early migration of customers.

nbn uses a classification system to represent the status of the physical NBN infrastructure applicable to each premises (see Appendix A.vii). Premises that are classified as service class 0 (for FTTP areas), service class 10 (for FTTN and FTTB areas) or service class 20 (HFC areas) are located in NBN Ready For Service areas, but are currently not serviceable by NBN infrastructure. This means that customers and retail service providers are not yet able to order an NBN service.

nbn generally declares an area to be Ready For Service when at least 90 per cent of premises in its footprint in that area are passed. However, in early FTTP rollout regions, a significant proportion of these premises were classified service class 0, which led to a number of premises being unable to migrate to the NBN until late in the migration window. The proportion of non-serviceable premises in FTTP Ready For Service areas has significantly reduced. nbn is and will continue to focus on making the remaining service class 0 premises serviceable.

High numbers of non-serviceable premises are less likely in the FTTN and FTTB rollout as the vast majority of premises in these areas already have copper lead-in connections between the street pillar or nbn node and the premises.

nbn continuously addresses serviceability related issues both during and after the initial Ready For Service. nbn continues to optimise its serviceability processes with the goal of expediting the ability to order NBN services for serviceable customers and minimising the risk of poor customer experience.

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Within FTTN areas there is also a new capability to see the service class of specific copper pairs into a premises (i.e. if a premises has two copper lines, one may be at service class 11 and one may be at service class 12, for example). This is important for retail service providers as it enables them to select the right copper pair at time of ordering.

Premises that are not NBN serviceable (service class 0, 10 or 20) are exempted from Cease Sale rules under Telstra's Migration Plan. This means customers whose premises are not NBN serviceable can order a fixed line service that is delivered over Telstra's local access networks even after Cease Sale has commenced. However, once a customer's premises becomes serviceable within the migration window, they will still be required to migrate to the NBN or an alternative service before the Disconnection Date if they wish to maintain continuity of their fixed line services.

Pillar 2—Product availability

The second pillar in the migration process focuses on the development and release of suitable NBN-based products and services by nbn, retail service providers and application service providers to enable services to be migrated early in the migration window.

nbn provides wholesale layer 2 services that retail service providers can use as part of the network layer to create their own retail products and services over the NBN. These retail products need to be suitable for supporting the migration of existing Telstra and Optus local access network based voice and broadband services. nbn will make available the product technical specifications (including limitations) so retail service providers can evaluate the suitability for their services to be migrated.

To drive early migration, nbn, retail service providers and application service providers all need to have suitable products for residential and business customers (including Special Services where available), and associated processes, developed and available well before an area is declared Ready For Service.

In many cases, new products or processes need to be developed and tested prior to their delivery over the NBN. This includes the migration of over the top services such as monitored fire, security and medical alarms, lift phones, Tele Typewriters (TTYs), and payment services such as EFTPOS and ATMs. Business customers may also require the development of more complex product solutions.

Broadband services

The core NBN wholesale service provided to retail service providers is nbn's Ethernet Bitstream Service. This is a wholesale layer 2 service which provides Ethernet based connectivity between the customer's premises and a retail service provider's network interconnection at one of nbn's 121 Points of Interconnect.

The majority of retail service providers who offer services over the NBN use this connectivity to provide a high speed broadband service by combining their own higher layer services (e.g. email accounts, internet access etc.) to complete their retail offer.

Voice services

As part of nbn's Ethernet Bitstream Service offering for FTTP, FTTN, FTTB and HFC access technologies, nbn provides additional Ethernet Bitstream Service features to enable different quality of service options to be developed in retail service providers' retail products over the NBN. These features are called traffic classes, and an example is the use of traffic class 1 to provide a priority traffic treatment for priority traffic, such as voice. Traffic class 1 is prioritised over other traffic classes, enabling a voice call to continue uninterrupted even if a large volume of broadband traffic is also being downloaded or uploaded at the same time.

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Where nbn determines to service a premises using FTTP access technology, nbn provides a Network Termination Device (also known as an NTD or NBN Connection Box) which includes two UNI-V ports which have been provided to allow retail service providers to offer a voice service without the need for additional powered retail service provider equipment at the customer's premises. These UNI-V ports can only provide the voice service after a retail service provider configures the service to operate over the NBN network (e.g. dial tone, calling capability etc.).

For premises serviced by FTTN and FTTB access technologies, the NBN network boundary point is the first socket in the premises (in most FTTN instances) or the customer side of the main distribution frame (for premises serviced by FTTB technology and a small percentage of FTTN premises). As a result, the in-premises equipment is generally supplied by the retail service provider. Voice services over these technologies are provided by retail service providers via the retail service provider supplied or specified gateway device (premises in FTTN and FTTB areas do not have an NBN Connection Box). In some instances, a retail service provider's specified gateway device may also have analogue telephony ports so that the customer can use their existing analogue telephone handset.

For premises served by HFC, nbn provides a NTD with a single active UNI-D port. As a result, the additional in-premises equipment is generally supplied by the retail service provider. Voice services over HFC are provided by retail service providers via the retail service provider-supplied or specified gateway device. In some instances, a retail service provider's specified gateway device may also have analogue telephony ports so that the customer can use their existing analogue telephone handset.

The features and quality of the end to end voice service are dependent on the underlying NBN Layer 2 service and how the respective retail service provider has configured its higher layer voice network equipment as part of its retail offer.

Pillar 3—Customer awareness and management

The third pillar in the migration process focuses on customer activities that drive early migration by customers. Customers who have active fixed line telephone and broadband services need accurate, useful, consistent and timely information from all industry parties regarding the steps involved in migrating their services.

Customers in an NBN rollout region typically receive multiple communications from nbn and retail service providers, and in some cases application service providers and other organisations (such as equipment providers).

Customers who are impacted by the rollout require early and effective communication around the need to migrate existing fixed line services onto the NBN or to an alternative telecommunications network. Specifically, customers need to receive consistent, accurate and timely messages from nbn, their chosen retail service provider and their application service providers regarding the timing of migration and disconnection; the process involved in migration; potential impacts of migration (or disconnection, if they choose not to migrate) on their service and equipment, and updates from their retail service provider on the status of their NBN connection.

Customer information should be available in a range of forms e.g. verbally through customer service representatives, on company websites and via direct mail. This responds to the fact that various customer segments may differ in their preferred means of accessing information. nbn also provides customer awareness information and direct mail material via its Public Information on Migration program (see Appendix A.ii).

Some customers may require additional support in the migration process. To assist with this, the MAF sets out actions that should be taken by various parties engaged in the migration process (e.g.

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customers, medical alarm providers, application service providers, equipment providers, retail service providers, nbn, etc.). All of these actions, when taken together, are intended to ensure the customer is made aware, well before the Disconnection Date, of the need to migrate their services (including any medical alarm service), and the potential impacts of disconnection. This will help in ensuring early action is taken to migrate services that may be used to support a person's health or safety, and as a result minimise the risk of inadvertent disconnection for these customers.

It is important to note that once the Disconnection Date is reached and the managed disconnection period begins, most telecommunications services[4] of customers without a valid NBN order (including those supporting medical alarms, monitored fire alarms, lift phones, and those used by vulnerable customers) will be subject to service restriction and disconnection. This includes services that are registered on nbn's Medical Alarm Register or which are identified by Telstra as Priority Assistance customers.

A smooth migration process also requires appropriate avenues for customers to raise issues or queries if they encounter problems related to their retail service provider, or the connection and operation of their NBN service.

Customer focused and responsive complaint management protocols seek to provide customers with confidence in the migration process.

In the time since the MAF's predecessor document was released in February 2016, there has been significant progress and improvements in engaging customers in the migration process. These nbn actions include:

- National Community Relations Team continuing to work closely with community and peak industry body groups, with a number of additional groups being added as community partners
- Implementation of initiatives to engage better with customers with critical safety services, and
- Working with Telstra to reduce the number of Disconnection Dates per month, generally to one Disconnection Date per month. This assists in simplifying the migration process by enabling more centralised and efficient communication strategies by all parties involved in the migration process.

Retail service providers are also encouraged to support early migration by considering allowing customers with standard voice and internet services to migrate to the NBN without early termination charges for the migration.

Pillar 4—Installation and activation

The fourth pillar in the migration process focuses on the installation and activation activities that take place after a customer places an order.

nbn needs to provide accurate, consistent and timely rollout forecasts to the industry. This should result in more accurate and timely activation forecasts provided by retail service providers and will inform the community messaging with regard to the timing of nbn's network availability in an area, and encourage early migration.

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[4] There are a limited number of services that are exempt from mandatory disconnection, for more information on services to be disconnected refer to www.nbnco.com.au/connect-home-or-business/information-for-home/will-it-work-over-the-nbn/what-services-will-be-switched-off.html

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Providing adequate field workforce resources in Ready For Service areas and planning according to order volumes will contribute to the activation timeframe for services over the NBN being as short as possible, hence improving customers' migration experience.

This pillar also covers areas including the role of the cabling industry, disconnections in error, and measures to ensure service continuity.

For premises in FTTN and FTTB areas it is important for all parties to be aware that new in-premises equipment may be required (e.g. a gateway modem which is compatible with the NBN). Retail service providers are responsible for providing the equipment and ensuring it is installed correctly, either by the customer or a professional technician.

In most cases neither an nbn nor a retail service provider technician will visit the customer's premises to activate a service. Unless the customer requires assistance with installation, retail service providers need to ensure that customers are provided with tailored information as well as clear self-installation instructions.

nbn has continued to work with retail service providers to further refine migration processes to improve customer experience. These activities include:

- continuing to undertake initiatives to optimise its Delivery Partners' installation and activation capacity, and is liaising on those matters with retail service providers
- an ongoing commitment to process improvement by determining root causes of FTTN activation errors and to implementing improvement initiatives (such as a Fast Fix process for retail service providers to quickly escalate activation issues to nbn)
- an improvement to the Ready For Service forecast accuracy and increased its service class 2 and 12 thresholds. nbn and retail service providers communicate regularly about outgoing and incoming forecasts, and
- in circumstances where there is unusually high demand in an area, nbn may undertake communication activities to inform retail service providers and customers.

4. Roles and responsibilities of industry

Effective migration requires ongoing co-operation, information exchange and appropriate resourcing by all industry stakeholders. It is important that the telecommunications industry equipment providers and application service providers are aware of their respective roles and responsibilities in the migration process so that a customer receives seamless and effective migration to an NBN service.

Service continuity is paramount.

Industry have a shared responsibility to ensure the timely, effective and fair resolution of any disputes involving the migration of services to the NBN.

Respective roles and responsibilities are separated out into overarching responsibilities across all fixed line NBN technologies, and then into the responsibilities particular to each technology type. The majority of the responsibilities called out under the specific network types occur as a result of the different installation and activation requirements of that particular network access technology. For example, premises connected to the FTTP and HFC networks will have their NBN equipment installed inside and outside of the customer's premises. This means that migrations are reliant on a technician attending the customers' premises to install equipment both to connect the premises to the network and to activate services.

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For premises being connected to the FTTN and FTTB networks, there is no requirement for NBN equipment in the premises and as a result, the majority of connections will not require an nbn technician to access the premises, although residents and businesses need to test their services and confirm they have a working NBN connection at the time of activation or soon after.

The following sections identify the high level roles and responsibilities of each key stakeholder in the migration process:

- nbn
- Telstra (as disconnecting network provider)
- Optus (as disconnecting network provider)
- Telecommunications retail service providers
- Application service providers and equipment providers (including monitored medical alarm service providers and providers of unmonitored emergency dialler equipment, and providers of Tele Typewriters)
- Customers—residential and business
- Building managers (building owners, managers, bodies corporate)
- Cabling industry
- Telecommunications Industry Ombudsman (TIO).

Migration topic / Party	Pillar 1 Serviceability	Pillar 2 Product development	Pillar 3 Customer awareness	Pillar 3 Customer management	Pillar 4 Installation & activation
nbn	✔	✔	✔		✔
Telstra (as disconnecting network provider)			✔		
Optus (as disconnecting network provider)			✔		
Retail service providers		✔	✔	✔	✔
Application service providers		✔	✔	✔	✔
Equipment providers		✔	✔	✔	✔
Residential customers			✔		✔
Business customers			✔		✔
Building managers			✔	✔	✔

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4.1 NBN Co Limited (nbn)

nbn is responsible for:

- construction, operation and maintenance of the NBN
- supplying wholesale products
- working with retail service providers to install and activate services

Overarching roles and responsibilities

nbn is responsible for building, operating and maintaining the NBN, and therefore has a central role in facilitating migration. nbn's responsibilities include making premises serviceable, supplying wholesale products, working with retail service providers to activate and assure services, carrying out network repairs and maintenance, and communicating with customers about the network rollout and migration processes.

nbn responsibilities across all network technologies

Information sharing:

- provision and management of relevant data and information to key industry stakeholders, including with Telstra and Optus (as disconnecting network providers), application service providers and retail service providers, to facilitate the early migration of customers and prioritise service continuity
- key data flows are detailed in Appendix A.i under 'Key industry data flows to support migration', and
- working with retail service providers to identify and resolve issues during the migration process as they arise.

Serviceability:

- constructing, operating and maintaining the NBN
- maximising the number of serviceable premises at all sites, including complex sites, prior to the Ready For Service date to allow migration to occur as soon as possible
- making premises (including complex premises) that are not serviceable at the Ready For Service date serviceable in a timely manner, to allow migration to occur as soon as possible after the Ready for Service date
- proactively identifying and addressing serviceability constraints as soon as possible after Ready For Service
- making premises in Service Continuity Regions serviceable to allow migration to occur as soon as possible
- where nbn identifies that a premises has been incorrectly classified as serviceable more than one month, but less than six months out from its Disconnection Date, endeavouring to make the premises serviceable, and where this is not achieved, rolling back the premises to a non-serviceable service class, cancelling the retail service provider order and moving the premises into a Service Continuity Region
- high numbers of non-serviceable premises are less likely in the FTTN and FTTB rollout as nbn's network is linked to pre-existing copper wiring at the street pillar or in a building's communications room

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- informing retail service providers of changes in the access technology proposed to be used to connect a particular premises to the NBN
- providing accurate, timely and consistent network and service readiness information to retail service providers with whom nbn has a Wholesale Broadband Agreement
- making accurate information available to customers regarding the serviceability status of their premises
- providing retail service providers with certainty of the network footprint, to enable them to provide clear and accurate information to their customers well before the Disconnection Date about the actions they need to take to migrate, and
- providing commitments for enhanced service levels for priority assistance connections and priority assistance service assurance.

Product availability:

- ensuring timely release of suitable wholesale layer 2 products to facilitate development of retail products
- providing layer 2 wholesale products that allow retail service providers to add additional functionality
- making available the product technical specifications (including limitations) so retail service providers can evaluate the suitability for their services to be migrated
- hosting the Product Development Forum to enable appropriate stakeholder consultation on future product changes
- managing nbn's Industry Self-Test Facilities (informally known as plugbench) to enable application service providers and equipment providers to test compatibility of their equipment/devices over a range of retail service providers' services, and
- if nbn decides to make a commercial release of product functionality for a class of Special Services, progressively releasing White Papers to illustrate the capability of nbn's fixed line network technologies as suitable migration pathways for that class of Special Service.

Customer awareness and management:

- undertaking public and industry awareness and education activities to support migration through its Public Information on Migration campaign, including notifying customers of the need to migrate existing and compatible fixed line services to the NBN, and the impact of nbn's network availability on their fixed line services (see Appendix A.ii)
- working with community and peak industry body groups to seek input as part of a continuous improvement process focused on maximising service continuity and facilitating a seamless migration experience for customers
- providing information to customers that is instructive, clear in its purpose, and easy to understand
- providing customers with clear information regarding the operation of NBN-based services during a power outage
- providing information to business customers
- providing clear, consistent messaging templates for retail service providers and other industry participants to use when communicating to customers
- developing and implementing a process for communicating to customers about Special Services and the implications of disconnection and migration on those services including, where relevant, encouraging customers to talk to their retail service provider
- working closely with retail service providers to resolve issues and providing transparent, detailed information as to why these issues may have occurred

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- where a customer contacts nbn directly, answering their general network questions, and referring them to their retail service provider or their application service provider and/or equipment provider if the customer needs to discuss specific details of their retail service
- providing tailored communications to those customers that require additional assistance to migrate their services (see section 6.3), and
- working with the fire protection and lift maintenance industries to assist with the migration of safety critical services (see section 6.2).

Installation and activation:

- working with its wholesale customers to coordinate and sequence customer appointment times including where there may be delays in activations or appointment timekeeping
- undertaking serviceability and connection related activities (to the extent this is associated with an NBN connection, service or network element)
- working with its Delivery Partners to optimise field technician activation capacity requirements for each area released as Ready For Service
- working with Delivery Partners to optimise field technician training to competently complete technical work associated with equipment installation, service activations, and assurance activities
- coordinating fault rectification and assurance processes (to the extent this is associated with nbn's aspects of the network and service delivery)
- ensuring that NBN services are installed in a timeframe that enables responsible parties to migrate their services with minimal service disruption, and
- working with industry to continually improve processes and IT interfaces that facilitate seamless migration to the NBN.

Migration of monitored medical alarms and unmonitored emergency diallers:

- maintaining, promoting and managing the Medical Alarm Register, including:
  - offering the ability to register the details of a premises in which a medical alarm is located
  - maintaining that information until advised that the service has been migrated
  - providing Telstra with details of premises entered on the Medical Alarm Register so that the premises can be flagged as having a medical alarm present
  - updating (where possible) the information held on the Medical Alarm Register up to the point at which a service is migrated or disconnected
  - promoting customer awareness of the actions they need to take so that their medical alarms are successfully migrated to the NBN or an alternative telecommunications network early in the migration window and well in advance of the Disconnection Date, including:
    - providing information to customers, medical alarm service providers and medical alarm equipment suppliers about the impact of migration and disconnection of their services and the need to migrate early
    - encouraging customers to contact their monitored medical alarm service provider and retail service provider early in the migration window to reduce the likelihood of migration difficulties
    - advising customers with unmonitored emergency diallers to contact their equipment provider for advice on migration or alternative options
    - promoting registration on the Medical Alarm Register for all users and sellers of monitored medical alarms and unmonitored emergency diallers and notification to nbn (via their application service provider in most cases) when the service has been successfully migrated to another network so these services can be identified as such on the Medical Alarm Register

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- providing information to customers with services registered on the Medical Alarm Register regarding the steps required to migrate their monitored alarms or unmonitored emergency diallers where possible and if necessary, contacting individual customers who are registered on the Medical Alarm Register to provide information directly, and
- working with the monitored medical alarm industry on initiatives to support continuity of service for customers.

Migration of monitored fire alarm and lift phone services:

- managing the Fire and Lift Register, including encouraging the registration of the full national number (ten digit number including area code) and developing a process for retail service providers to advise nbn of the Unconditioned Local Loop Service 161 number (where relevant) over which the service operates and its associated building address
- participating in the Fire Alarm and Lift Phone Roundtable and its associated industry working groups
- promoting awareness of the impact of migration and disconnection on the customers' monitored fire alarm and lift phone services, including the action that needs to be taken to ensure those services are successfully migrated to suitable alternative services early in the migration window
- developing ways to provide information to building managers/owners, bodies corporate, lift maintenance providers, fire alarm monitoring companies and customers about the likely impact of migration and disconnection on their services, and the need to migrate early
- providing Telstra with regular and up to date Fire and Lift Register data feeds that contain the relevant full national number, Unconditioned Local Loop Service 161 number of the fire alarm and/or lift phone service
- encourage application service providers to update data on the Fire and Lift Register, and
- where relevant, ensuring that NBN services are installed in a timeframe that enables other parties to migrate monitored fire alarm and lift phone services without unreasonable service disruption.

Additional responsibilities for nbn at FTTP premises

Installation and activation:

- scheduling field technicians to perform external and internal installation of the premises connection device (also known as the NBN Utility Box) and the NBN Connection Box at the premises, and
- advising the retail service provider of scheduled installation dates and providing subsequent notification when services have been activated in nbn's network.

Additional responsibilities for nbn at FTTN and FTTB premises

Installation and activation:

- informing retail service providers of the timing of the service activation
- coordinating the timing of network transition to maximise service continuity
- promoting service continuity for services operating on Telstra's local access networks during the migration window (following asset transfer).

Customer awareness and management:

- working with retail service providers to improve communications to customers about the migration processes, including in relation to expected disruptions to services and customers' participation in installation and activation processes
- working with retail service providers to ensure that customers are aware if they need to be in attendance for cut-over appointments, and

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- providing customers with clear information regarding the operation of NBN-based services in a power outage.

Additional responsibilities for nbn at HFC premises

Installation and activation:

- scheduling field technicians to perform external and internal installation of the premises connection device (also known as the NBN Utility Box) and the NBN wall plate/HFC NTD at the premises
- advising the retail service provider of scheduled installation dates and providing subsequent notification when services have been activated in nbn's network, and

Customer awareness and management:

- educating customers on the multiple HFC/Pay TV configurations that exist in their premises and how the nbn installation may affect their existing services, including that if the same HFC lead in is used for the NBN and legacy services (broadband/Foxtel), the services will be provided in parallel.

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4.2 Telstra (as disconnecting network provider)

Telstra (as disconnecting network provider) is responsible for:

- progressively disconnecting its local access networks
- sharing wholesale customer information with nbn and Telstra Wholesale customers
- working with nbn, Telstra Operations and Telstra Wholesale customers on the continued implementation of the disconnection framework

Overarching roles and responsibilities

As the disconnecting network provider, Telstra is responsible for progressively disconnecting its local access networks in NBN fixed line rollout regions as services are migrated or cancelled and for disconnecting remaining active services at the end of the migration window in line with its regulatory obligations.

Telstra has worked cooperatively with nbn to develop a disconnection framework that enables retail service providers and application service providers to support service continuity for their customers during the migration and disconnection processes. Telstra is working in cooperation with nbn and retail service providers on the continued implementation of this framework.

Telstra responsibilities across all network technologies

General:

- disconnecting remaining active services on Telstra's local access networks at the end of the migration window
- working with nbn on the continued implementation of the disconnection framework, and
- reconnecting a service when a disconnection has occurred in error (based on current business as usual processes).

Information sharing:

- sharing data and information (key data flows are detailed in Appendix A.i under 'Key industry data flows to support migration') with nbn and Telstra Wholesale customers, to facilitate the early migration of customers and prioritise service continuity, including:
  - making available to Telstra Wholesale customers and Telstra Retail, information which is directly related to the disconnection of their services or networks as a consequence of the migration
  - providing information to Telstra Wholesale customers regarding which premises are in nbn's fixed line Ready For Service footprint and may therefore be subject to disconnection
  - disseminating the location of eligible monitored fire alarm and lift phone services that have been identified on nbn's Fire and Lift Register to retail service providers and nbn from six months before the Disconnection Date
- informing Telstra Wholesale Unconditioned Local Loop Service customers of the process nbn has established to identify fire alarm and lift phone services supplied over a Unconditioned Local Loop Service, to assist them in obtaining the benefit of deferred disconnection, and in support of nbn's ongoing migration assistance thereafter
- the disconnection information referred to above is updated monthly (on a best efforts basis) from six months before the Disconnection Date, so that retail service providers have clarity on which of

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their existing customers are subject to disconnection and can then assist these customers to migrate and understand the implications of disconnection, and

- pursuant to a Carrier Licence Condition, Telstra is required to provide nbn with its location identification data for all active Telstra local access wholesale services, subject to disconnection at the respective Disconnection Date, in nbn's Ready For Service regions from six months before the Disconnection Date, where the wholesale customer has not consented to Telstra providing this information.

Migration of monitored medical alarms and unmonitored emergency diallers:

- flagging to Telstra Retail, and Telstra Wholesale customers the premises that nbn advises are on the Medical Alarm Register from six months before the Disconnection Date until the premises has been disconnected or successfully migrated to the NBN or an alternative telecommunications network
- updating that information, as advised by nbn, until the service has been successfully migrated or disconnected from Telstra's local access network, and
- before processing a business as usual disconnection request during the migration window, using best endeavours to check with a Telstra Wholesale customer submitting a disconnection request for a service that is flagged as having a medical alarm that the disconnection of the service should occur if the If the Telstra Wholesale customer consents to the disconnection or does not respond, Telstra may proceed with the disconnection request.

Migration of monitored fire alarm and lift phone services:

- participating in the Fire Alarm and Lift Phone Roundtable and its associated industry working groups
- flagging in its systems and data interfaces and providing to nbn the premises that correspond to the full national numbers or Unconditioned Local Loop Service 161 numbers that nbn has notified to Telstra so that they can be subject to deferred disconnection and in support of nbn's ongoing migration assistance thereafter
- disconnecting its local access network services after the Disconnection Date in accordance with its Migration Plan obligations, noting that a temporary extension applies to eligible monitored fire alarm and lift phone services that are notified to Telstra by nbn as being registered with nbn on the Fire and Lift Register with the relevant service details (including the full national number or Unconditioned Local Loop Service 161 number, as applicable) and therefore exempt from managed disconnection until after 30 June 2017
- before processing a business as usual disconnection request during the migration window, in relation to any registered monitored fire alarm or lift phone service notified by nbn, using reasonable endeavours to check with a retail or wholesale customer submitting that disconnection request that disconnection of the service should occur, and
- assisting nbn with development of processes to improve identification of fire and lift services including reconciling addresses, service data, network and customer data as applicable.

Additional responsibilities for Telstra at FTTN and FTTB premises:

- disconnecting relevant Telstra local access network services and products upon receipt of nbn notification of the successful transition of a service to the NBN, in accordance with *Communications Alliance Industry Guidance Note (IGN008) NBN FTTB/N Migration Processes*.

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4.3 Optus (as disconnecting HFC network provider)

Optus (as disconnecting HFC network provider), is responsible for:

- progressively disconnecting its HFC network as services are migrated to the NBN or as customers make an informed choice not to migrate to the NBN
- working with nbn to support service continuity during the migration process.

Overarching roles and responsibilities

As a disconnecting network provider, Optus is responsible for progressively disconnecting its HFC network in line with the obligations in its Subscriber Agreement with nbn.

Optus responsibilities across all network technologies

General:

- disconnecting remaining active services on its network at the end of the migration window
- providing customers with sufficient time to migrate to their services within the relevant migration window
- working with nbn to develop and implement migration processes that support service continuity for customers as they migrate to the NBN, and
- reconnecting a service when a disconnection has occurred in error.

Information sharing:

- sharing data and information with nbn, to facilitate the early migration of customers and prioritise service continuity, and
- working with nbn and the rest of industry to identify and resolve issues during the migration process as these arise.

Customer awareness and management:

- providing customers with clear and explicit information regarding the disconnection of their services on Optus' HFC network and the steps they need to take to migrate their services
- ensuring that communications to customers regarding the general migration process to the NBN and disconnection of Optus's HFC network align with nbn messages, and
- if requested, advising customers to contact their over the top service provider about migration options to ensure that their medical alarms, unmonitored emergency diallers, monitored fire alarms or lift phone services are migrated on to the NBN or alternative telecommunications networks before disconnection of the legacy HFC network service(s).

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4.4 Telecommunications retail service providers

Retail service providers are responsible for:

- the direct service relationship with the customer
- purchasing wholesale NBN services, adding additional functionality and packaging these services for sale to customers
- working with nbn to facilitate installation and activation of NBN services
- ensuring customers have suitable in-premises equipment in place that is compatible with the NBN at the time of migration
- liaising with customers to coordinate the migration process and provide migration advice to customers

Overarching roles and responsibilities

Retail service providers have a direct service relationship with customers. Retail service providers purchase wholesale NBN services, and then add additional functionality (above layer 2) to package the services for sale to the customer.

Retail service providers are the connecting factor between the wholesale network provider and the customer, and as a result play a critical three-fold role in the migration process. Their first role is to design and sell retail product offerings; the second being to assist customers with selection of a retail product to meet customer needs and working with nbn to arrange installation and activation of the NBN access service; and the third important role is to liaise with their customers to provide general migration information as well as premises/customer specific advice relating to the migration of services, and to coordinate the customer's participation in the migration process.

Retail service providers are the first point of contact for customers after an order has been placed for an NBN service to address a query about the service or to resolve complaints.

The effectiveness with which retail service providers discharge their roles and responsibilities will have a significant impact on the customer's migration experience.

Retail service provider responsibilities across all network technologies

Information sharing:

- sharing data and information with nbn and Telstra (as disconnecting network provider), to facilitate the early migration of customers and prioritise service continuity (key data flows are detailed in Appendix A.i under 'Key industry data flows to support migration')
- if the retail service provider acquires Unconditioned Local Loop Service from Telstra, promptly providing nbn with the Unconditioned Local Loop Service 161 numbers and their associated full national numbers (ten digit number including area code) that are facing disconnection, so nbn can data match the full national numbers with any full national numbers on its Fire and Lift Register
- working with nbn and the rest of industry to identify and resolve issues during the migration process as these arise, and
- working with nbn to develop and improve business-to-business interfaces that improve order and assurance system clarity for all parties.

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Product availability:

- considering the release dates of nbn's wholesale products in their business planning
- developing and releasing retail products and services (over the NBN or other networks), so that customers can migrate early in the migration window
- making their services available in nbn's Industry Self-Test Facilities so that application service providers can test the compatibility of equipment/devices
- if a retail service provider does not intend to provide services over the NBN, communicating this to customers in a timely manner so that those customers can make an informed decision with regard to alternative providers and/or products and services
- timely development of products for Special Services (if nbn has a white paper in relation to that Special Service) to facilitate these services migrating as early as possible in their migration window, and
- participating in the nbn Product Development Forum.

Customer awareness:

Retail service providers provide important information to customers and it should be:

- easy to understand, is not ambiguous or misleading and avoids the use of acronyms and technical jargon
- on retail service packages that the customer can purchase, including the customer's choice of retail service providers, and also including the various speed tiers available
- about broadband speeds available to customers during sales processes and on their websites to help customers to compare plans and identify how various applications will perform
- consistent with the Australian Competition and Consumer Commission's (ACCC's) six principles to guide best practice marketing of broadband speeds
- clear on the need to move to the NBN, or alternative telecommunications networks, at the commencement of the migration window (or earlier)
- clear on the likely impact of migration from and disconnection of Telstra's or Optus' local access networks on their products and services
- inclusive of details of the various ordering-to-activation steps the customer needs to take to reduce the likelihood of service disruption where possible, and
- clear on how Cease Sale provisions will impact the future availability of retail services over the Telstra local access network when a customer is directly impacted by this provision.

Additionally responsible for:

- obtaining information from customers to identify all telecommunications services it supplies at the customer's premises that need to be migrated
- making endeavours to identify their business customers with complex migration needs (e.g. businesses with multiple services, Special Services, PABX systems) and engaging with them early in the migration window so that they can plan ahead for migration, including for the costs involved
- first point of contact for customer queries and resolution of complaints once an order is placed
- providing existing customers with information about the product options they offer to migrate to and making this information available to potential new customers; this information should include:
  - the differences between the services currently in use and the new services over the NBN, particularly for voice-only customers who may not be familiar with the functionality of voice over internet protocol (VoIP) services

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- processes for porting existing landline numbers, including typical lead times for porting requests
- the availability (or not) of priority assistance services
- availability of enhanced call handling features including call waiting, call forwarding, call barring, and privacy protection measures such as calling number display and calling number display blocking
- any common requirement for new or different customer in-premises equipment, such as gateways, modems or routers
- any common requirement for upgrades to internal wiring or a non-standard installation
- advice about the likelihood that pre-existing telephone sockets will be inoperable after migrating services to the NBN, and the need for re-wiring to re-establish additional working outlets
- the effect of a power outage on the operation of services they provide over the NBN, including the operation of retail service provider-supplied in-premises equipment (e.g. gateways, modems)
- providing advice specific to the customer's service needs and premises requirements, at the time of placing an order for a service over the NBN, with regard to:
  - the migration window timeframe of 18 months following Ready For Service being declared
  - requirements associated with the porting (keeping) of their existing telephone number
  - checking if the customer has any over the top services and advising the customer to take steps to migrate these services, or establish alternative services if applicable, including advising the customer to contact their application service provider or equipment provider
  - if additional internal wiring work is required at the customer's premises, arranging to undertake the wiring work/or advising the customer to organise the upgrading of wiring
  - if new in-premises equipment is required
  - if self-installation of retail service provider provided equipment is required, and the types of actions the customer is required to undertake as part of that installation, so that the customer can assess if they are capable of undertaking the self-installation
  - advising of alternatives to self-installation if the customer is not able to undertake the required steps
- advising the customer about the process involved in migrating services to the NBN, including:
  - the Disconnection Date for the customer's premises
  - the process for fulfilling an order and the likely timeframe
- informing the customer of equipment installation and service activation times
- scheduling appointments for technician visits (as necessary) and advise customer of any scheduling changes
- confirming the customer has the necessary customer premises equipment, and if not, providing the equipment as necessary
- notify the customer (as necessary) of the need to be present for an installation or activation appointment
- notify the customer of any expected service outages to be experienced as part of the standard migration process
- for customers choosing to self-install modems, providing clear information, including:
  - user friendly instructions on how to install the in-premises equipment
  - advice on the timing as to when the customer is required to undertake the self-installation
  - instructions on troubleshooting or how to seek assistance from the retail service provider if self-installation issues arise

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- resolving any billing, account management or service performance issues impacted by migration with customers, and
- where relevant, working with nbn to resolve any customer complaints that are related to nbn's wholesale network.

Installation and activation:

- migrating customers' telecommunications service(s) to the NBN or an alternative telecommunications network, as agreed with the customer
- ensuring that any retail service provider supplied in-premises equipment (e.g. gateways, modem) is delivered to the customer at or prior to the installation and activation of the NBN service
- working with nbn to coordinate and sequence customer appointment times where required
- informing customers of progress, including issues or delays, relating to their NBN order
- once nbn has notified activation of nbn network, testing the service to confirm it is operational and ready for consumer use
- working with nbn and other industry stakeholders, such as other retail service providers and application service providers, to migrate customers, to support continuity of service
- communicating with customers in relation to appointment times, including where nbn has advised that fulfilment times are impacted by high demand
- working with Telstra or Optus to coordinate the disconnection of existing local access network based services as per business as usual processes once a customer's service has been migrated to the NBN, and confirmed as working; or the customer has confirmed they will be transitioning their services to an alternative network (e.g. mobile)
- fault rectification and assurance processes (to the extent this is associated with retail service provider aspects of the network and service delivery), including:
    - liaising with nbn to resolve any issues a customer may have relating to the order, installation and activation of their NBN service
    - liaising with Telstra to resolve any issues a customer may have relating to disconnection in error
    - keeping customers updated regarding any migration delays or unexpected service disruptions that directly impact on their services

Migration of priority assistance customers:

- for retail service providers that offer priority assistance services:
    - notifying priority assistance customers of the likely impacts that the migration may have on their services, including that failure to migrate will result in the service being disconnected
    - notifying priority assistance customers who migrate to the NBN of any differences in the replacement services, and
- advising customers who request a priority assistance service whether they offer these services, and if not, advising them of retail service providers that do offer this service.

Migration of monitored medical alarms and unmonitored emergency diallers:

- advising their residential customers about the impact migration may have on medical alarms, including:
    - that failure to migrate may result in service disruption as the Telstra local access network service will be disconnected
    - advising customers that their medical alarm may not work once their telecommunication services are migrated to the NBN

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- advising customers to make arrangements that ensure their medical alarm will continue to operate after migration
- where the customer indicates they are using a monitored medical alarm, informing the customer to register their device on nbn's Medical Alarm Register and contact their medical alarm service provider to ensure that the device will continue to operate after migration
- where the customer indicates they are using an unmonitored emergency dialler, informing the customer to register their device on nbn's Medical Alarm Register and contact their equipment provider to seek advice on how best to ensure service continuity and available alternatives.

Migration of monitored fire alarms and lift phones:

- participating in the Fire Alarm and Lift Phone Roundtable and its associated industry working groups
- advising customers about the impact migration may have on any monitored fire alarm or lift phone service they may have, including:
  - that failure to migrate may result in service being disconnected when the existing local access network line over which it operates is disconnected
  - informing customers to register their monitored fire alarm and lift phone service on nbn's Fire and Lift Register (or encouraging the building manager to register any monitored fire alarm or lift phone service they may have on nbn's Fire and Lift Register) as early as possible
  - informing the customer to contact their application service provider to ensure their monitored fire alarm or lift phone service will continue to operate following migration
- if the retail service provider becomes aware of or suspects the existence of a monitored fire alarm or lift phone service, refer their customer to the Migration of Monitored Fire Alarms and Lift Phone Services Good Practice Guide [5] and encourage registration of the relevant service information (including either full national number or Unconditioned Local Loop Service 161) on nbn's Fire and Lift Register, and
- if requested, assisting their customers to migrate their monitored fire alarm and lift phone services well before disconnection.

Additional responsibilities for retail service providers at FTTP premises

Customer awareness and management:

The technical requirements of the FTTP network mean that NBN equipment is installed outside and inside the customer's premises. As a result, retail service providers are responsible for informing customers:

- of the installation and activation processes, including how to prepare for the install, placement of the in-premises NBN Connection Box and other customer in-premises equipment (which may include retail service provider supplied equipment (e.g. gateway, modem))
- that the ability to make or receive calls during a power outage, including to an emergency service number, depends on whether a battery backup is supplied to the customer's premises and how their voice service is configured

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[5] www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide

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- whether they offer battery backup, before accepting an order to supply an FTTP service to that customer, and
- what an nbn-supplied battery backup power unit would (and would not) do during a power failure, including the estimated period of time backup power would enable the service to operate, and that powered customer equipment and retail service provider equipment (e.g. gateway, modem) will not operate during a power failure unless it has its own backup power supply (further information is at section 5).

Additional responsibilities for retail service providers at FTTN and FTTB premises

Installation and activation:

Transferring services from Telstra's local access network to the NBN FTTN or FTTB networks involves migrating services over a single copper path. As a result, the customer will experience a disruption to their services when the cut-over work is undertaken at the pillar and node in the street, or in the premises. Retail service providers should:

- consider appropriate safety nets and optimise their processes to maximise service continuity for customers at the time of transfer from the existing network to the new network, and
- obtain their customers' consent via a Customer Authorisation in line with relevant industry guidelines.

Customer awareness and management:

The technical requirements of the FTTN and FTTB networks mean that there is more variation in the customer in-premises equipment, and, as a result, retail service providers need to tailor their customer information and assistance to their specific customers. This includes:

- informing customers of the installation and activation processes and associated requirements, including whether the customer is likely to see the technician undertaking the network cut-over work and whether they need to be in attendance at the time of activation
- advising customers of expected service outages during the transition of their services to the NBN, including the expected duration of the outage
- checking that retail service provider supplied in-premises equipment (e.g. gateway, modem), or customer supplied equipment has been delivered and is properly installed prior to the planned service cut-over date
- notifying customers when the migration of their service to the NBN has occurred and advising customers to test their services and notify their retail service provider immediately if services are not working.

Additional responsibilities for retail service providers at HFC premises

Customer awareness and management:

The technical requirements of the HFC network mean that NBN equipment is installed inside the customer's premises (also known as the NBN Utility Box) and the NBN wall plate/HFC NTD. As a result, retail service providers are responsible for informing customers:

- of the installation and activation processes, including how to prepare for the install, placement of the in-premises NBN Connection Box and other customer in-premises equipment (which may include retail service provider supplied equipment (e.g. gateway, modem))
- when the migration of their service to the NBN has occurred and advising customers to test their services and make contact with their retail service provider if services are not working, and

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- of the need to include a splitter as part of the in-premises equipment if there is also a Pay TV service, and the associated connection instructions (where required).

In the event of a delay to the activation of the nbn HFC services, retail service providers should work with the relevant network providers and nbn to delay disconnection of the legacy service to minimise disruption and promote service continuity wherever possible.

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4.5 Over the top service providers

4.5.1 Application service providers
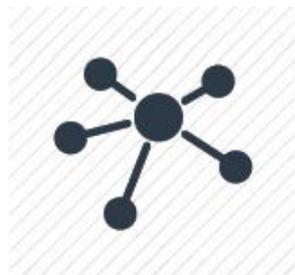
Application service providers operate over the top services such as:

- security, monitored medical and monitored fire alarms
- lift phones
- payment services

Application service providers are responsible for:

- informing customers of the potential impact of migration on their services
- assisting their customers in migrating application services to the NBN or alternative telecommunications networks including activities to support continuity of service
- having products available or sourcing products for migration to the NBN or an alternative network

Overarching roles and responsibilities

Application service providers operate over the top services such as security alarms, medical alarms, fire alarms, lift phones, and payment services (EFTPOS and ATMs), and play an important role in facilitating the migration of such services.

Further information about specific arrangements for the migration of medical alarms (including both monitored medical alarms and unmonitored emergency diallers), monitored fire alarms, and lift phones can be found in section 6.

Application service provider responsibilities across all network technologies

General:

- participating in relevant working committees, for example the Fire Alarm and Lift Phone Roundtable and its associated industry working groups, and
- considering which migration option is best suited to their service or application; this could be NBN-based or an alternative telecommunications network.

Product availability:

- having products available, or sourcing products, for the migration of their services to the NBN or an alternative telecommunications network
- testing their applications and devices at nbn's Industry Self-Test Facilities (informally known as plugbench) to ensure they work on retail service provider retail products delivered over the NBN (where relevant), and
- sourcing replacement products and arranging appropriate migration solutions to use depending on the technology available and providing customers with information based on technology available to them.

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Customer awareness and management:

- developing proactive messaging to customers about migration
- informing their own customers about the impact of migration and disconnection on their services and premises, including clear information on any additional costs (e.g. new customer premises equipment) and what steps the customer may need to take in relation to the service (such as migration options, registration on nbn's Medical Alarm or Fire and Lift Register (if applicable) etc.), and
- any billing, account management or other relationship issues associated with their own customers.

Installation and activation:

- proactively identifying and migrating their customers' over the top services to the NBN, or alternative telecommunications networks, within the 18 month migration window
- coordinating activities with nbn and other industry stakeholders to support continuity of application services
- undertaking any installation, or upgrading of wiring or customer premises equipment, associated with migration of their customers (or customer premises)
  - where an application service provider chooses not to provide this service option, then the application service provider is responsible for timely and clear communication of the requirements of their equipment and how a customer may be able to get their in-premises wiring upgraded (if required), or provide information on alternative products that offer similar functionality without re-wiring, and
- having arrangements in place to test customer devices and applications promptly after migration has taken place.

Role of monitored fire alarm and lift service providers

In addition to the application service provider responsibilities across all technologies as outlined above, monitored fire alarm and lift service providers are responsible for:

General:

- participating in the Fire Alarm and Lift Phone Roundtable and its associated industry working groups, and
- where possible, following the Migration of Monitored Fire Alarms and Lift Phone Services Good Practice Guide[6].

Information sharing:

- registering accurate details of all monitored fire alarm and lift phone services they provide on nbn's Fire and Lift Register (see section 6.2). This includes:
  - providing the full national number (ten digit number including area code) for the service
  - providing the building manager contact details for the service
  - keeping registered information up to date
  - providing confirmation to nbn when the service has been successfully migrated, and
- working with nbn to refine data on the Fire and Lift Register, as required.

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[6] www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide

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Customer awareness and management:

- Working with their respective customers to manage the migration of those customers' services in a way that supports service continuity. This is particularly important in circumstances where an application service provider decides not to provide data for the Fire and Lift Register or participate in the framework provided under the Fire Alarm and Lift Phone Roundtable and its industry working groups.
- Where the customer's preferred migration path is an alternative telecommunications network to NBN, encourage early planning of migration (whether Ready For Service or not).
- Proactively informing their customers (including building managers) of the need to take action early in the migration window.
- Advising their customers whether their monitored fire alarm or lift phone services will operate during a power outage once migrated (either to the NBN or an alternative telecommunications network).
- Developing processes and communications for managing customer enquiries about migrating services.
- Providing clear information to customers about what technical options are available for migrating their service and what is required for each option, including upgraded equipment, installation processes, and any associated costs.
- Assisting their customer in finding an alternative, workable solution to their existing monitored fire alarm or lift phone service, where requested.

Installation and activation:

- Developing migration pathways for the ongoing operation of monitored fire alarm and lift phone services.
- Developing and implementing transition plans for migrating their customers' services to support service continuity.
- Where they have been advised that a service has migrated, performing tests to ensure that the monitored fire alarm or lift phone service is operable on the NBN platform. This includes developing adequate contingency plans in case of device or service failure.

Role of medical alarm service providers

In addition to the application service provider responsibilities across all technologies outlined above, the following also apply to medical alarm service providers:

General:

- Working with nbn on initiatives to support service continuity for customers with medical alarms.

Information sharing:

- With the customer's agreement, registering their customers on nbn's Medical Alarm Register as early as possible, including providing the relevant contact details for the service, and keeping that information up to date (including confirming a successful migration of the service to an alternative network so the Medical Alarm Register can be updated).

Product availability:

- Developing products suitable for retail service providers' NBN-based services or alternative telecommunications networks.

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Customer awareness and management:

- advising their customers who are in an area where the NBN has become, or is about to become, available of the need to take action early in the migration window to ensure their medical alarm service continues to operate following disconnection
- advising their customers how their medical alarm will operate during a power outage once migrated (either to the NBN or an alternative telecommunications network)
- if requested, assisting their customers in finding an alternative, workable solution to their existing safety critical services, and
- where data has not been provided to nbn, working with their respective customers to manage the migration of their services in a way that supports service continuity.

Installation and activation:

- performing tests to ensure that their devices and services continue to work after migration takes place, and developing contingency plans in case of device or service failure.

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4.5.2 Equipment providers

Equipment providers operate over the top services such as unmonitored emergency dialler equipment or auto diallers, or tele typewriters.

Equipment providers are responsible for:

- accurately informing customers on the operation of their equipment over the NBN and of the potential impact of migration on their services (including during a power outage)
- having products available or sourcing products for migration to the NBN or an alternative network

Role of all providers of equipment used over telecommunications services

Product availability:

- developing products suitable for retail service providers' NBN-based services, including performing tests to ensure their devices and services operate over retail service provider voice or data services provided through the NBN access networks.

Customer awareness and management:

- advising customers if their products will continue to operate over retail service provider voice or data services provided over the NBN, and working with their customers to find alternative solutions if their products will not operate following migration
- assisting their customers in making timely decisions on what to do with their equipment when migrating to the NBN, in order to promote service continuity, and
- proactively providing accurate information to their customers regarding how their services and/or equipment will operate in the event of a power outage if used on the NBN platform (for further information see section 5).

Role of suppliers of unmonitored emergency dialler equipment

Product availability:

- developing products suitable for retail service providers' NBN-based services or alternative telecommunications networks, including performing tests to ensure their devices and services continue to work after migration takes place, and develop adequate contingency plans in case of device or service failure.

Customer awareness and management:

- advising customers if their products will continue to operate over the NBN and working with them to find alternative solutions if their products will not operate following migration
- advising customers to register their medical alarm service on nbn's Medical Alarm Register as early as possible
- if a provider of unmonitored emergency dialler equipment retains customer records, contacting customers to advise them that they need to take action early in the migration window to ensure their medical alarm service continues to operate following migration, and
- ensuring their customers are aware of how their services and/or equipment will operate in the event of a power outage (further information see section 5).

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4.6 Customers

4.6.1 Residential customers

Residential customers will need to:

- inform themselves of the need to migrate their telecommunications services and identifying upgrades or special equipment needed
- selecting the NBN services that will meet their needs
- placing an NBN order with their choice of retail service provider and working with that provider to ensure their services work after they have been migrated

Overarching roles and responsibilities:

Migration does not happen automatically and successful migration of telecommunication services is reliant on customers initiating the migration process for services at their premises. All customers are responsible for placing an order with their preferred retail service provider early in the migration window, following any instructions given by their service provider(s) and working with their service provider to ensure their services work after they have been migrated.

Residential customer responsibilities across all network technologies

Customer awareness and management:

Industry participants in the migration process play an important role in assisting customers to be informed. Customers should not be expected to navigate the migration process, however, they need to be sufficiently informed to take initial action as migration does not happen automatically.

Customers should be able to seek or access the following to be informed:

- migration information provided by nbn, retail service providers, application service providers and other organisations, and understanding when the network is available in their area and when their existing services will be disconnected
- information about the migration processes and service features available at their premises
- Information to select a retail service provider to meet their needs (including offers the appropriate level of support (e.g. priority assistance and/or professional gateway/modem installation)
- understanding of what to do if they have a monitored medical or security alarm or unmonitored emergency dialler, or tele typewriter and need to work with their application service provider or equipment provider to migrate the service ahead of the Disconnection Date
- by their equipment provider if they have an unmonitored emergency dialler to understand whether their device will continue to operate over the NBN after migration, and to seek information on alternative solutions if it will not, and
- information on how telecommunications services provided over the NBN are expected to operate during a power outage, and considering maintaining an alternative communications technology, such as a charged mobile phone.

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Ordering services:

The customer should not be expected to navigate the migration process and deal with separate providers in the end to end process. However, they need to take initial action as migration does not happen automatically. Customers will need to:

- place an order with their preferred retail service provider and ideally, early in the migration window
- discuss their voice and broadband requirements with their retail service provider to ensure the NBN-based service they select meets their needs
- advise their retail service provider if they would like to keep their existing telephone number for any voice services, and
- advise their retail services provider if they have enhanced call handling features (e.g. call waiting, call forwarding, call barring or if they require number display and/or calling number display blocking to continue on their migrated service.

Installation and activation:

The customer has a role in the installation process including:

- being available or attending a scheduled nbn, retail service provider and application service provider appointments, as required
- understanding that there may be a small interruption to their service during the migration as their service is migrated to the NBN or an alternative telecommunications network
- after services have been migrated, testing each of their services to confirm they are operational
- placing cancellation orders after migration has successfully occurred if they have changed retail service providers
- obtaining the assistance of any third parties (such as a registered cabler), if required (the details of registered cablers can be found at www.registeredcablers.com.au)
- covering the costs associated with migration and the supply of new services if any additional upgrading of wiring, change of service or customer premises equipment may be required, and
- notifying their retail service provider or application service provider if they experience unexpected or prolonged disruptions to service continuity during or after the migration process.

Complaints about NBN-based services:

nbn is a wholesale infrastructure provider that sells its products to retail service providers, who then add additional functionality and provide retail services to end users.

If a customer has a concern regarding the installation or operation of their NBN services, they should contact their retail service provider first, as they have the main relationship with the customer as well as with nbn and are best placed to provide assistance or resolve a query or complaint.

To assist, the customer will need to:

- be aware that nbn is a wholesale provider and is therefore only able to provide general advice as it is not aware of the specific arrangements between retail service providers and their customers
- arrange any specific activities suggested by their retail service provider or nbn to resolve an issue, such as contacting a registered cabler to complete additional wiring, in a timely manner, and
- contact the Telecommunications Industry Ombudsman (TIO) to make a complaint if they are unsatisfied with the response from their retail service provider (for further information see section 4.9).

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Complaints about over the top services:

If a customer has a concern with an over the top service, they need to contact their application service provider or equipment provider, and if they are not satisfied with the response they should contact the local state and territory consumer protection agency. A list of local state and territory consumer protection agencies can be found at www.accc.gov.au/contact-us/other-helpful-agencies/consumer-protection-agencies.

Customers with monitored medical alarms or unmonitored emergency diallers:

Customers with medical alarms will need to be informed about the requirements of migrating to the NBN or an alternative telecommunications network, including when the network is available in their area, and when the existing network will be disconnected. Information is available from equipment providers.

The customer is responsible for:

- obtaining the assistance of any third parties (such as a registered cabler), if required
- registering their details on nbn's Medical Alarm Register (see section 6.2)
- advising their retail service provider they have a monitored medical alarm or unmonitored emergency dialler, so that the retail service provider can appropriately advise the customer on what actions they need to take
- working with their application service provider, or equipment provider and their retail service provider to safely migrate their medical alarm during the migration window, either to a service over the NBN, or a service provided over an alternative telecommunications network
- after their medical alarm has been migrated, informing their monitored medical alarm service provider of the fact and testing their device to ensure successful migration
- for users of unmonitored emergency diallers (also see section 6.2.1.3):
  - contacting the manufacturer of the device, or the retailer from which they purchased the device, to find out whether it will continue to function over the NBN, and if required finding a suitable alternative
  - informing their retail service provider before migrating their services to the NBN, that they have an unmonitored emergency dialler
  - organising any in-home wiring changes if required
- for users of locally monitored medical alarms in retirement villages, aged care facilities or similar (also see section 6.2.1.2):
  - contacting staff at the facility to obtain further advice on migrating their medical alarm
  - contacting staff at the facility to confirm their device is operational after migration has occurred
  - organising any in-home wiring changes, if required.

Role of priority assistance customers:

- informing their retail service provider that they require this service (or a suitable offering) and placing an order with a retail service provider that offers those services.

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Additional responsibilities for residential customers at FTTP premises

Installation and activation:

At the time of installation, the customer will need to work with the installer to select an appropriate location for the installation of the NBN Connection Box, in line with nbn's guidelines and if a battery backup unit has been installed, maintaining the unit in accordance with advice provided in the NBN Fibre User Guide, and ensuring the battery is replaced when required.

Customers need to be familiar with the limitations of the battery backup unit (see section 5) and if this is a remaining concern, to consider an alternative communications technology such as a charged mobile phone.

Additional responsibilities for residential customers at FTTN and FTTB premises:

* When ordering services, a customer needs to advise the retail service provider of the full national number (ten digit number including area code) of the existing services they wish to migrate when placing an order.

At the time of installation:

* consider whether self-installation or a professional installation better suits their needs and selecting a retail service provider that offers an appropriate level of support (if required)
* if opting for self-installation, installing any retail service provider provided equipment (e.g. gateway/modem) as instructed by the retail service provider, noting that this may be before the migration (i.e. network cut-over) has taken place, and
* making appropriate arrangements in instances where their retail service provider advises there will be a disruption to their telecommunications services.

Additional responsibilities for residential customers at HFC premises:

When ordering a service, a customer will need to confirm to the retail service provider whether they hold an existing Pay TV services on their existing HFC legacy connection.

At the time of installation where a new outlet is required, working with the installer to select an appropriate location for the installation of the NBN Connection Box (also known as the NBN Utility Box) and the NBN wall plate/HFC NTD, in line with nbn's guidelines.

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4.6.2 Business customers

Business customers need to:

- inform themselves of the need to migrate and identifying upgrades or special equipment needed
- understanding that the migration of business services can take additional time where there are complex requirements or complex infrastructure at the premises
- selecting the NBN services that will meet their needs, and arranging any specific activities suggested by nbn or retail service providers (e.g. contacting a registered cabler)
- placing an NBN order with their retail service provider and working with their provider to ensure their services work after they have migrated

Overarching roles and responsibilities

Migration to an NBN service does not happen automatically and the successful migration of telecommunication services is reliant on business customers initiating the migration process for services at their premises. Business customers are responsible for considering their business needs, planning for the requirements of migration, and working with their service provider(s) to migrate their services early in the migration window. Those with complex business requirements should contact their service provider very early in the migration window, recognising that the migration of their services may necessarily take longer.

Business customer responsibilities across all network technologies

Customer awareness and management

Self-education and awareness:

- reading NBN-related communications material provided by nbn, retail service providers, application service providers and other organisations and on the tailored business section of the nbn website
- understanding the migration processes and service features of the network access technology type for their premises
- understanding that the migration of business services can take additional time where there are complex service requirements or complex infrastructure at the premises
- identifying the services they use that operate over the current local access networks and initiating action with the relevant retail service providers and application service providers to migrate these services early in the migration window
- businesses with Special Services should make appropriate plans for any additional costs incurred as part of migrating their Special Services
- if they have a monitored fire alarm or lift phone, registering the details of that service on nbn's Fire and Lift Register (see section 6.2)
- if their business premises is in a building with a monitored fire alarm or lift phone, speaking to the building manager, to ensure that steps are being taken to migrate any monitored fire alarm or lift phone services, and
- understanding how telecommunications services provided over the NBN are expected to operate during a power outage, and considering maintaining an alternative communications technology, such as a charged mobile phone.

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Ordering services:

- placing an order with their preferred retail service provider or if relevant, telecommunications service aggregator, early in the migration window
- allowing additional time to migrate where there are complex service needs or there is complex infrastructure at the premises
- discussing their business' voice and broadband requirements with their retail service provider to ensure the NBN-based service they select meets their needs
- if they have an over the top service such as an EFTPOS machine, lift phone, or fire or security alarm, notifying their application service provider(s) that they are in an NBN Ready For Service region and working with their retail service provider and application service provider(s) to migrate the service(s) ahead of the Disconnection Date
- if they have enhanced call handling features (e.g. call waiting, call forwarding, call barring, calling number display and/or calling number display blocking), advising their retail service provider they would like these features to continue on their migrated service, and
- working with their retail service provider to migrate Special Services as products become available (for further information on Special Services see section 6.4).

Installation and activation:

- organising out-of-hours installation appointments, if required, via their retail service provider
- attending scheduled nbn, retail service provider and application service provider appointments, when required
- after services have been migrated, testing each of their services to confirm they are operational
- where the customer is changing to another retail service provider, placing cancellation orders with their existing retail service provider, after migration has successfully occurred
- obtaining the assistance of any third parties (such as a registered cabler), if required—(the details of registered cablers can be found at www.registeredcablers.com.au), and
- notifying their retail service provider or application service provider if they experience unexpected or prolonged disruptions to service continuity during the migration process.

Complaints about NBN-based services:

- understanding that nbn is a wholesale carrier that sells its products to retail service providers, who add additional functionality and provide retail services
- if they have a concern regarding the installation or operation of their NBN service, contacting their retail service provider first, as it has the primary relationship with the customer and is best placed to provide assistance
- being aware that if they wish to contact nbn directly, nbn is only able to provide general advice as it is not aware of arrangements between retail service providers and their customers
- arranging any specific activities suggested by their retail service provider or nbn to resolve an issue, such as contacting a registered cabler to complete additional wiring, in a timely manner, and
- if they are unsatisfied with the response from their retail service provider, contacting the TIO to make a complaint (for further detail see section 4.9).

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Complex business migrations:

- understanding that, as they have complex requirements, migration will necessarily take longer and will be more costly, so they should contact their retail service provider to commence the migration process as early as possible in the migration window
- discussing their specific service requirements with their retail service provider to develop a migration plan for any complex business services, and
- consider any associated costs as part of their business planning.

Additional business customer responsibilities at FTTP premises

Installation and activation:

- working with the installer to choose an appropriate location for the installation of the NBN Connection Box, consistent with nbn's guidelines
- if a battery backup unit has been installed, maintaining the unit in accordance with advice provided in the NBN Fibre User Guide, and ensuring the battery is replaced when required, and
- understanding the limitations of the battery backup unit (see section 5) and considering maintaining an alternative communications technology such as a charged mobile phone.

Additional responsibilities for business customers at FTTN and FTTB premises

Ordering services:

- advising their retail service provider the full national number (ten digit number including area code) of the existing services they wish to migrate when placing an order.

Installation and activation:

- considering whether self-installation or a professional installation better suits their needs and selecting a retail service provider that offers an appropriate level of support
- if opting for self-installation, installing any retail service provider-provided equipment (e.g. gateway/modem) as instructed by the retail service provider, noting that this may be before the migration has taken place, and
- making appropriate arrangements in instances where their retail service provider advises there will be a disruption to their telecommunications services.

Additional responsibilities for business customers at HFC premises

Ordering services:

- confirming to the retail service provider whether they hold an existing Pay TV services on their existing HFC legacy connection.

Installation and activation:

- where a new outlet is required, working with the installer to select an appropriate location for the installation of the NBN Connection Box (also known as the NBN Utility Box) and the NBN wall plate/HFC NTD, in line with nbn's guidelines.
- making appropriate arrangements in instances where their retail service provider advises there will be a disruption to their telecommunications services.

4.7 Building managers (building owners, managers, bodies corporate)

Overarching roles and responsibilities

Building managers have an important role in supporting the migration of telecommunications services within their buildings and ensuring their services migrate to the NBN or alternative telecommunications networks. Building managers include commercial and non-commercial operators responsible for administration of a wide range of commercial and other premises, such as, retirement villages, nursing homes, hospitals, and schools. Building managers are responsible for checking that their migrated services are operational and compliant with relevant regulations and standards. Further information about specific arrangements for the migration of safety critical services (monitored fire alarms and lift phones) can be found in section 6.

Building manger responsibilities across all network technologies

Customer awareness and management

Self-education and awareness:

- identifying all services within their building which will need to be migrated, such as voice or data services in common areas, monitored fire alarms, lift phones, and/or security alarms
- taking action to inform themselves of migration requirements, including:
  - when the NBN may be available in their area
  - the likely impacts of migration on services
  - understanding connectivity requirements within their building itself (including wiring and connectivity requirements for building owned/managed active and passive equipment)
- registering their building or apartment block with nbn at www.nbnco.com.au/connect-home-or-business/register-your-building-or-apartment-block.html, to assist in streamlining the installation process. nbn will engage with the building manager to connect the building or apartment block to the NBN.

Ordering services:

- when the nbn is available in their area, taking early action to migrate all identified services within their building well before the Disconnection Date:
  - standard phone and internet services in common areas can be migrated by placing an order with a retail service provider
  - building managers will need to contact both a retail service provider and their application service provider to ensure over the top services such as monitored fire alarms, lift phones, and/or security alarms are migrated successfully
- arranging and covering costs associated with any additional upgrading of wiring or equipment that may be required.

Installation and activation:

- providing access to their building for the installation of equipment
- confirming that all services are working correctly after migration
- ensuring services, once migrated, are compliant with relevant building standards and codes, and
- further information is available at section 6.6—Multi-dwelling unit common areas.

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Migration of monitored fire alarm and lift phone services

Building owners, managers and bodies corporate have responsibilities before, during and after migration of their respective buildings' monitored fire alarms and lift phones, both in the context of their general responsibilities for the building and also as the party purchasing the service(s) and the voice line(s) over which these services operate.

General responsibilities:

- ensuring obligations are met for the operation of monitored fire alarms and lift phones under the relevant building codes and standards, and
- familiarising themselves with the Migration of Monitored Fire Alarms and Lift Phone Services Good Practice Guide [7].

Specific migration responsibilities

Initiating and taking action to migrate:

- taking action to migrate their building's monitored fire alarm and lift phone services to the NBN or an alternative telecommunications network
- working with their application service provider and their retail service provider to obtain a suitable alternative telecommunications service for monitored fire alarm or lift phone services well in advance of disconnection of the existing network
- migrating and promoting the continuity of service for their monitored fire alarm or lift phone during and after the migration window, whether to a service over the NBN, or over an alternative telecommunications network. This includes obtaining the assistance of any relevant party (such as a registered cabler, fire alarm monitoring or lift service provider, or a retail service provider) required to ensure a safe and successful migration of the service, and
- arranging and covering costs associated with any additional upgrading of wiring or equipment that may be required to migrate their monitored fire alarm or lift phone service.

Registration of services and provision of associated data:

- registering their monitored fire alarm or lift phone services on nbn's Fire and Lift Register (which includes providing the correct full national number (ten digits including area code) or the Unconditioned Local Loop Service 161 number as appropriate, of the relevant services) and keeping this information up to date:
- the correct full national number or the 161-number for the Unconditioned Local Loop Service is essential, without it, Telstra will not be able to identify services that are eligible for deferral of disconnection and nbn may not be able to provide migration assistance
- it cannot be assumed that application service providers will register services, so it is essential for building managers and owners to register all services they are responsible for, and
- assisting nbn, if requested, to refine or confirm data on the Fire and Lift Register.

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[7] www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide

nbn   Telstra   Optus   Retail service providers   Application service providers   Equipment providers   Residential customers   Business customers   Building managers

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Following migration:

- after monitored fire alarm and lift phone services have been migrated, informing their application service provider of the fact and requesting a test be carried out to ensure successful migration to the alternative service
- requesting that their application service provider notify nbn that the service has been migrated, and
- in circumstances where the customer of the telecommunications service is not the building manager or owner (e.g. a business with a long-term lease for a premises), working with the customer of the telecommunications service over which the monitored fire alarm or lift phone is provided to ensure the above takes place.

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4.8 Cabling industry

Registered cabling providers have an important role in supporting the migration of telecommunications services to the NBN. Cabling providers offer services such as in-premises cabling and installation of in-premises equipment beyond the basic nbn or retail service provider installation.

Cabling industry responsibilities across all network technologies

Customer awareness and management:

- providing information and services to assist customers in addressing in-premises wiring
- ensuring members are updated with the latest information regarding wiring codes, and
- developing consistent arrangements to assist customers in addressing in-premises wiring issues for example through the update of the Cabling existing telecommunications services in the customer's premises for the NBN via FTTP *Industry Guideline (G649:2014)* that addresses in-premises wiring issues associated with migration to the NBN.

4.9 Telecommunications Industry Ombudsman (TIO)

The TIO is a dispute resolution service for small business and residential customers who have a complaint about their telecommunications service in Australia. Its goal is to settle disputes quickly in an objective way. If a customer is dissatisfied with the response received from their retail service provider, they can lodge a complaint with the TIO. The TIO is independent of industry, government and consumer organisations.

If a customer lodges a complaint with the TIO, the TIO will refer the customer to either the retail service provider or nbn, depending on the nature of the issue. In referring the customer, the TIO will have regard to the circumstances of the complaint and will consider which party is best placed to assist the customer to conclude resolution.

If a complaint is related to a customer's interaction with nbn, for example, damage to property or poor workmanship in relation to NBN equipment installation, the TIO will generally refer the customer to nbn to resolve the issue and work with them to resolution. If the complaint is related to their interaction with their retail service provider (e.g. missed appointments and long lead times), the TIO will refer the customer to the retail service provider and work with them to resolution.

For certain types of complaints, where the TIO believes it will promote fast and effective resolution, the TIO will notify both the retail service provider and nbn of the complaint, and will encourage engagement between the parties to ensure the customer's matter is resolved as they should not be expected to navigate complaint resolution between industry participants.

Further information is available at www.tio.com.au.

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5. NBN service outage considerations

All telecommunications networks, like other utilities and essential services, are prone to infrastructure damage, power outages and accessibility difficulties from time to time, and, in particular, during emergencies and natural disasters. No telecommunications infrastructure or technology is infallible when exposed to power outages or the physical realities of a natural disaster.

Service failures can be caused by a range of issues, including but not limited to: cut cables, software or hardware failures, and power outages.

Many customers rely on electronic equipment like a gateway or modem in their premises that need their own battery backup to operate in the event of a power outage affecting the premises. Therefore, customers should consider also keeping an alternative communications technology available such as a charged mobile phone.

Power outages

Power outage considerations:

- all active technology requires power to operate
- nbn's message is that services over the NBN will not work during a power outage
- it is recommended that customers maintain an alternative means of communications, such as a charged mobile phone, if they require a service to work during a power outage.

nbn's public message is that services over the NBN will not work during a power outage. nbn operates a mix of network technologies, each with different power requirements, and, as with any telecommunications service, service continuity cannot be guaranteed at all times. As a general rule, customers should not rely on a single communications technology and, if they need a service to operate in an emergency, they should consider maintaining an alternative form of communications, such as a charged mobile phone.

This is a change in customers' expectations, which have been historically informed by the fortuitous continued operation of basic corded telephone services over the Telstra local access network, even though this was not part of the Telstra telephony service product specification.

It is important to be aware that no communications network can provide 100 per cent operation during power outages or natural disasters. The copper lines used in the Public Switched Telephone Network provided a fortuitous benefit that allowed, in most instances, for the continued operation of telephone services in the event of a power outage, unless the network or exchange itself was damaged.

Irrespective of the network technology (e.g. copper or NBN-based), devices such as modems and cordless phones will not operate during a power outage, unless they are connected to an uninterruptible power supply. This has always been the case.

Network type	Will it work during a power outage?
FTTP—with optional Battery Backup Unit	Limited—Refer to the FTTP section below for further information
FTTP—without optional Battery Backup Unit	No—Refer to FTTP section below for further information
FTTN	No—Refer to FTTN, FTTB and HFC section below for further information
FTTB	No—Refer to FTTN, FTTB and HFC section below for further information
HFC	No—Refer to FTTN, FTTB and HFC section below for further information

FTTP

FTTP architecture incorporates passive (unpowered) infrastructure between the powered equipment in the exchange and the in-premises NBN Connection Box. Over the FTTP network, battery backup is mandatory for priority assistance customers and optional for other customers. The Australian Communications and Media Authority (ACMA) has made service provider rules requiring retail service providers to, as part of (and prior to) providing FTTP services, notify customers about what an nbn-supplied battery backup power unit would (and would not) do during a power failure.

The battery backup unit self-charges from its mains connection and manages the condition of its battery. The unit will audibly and visually alert the customer when the battery needs replacement. Battery replacement requires the customer to purchase a new battery (the same type and rating as the battery installed). If there is a power outage and the area is serviced by FTTP, customers need to be aware that:

- the NBN service (fixed line phone and internet) will be unavailable unless all relevant in-premises equipment (e.g. the NBN Connection Box, retail service provider gateway/modem, etc.) is also connected to an alternative power source (e.g. uninterruptible power supply unit)
- retail service providers have an obligation to inform customers about the use of their FTTP service in a power outage before entering into an agreement with them for supply of that service
- various retail service providers offer the option of having an nbn-supplied battery back-up unit installed in an customer's premises which will power the NBN Connection Box, and
- if installed, the battery back-up unit in an FTTP installation is expected to allow the customer to receive telephony services (provided the customer has a corded handset connected to a UNI-V based retail service provider service) for up to five hours (for more details, see nbn's Fibre User Guide).

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It is also important for customers to understand that the battery backup unit supplied by nbn will only power the NBN Connection Box inside the premises in an outage and will not supply power to customer in-premises electronic equipment such as gateways/modems. For this to work, the customer is required to:

- if using the service to make a voice call, plug their corded phone into the 'UNI-V' port on the NBN Connection Box (note: UNI-V is an optional feature that needs to be ordered by the customer and supported by the retail service provider)
- if using the service for broadband based services, including VoIP calls, provide a separate backup power or uninterruptible power supply to other in-premises equipment, including modem gateways, Wi Fi routers, cordless phones and VoIP equipment.

FTTN, FTTB and HFC

FTTN and FTTB operate on a similar technical principle, however NBN active equipment is connected to optical fibre in a node or street cabinet. In FTTB, the 'node' is installed in the basement of an apartment block or complex.

For premises in areas serviced by FTTN and FTTB access technologies, the nbn network ends at the first wall socket. As nbn doesn't provide any in-premises equipment, it does not provide battery backup at the customer's premises.

HFC uses a different network technology, however also operates on the basis of nodes distributed on aerial lines around neighbourhoods, which require power to operate.

HFC connections require an in-premises NBN Connection Box to be installed at the point where the HFC line enters the premises. The NBN Connection Box, which is nbn's network boundary, requires power to operate. No battery backup for the NBN Connection Box is provided by nbn.

nbn's message is:

> *"Equipment connected over the nbn™ network will not work during a power blackout. Consider having an alternative form of communication handy (such as a charged mobile phone).*
>
> *If you have safety-critical equipment (e.g. a medical alarm, monitored fire alarm or lift emergency phone), speak to your equipment provider about alternative solutions."*

Safety critical devices

If premises have or require safety critical devices such as medical alarms, monitored fire alarms or lift phones, customers should consider connecting to a secondary communications technology such as a mobile network.

Medical alarms

Many monitored alarm service providers can supply a replacement alarm that operates over the mobile network rather than solely relying on a fixed line phone service. The mobile network connection is powered by the alarm's internal battery and can therefore remain online for the duration required by the monitored medical alarm *Australian Standard (AS4607)* in the event of a power outage, provided the mobile network remains available. A medical alarm service provider or device provider should be able to advise further options in this respect.

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Monitored fire alarms and lift phones

It is the building owner or manager's responsibility to ensure any monitored fire alarm or lift phone service is in good working order and meets all Australian standards and regulatory requirements, both before and after migration. This includes ensuring that services can continue to operate as required during a power outage.

When planning to migrate monitored fire alarm and/or lift phone services, building owners and managers will need to consider the most appropriate telecommunications solutions to meet the service operating requirements, which may include the use of multiple communication paths (e.g. mobile and NBN). Monitored fire alarm and/or lift service providers can advise on the most appropriate solutions to keep services working in the event of a power outage. Building owners and managers should also refer to the Migration of Monitored Fire Alarms and Lift Phone Services Good Practice Guide[8].

Further information on the migration of safety critical devices and services is set out in section 6.2.

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[8] www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide

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6. Migration arrangements for non-standard services

6.1 Over the top services

Over the top services or applications are those that are operated by third party application service providers over the top of voice telephony services on Telstra's local access networks. Over the top services include security, medical and monitored fire alarms, lift phones, and payment services (EFTPOS and ATMs). The migration to the NBN represents an evolution for the industry, involving changes to technical, cost and performance characteristics.

Over the top services operate by placing telephone calls over basic voice telephony services which are subject to the regular 18 month migration window in fixed line rollout areas (with certain exceptions including the limited disconnection deferral until after 30 June 2017 for eligible nbn-registered monitored fire alarm and lift phone services where the correct service details have been provided (see section 6.2).

nbn has committed to work with industries to assist them to understand the impacts of migrating over the top services and assist them to develop migration solutions. As part of this, nbn provides Industry Self-Test Facilities to enable application service providers to test the compatibility of their retail products over a range of retail service providers' services.

This approach recognises that retail service providers do not have visibility of the applications that are provided over the top of their telephony services, and responsibility for the management of the application rests with the party which provides it. Therefore customers should work with their application service providers to take action to migrate their services early in the migration window, to support service continuity. If retail service providers become aware that an over the top service is present, they may wish to implement additional processes and customer assistance to assist the migration of those services.

Due to the safety critical nature of some over the top services such as medical alarms, monitored fire alarms and lift phones, targeted activities are required to support the migration of these services. Information about specific migration arrangements can be found in the sections below.

6.2 Safety critical services

Failure to successfully migrate safety critical services to the NBN or alternative telecommunications networks prior to the Disconnection Date may present a risk to health or safety.

Migration is not automatic. The customer of the telecommunications service is responsible for initiating migration activity for their service with the retail service provider of their choice, and discuss their safety critical requirements with their service and/or equipment provider as early as possible in the migration window.

Safety critical services (including medical alarms) are not exempt from the disconnection process, and will be subject to disconnection from the Disconnection Date. For this reason, where possible, migration of safety critical services early in the migration window is strongly encouraged. All parties that are involved in the supply of safety critical services need to ensure that the approach to migration to the NBN or alternative telecommunications networks takes account of these services.

The successful migration of these services and/or devices is reliant upon the customer or responsible party receiving the necessary information from their retail service provider, application service provider,

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device provider and nbn, and taking the appropriate action to migrate their services before the Disconnection Date.

Service providers and equipment providers should assist their customers in ensuring that the service is migrated to an alternative network before disconnection, and ensuring the service is in good working order, both before and after migration. This also applies to any over the top service or application that is provided over that telecommunications service, such as a medical alarm or similar device or service. Retail service providers also have a responsibility to inform their customers of the impacts of migration and disconnection and assist them in the migration process.

6.2.1 Medical alarm users

Medical alarms are used to provide a communications capability for emergency situations, where the access or use of the standard telephone handset or mobile device is not possible or not desirable. The migration of premises with medical alarms is made more complex by the additional technical and financial implications and the necessary careful coordination of several parties which may be involved in migrating the service (this may include several of: the customer, application service provider, device provider, retail service provider, equipment provider, retirement village operator and nbn). Given the number of stakeholders involved, migration therefore raises the risk that there may be service disruption for medical alarm users.

Customers need to contact their medical alarm service provider, device provider or retail service provider to make arrangements to migrate their medical alarm prior to migrating their normal telephony and broadband services. nbn has been working with the medical alarm industry to provide information about how the NBN may interact with existing equipment, and to provide advice and consultation on future product development. This includes ensuring that monitored medical alarm and unmonitored emergency dialler providers are aware of how the NBN rollout would potentially impact services that were designed to rely on an entirely copper-based network, and to assist the industry in adapting its products and services to the changing operating environment of the NBN.

This initiative recognises that the rollout of the NBN will involve disruption to services, and permanent changes to the operations of services because of the new technologies being used. Some existing devices may not be compatible with these changes. For example, phone services provided over the NBN will not work during a power outage (with the exception of some limited use of FTTP with a battery backup unit) and medical alarms may need to be upgraded so they can still call out in the event of an emergency even if the fixed phone line is not available (for further information on power outages see section 5).

There are generally three different types of medical alarms that customers may be using. This includes professionally monitored medical alarms, locally monitored medical alarms and unmonitored emergency diallers (e.g. auto-diallers and other emergency call buttons). As a general principle, users of monitored medical alarms should contact their monitoring service provider to discuss migration options and users of unmonitored emergency diallers should check with the maker of their device, who should be able to provide advice on further options for the device's continued operation during a power outage as well as how best to migrate their medical alarm.

nbn has a program of work to assist medical alarm users to migrate to the NBN or alternative telecommunications networks. Importantly, solutions are available, and nbn has established a test facility where many medical alarm providers have tested their services over the NBN. In addition, nbn is working closely with providers of monitored medical alarms to help them identify and deploy solutions to their customers to help keep alarms working throughout Australia's nationwide transition to the NBN.

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6.2.1.1 Monitored medical alarms

Professionally monitored medical alarms are compliant with *Australian Standard 4607* and are used to call a professional monitoring service for help in an emergency. Monitored medical alarms typically have a base unit and wireless pendant with a help button on it. When the button is pressed, the alarm base unit's loudspeaker and microphone is activated and used to speak to an operator at a 24/7 professional medical alarm monitoring service. The monitoring service can then take appropriate action such as dispatching an ambulance or contacting family. Professionally monitored medical alarms generally have an ongoing monthly fee.

For information on migrating a monitored medical alarm, customers need to contact their medical alarm service provider. Further information on the roles and responsibilities of customers in this regard can be found in section 4.5. It is also important that customers register their medical alarm service on nbn's Medical Alarm Register (for further details on nbn's Medical Alarm Register see below).

6.2.1.2 Locally monitored medical alarms

Locally monitored medical alarms are often used in retirement villages or aged care facilities. A locally monitored alarm calls a nurse or staff member on-site (or at a monitoring room operated by the retirement village group) who answers the call.

Customers with a locally monitored medical alarm need to contact someone at their retirement village or aged care facility for further advice on migrating their alarm. Further information on the roles and responsibilities of customers in this regard can be found in section 4.5. It is also critical that customers register their medical alarm service on nbn's Medical Alarm Register (for further details on nbn's Medical Alarm Register see below).

6.2.1.3 Unmonitored emergency diallers

Unmonitored emergency diallers have some functions similar to professionally monitored medical alarms, but they do not exhibit all of the features of a monitored service (including prolonged operation during a power outage). With unmonitored emergency diallers, when the help button is pressed, the alarm unit calls one or more programmed phone number(s) and plays a pre-recorded message or activates a loudspeaker to enable a speakerphone conversation, rather than calling a 24/7 monitoring centre. Generally unmonitored emergency diallers can be are purchased for a one-off price (including online and from overseas) and have no ongoing monthly fees. Additional steps may need to be taken by unmonitored emergency dialler users to check if their device will work over the NBN and, what limitations may exist (such as operation in a power outage). If required, customers may wish to consider alternative migration options.

For further information on migrating an unmonitored emergency dialler or auto-dialler, customers need to contact the maker of their device before they migrate. Further information on the roles and responsibilities of customers in this regard can be found in section 4.5. It is also critical that customers register their medical alarm service on nbn's Medical Alarm Register.

6.2.1.4 Medical Alarm Register

nbn's Medical Alarm Register is an important initiative to help support users of medical alarms when the existing phone network is replaced by the NBN. The information is being collected to help identify households with medical alarms, and where support may be needed to assist in the move to the NBN.

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To enable a medical alarm service to be identified and registered, the following information must be provided to nbn:

- the physical address where the medical alarm is located
- the type of medical alarm (monitored, unmonitored or locally monitored), and
- the contact details of the person most responsible for management of the medical alarm.

Anyone can register their or (provided they have consent) another person's medical alarm details online at www.nbnco.com.au/medicalregister or by telephoning 1800 227 300. Information on the Medical Alarm Register can be accessed, corrected or updated at any time by contacting nbn on 1800 227 300 or emailing info@nbnco.com.au.

It is important to note that placing a premises on the Medical Alarm Register does not prevent it from being disconnected. Information from the Medical Alarm Register is provided by nbn to Telstra, so that Telstra can advise its wholesale customers and retail business units that those premises are flagged as having a medical alarm and alert them to the need for particular attention to be paid to those premises. Telstra is required to disconnect all premises after the Disconnection Date (including those with medical alarms) in accordance with its legal obligations under the Migration Plan and irrespective of whether those services are at premises that are flagged as having a medical alarm or are on nbn's Medical Alarm Register.

It is also important to note that the Medical Alarm Register contains only those services that have been added to it either by customers or alarm service providers. nbn advises that it makes no warranty as to the accuracy or completeness of the Medical Alarm Register.

6.2.2 Monitored fire alarm and lift phone services

If a monitored fire alarm or lift phone service is not successfully migrated to the NBN or an alternative telecommunications network prior to disconnection, the resulting service disruption could present a significant risk to building occupants or lift passengers in the event of an emergency. Consequently, the successful migration of these services is reliant upon the responsible parties receiving the necessary information and taking the appropriate action to migrate these services before they are disconnected.

In general terms, the customer responsible for the telecommunications service including any over the top service such as a monitored fire alarm or lift phone is responsible for the migration of the service. This is usually the building owner, manager, or body corporate.

All buildings that have a lift must comply with relevant building codes and Australian Standards, including workplace health and safety standards. Under these standards, lifts must be equipped in such a way that assistance can be sought in the case of an emergency. Responsibility for ensuring that these obligations are met rests with the building owner, or in the case of a strata title, the bodies corporate (together referred to as the building manager). Similarly, the building codes and relevant Australian Standards establish requirements for fire alarms, including fire alarm monitoring, within buildings. It is the responsibility of the building manager, to ensure these requirements are met.

It is the building manager's responsibility to ensure any monitored fire alarm or lift phone service is in good working order and meets all regulatory requirements, both before and after migration. If the building manager is not also the customer responsible for the telecommunications service on which the fire alarm or lift phone is provided, then it is expected that the building manager will work with the customer to ensure the fire alarm or lift phone service is maintained according to the relevant regulatory standards.

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To carry out their obligations effectively, the building manager responsible for the maintenance of a monitored fire alarm or lift phone service need to be informed of the disconnection risk, and be aware of the steps they need to take to promote compliance with their obligations.

For individual roles and responsibilities for the various parties involved in the migration of monitored fire alarm and lift phone services (e.g. building managers, application service providers, retail service providers, Telstra (as disconnecting network provider), nbn etc.) see section 4.

6.2.2.1 Long-term migration arrangements for monitored fire alarm and lift phone services

To support the migration of identified monitored fire alarm and lift phone services, a framework has been implemented in response to industry feedback in 2015 that more time was needed to determine migration solutions for these services:

- a disconnection deferral period until after 30 June 2017, for identified and nbn-registered monitored fire alarm and lift phone services (in areas that will reach the Disconnection Date prior to 30 June 2017 or have already reached the Disconnection Date)
  - other monitored fire alarm and lift phone services in areas that are not yet 'Ready For Service' or will not reach the Disconnection Date until after 30 June 2017 will be disconnected under business as usual arrangements
- a Fire Alarm and Lift Phone Migration Roundtable, and associated industry working groups (one each for fire alarms and lift phones), has been convened for the duration of the temporary disconnection deferral period
  - membership includes monitored fire alarm and lift service providers, nbn, retail service providers, Telstra (as disconnecting network provider), state and territory agencies with responsibility for fire services and work health and safety matters, and peak bodies such as Communications Alliance, Strata Community Australia, the Property Council of Australia, the Owners Corporation Network, Fire Protection Association Australia and the Australian Elevator Association
  - the Roundtable meets quarterly to inform the policy framework for the migration of fire alarm and lift phone services and monitor its implementation, and
- the industry working groups have developed migration solutions (generally based on an alternative telecommunications networks (e.g. mobile networks) with possible NBN connectivity) to which their respective services can migrate, and are disseminating relevant messaging to stakeholder groups via a Good Practice Guide[9] which can be found at www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide.

6.2.2.2 Fire and Lift Register

The Fire and Lift Register was established as a safety net to provide assistance to those responsible for the migration of monitored fire alarm and lift phone services. More recently, the Fire and Lift Register has assisted in identifying monitored fire alarm and lift phone services eligible for the above mentioned disconnection deferral arrangements. nbn and Telstra will continue to work together with a view to establishing arrangements for providing assistance to those responsible for the migration of monitored fire alarm and lift phone services after the deferred disconnection period. Registered services will still need to be migrated to an alternative telecommunications network.

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[9] www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide

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To enable a service to be identified and registered, the following information must be provided to nbn for all monitored fire alarm and lift phone services:

- the full national number (ten digits including area code), or the Unconditioned Local Loop Service 161 number, as applicable, corresponding to the monitored fire alarm or lift phone service—this should be provided as a matter of priority, as a service cannot be identified without the correct service information
- the physical address where the service is located, and
- the contact details of the party responsible for management of the telephone service associated with the monitored fire alarm or lift phone service.

Services can be registered on nbn's Fire and Lift Register online at www.nbnco.com.au/fireandlift or by calling 1800 687 626.

Further action is also required by application service providers to determine the most appropriate migration path for their services, and work with their customers (including building managers) to support the migration of services. There is also action required to design targeted communications that all parties, application service providers, nbn, retail service providers, government, and industry bodies can use to provide clear and consistent messaging to building owners, bodies corporate and strata/building managers who purchase fire alarm and lift phone services. A significant part of this work is being undertaken by the Roundtable and Working Groups, with a joint industry Good Practice Guide[10], released in February 2017, which outlines the requirements for migrating services and advice on technical migration solutions.

For individual roles and responsibilities for the various parties involved in the migration of monitored fire alarm and lift phone services (e.g. building managers, application service providers, retail service providers, nbn etc.) see section 4.

Tenants, occupants and landlords of buildings with a monitored fire alarm or lift phone service

All tenants, other occupants, and landlords of buildings with a fire alarm or lift phone service in an area where the NBN is available, or is about to become available, are encouraged to contact and speak with their building manager, to ensure that all reasonable steps are being taken to migrate the fire alarm or lift phone service to a reliable and safe alternative service early in the migration window, well prior to the Disconnection Date.

State and territory authorities/regulatory bodies

Failure by building managers to maintain monitored fire alarm and lift phone services may be a serious breach of obligations under relevant federal, state or territory regulations, building codes, and/or Australian Standards. Clear information needs to be provided to building managers so that they can make arrangements to migrate their services in order to avoid breaching any of their obligations.

In this context, all state and territory authorities/regulatory bodies involved in building code regulation that includes monitored fire alarms or lift phones have been encouraged to include on their websites, and in the information made available to builders or building managers, statements about the impact of the NBN rollout on monitored fire alarm and lift phone services. This information should reiterate the need for parties to take action early in the migration window to ensure a successful migration of their

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[10] www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide

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service prior to the Disconnection Date in order to maintain compliance with relevant building regulations and the safety of occupants of their premises.

Peak industry bodies (including Fire Protection Association Australia, the Australasian Fire and Emergency Services Authorities Council, the Australian Elevator Association, and the Lift Engineering Society of Australia (New South Wales and Victoria))

Peak bodies have been encouraged to include on their websites, and in the information made available to their members, statements about the impact of the NBN on monitored fire alarm and lift phone services. This should highlight the need for parties to take action to ensure a successful migration of their service prior to the Disconnection Date in order to maintain compliance with relevant building regulations and the safety of occupants of their premises.

6.3 Customers requiring additional assistance

In the context of migration to the NBN or alternative telecommunications networks, some customers who require additional assistance are outlined below using a tiered approach which is determined based on their needs.

Tier one customers are those who may be at serious risk due to migration and disconnection (e.g. medical alarm users or customers of priority assistance services)

Tier two customers are those whose circumstances present barriers to obtaining or understanding information relating to their need to migrate.

It is recognised that some customer segments may require information delivered in alternative formats and/or through alternative parties (other than their retail service provider or nbn) in order to process information and take the required action to migrate. These segments include:

- those with a severe chronic illness, disability, or some form of cognitive or sensory impairment (e.g. dementia, learning difficulties and blindness)
- older customers (aged 65+)
- those with limited English proficiency, and
- those with mental and behavioural disorders (e.g. severe anxiety and depression).

There have been significant efforts by nbn and retail service providers to educate customers about the migration process through standard communication. The approach taken by these parties recognises that identifying these customers is difficult, as they are largely undetectable by retail service providers. For this reason, the approach for these customers involves nbn working with community groups to assist in the communications to these customers, as well as retail service providers and application service providers maintaining their communication efforts to their customers regarding their migration, as noted above. It is important that other parties that may have contact details of such customers, (for example, any direct sellers/manufacturers of unmonitored emergency diallers) co-operate with nbn and retail service providers in relation to any initiatives to communicate to such customers. Many companies also provide disability awareness training to their staff, and this approach is to be commended.

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nbn has worked to improve communications to this group of customers within the community by providing consistent messaging frameworks for use by the groups, as well as seeking feedback on appropriate formats. These community groups include, but are not limited to:

- National Seniors Australia
- Australian Council of Social Services
- Federation of Ethnic Communities Councils of Australia
- Australian Multicultural Community Services
- Vision Australia
- Meals on Wheels
- Legacy
- Australian Blindness Forum.

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6.4 Special services

Special Services are primarily business grade services provided over Telstra's local access networks (either directly or via the use of Unconditioned Local Loop copper). Unlike standard voice and broadband services which are being disconnected on a region by region basis, Special Services are scheduled to be disconnected on a different timeline. The different approach to disconnecting Special Services has been adopted to allow additional time for nbn and retail service providers to develop product solutions and substitute products to be supplied over the NBN.

Special Services may be subject to disconnection either as part of a Telstra initiated product exit, or through the white paper process, whereby services are progressively disconnected as nbn releases white papers which outline how the NBN can be used by industry to provide equivalent services to the particular type of Special Service.

Under the white paper process, nbn may progressively release papers to illustrate the capability of nbn's fixed line network technologies as suitable migration pathways for the development of replacements for different classes of Special Services.

If nbn releases a white paper for a particular type of Special Service and NBN fixed line access technologies then the managed disconnection of those Special Services supplied to premises connected to those access technologies will generally commence 36 months after the date that the white paper is published (although longer timeframes can apply if Telstra unsuccessfully disputes the white paper).

If Telstra disputes the white paper and an independent expert determines that the NBN cannot be used by Telstra to provide equivalent services to the particular type of Special Service over the NBN then that white paper will not trigger disconnection of that Special Service.

For Special Services that are the subject of a white paper that has taken effect, the managed disconnection of those services generally commences 36 months after the publishing date of the white paper, although how managed disconnection proceeds (including arrangements for milestones such as Cease Sale) will be set out in measures developed by Telstra and approved by the ACCC, following consultation with industry. Once the 36 month period following the publishing date of each white paper has expired, the Disconnection Date for Special Services will align with the disconnection Date for the premises' **nbn** regular rollout region. The managed disconnection of certain classes of Special Services will commence from November 2018. More information about Special Services can be found at www.telstrawholesale.com.au/nbn/overview/special-services.html.

However, other factors can also impact on the Disconnection Date for a particular premises including:

- if the premises is in an NBN Ready For Service area
- if the business as usual Disconnection Date for the premises' NBN regular rollout region is after the Disconnection Date for the relevant Special Service
- if the NBN access technology supplying the service to the premises is included in the white paper (Special Services are defined by reference to each access technology, so if a white paper does not address a particular technology, the Disconnection Date will not be set by reference to that white paper), and
- if the access technology supplying a premises is changed.

As nbn releases its white papers, retail service providers should develop suitable NBN products for their business customers to migrate to well in advance of the Disconnection Date for those services.

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For Special Services where Telstra is exiting a product without a white paper, the Disconnection Dates (and other relevant dates) will be determined by Telstra, with the disconnection process set out in measures developed by Telstra and approved by the ACCC following industry consultation.

Some classes of Special Services now have a Special Services Disconnection Date, and the migration window in which services can be migrated ahead of their Disconnection Date has already commenced. Given the complexity and importance of Special Services, and the potential cost and time involved in migrating these services to an alternative network, all business customers are encouraged to speak with their retail service provider and/or their application service provider early in the migration window so appropriate actions can be taken early to promote a smooth migration of their services, and to ensure any costs are understood and planned for. More information about Special Services can be found at www.telstrawholesale.com.au/nbn/overview/special-services.html.

6.5 Non-premises

Locations that use a Telstra local access network service for communications but do not meet the premises definition set out in Telstra's Migration Plan are generally considered to be non-premises. Non-premises include, but are not limited to, traffic lights, bus stops, bridge controls, mobile phone cell towers, utilities and other infrastructure.

Non-premises are not subject to disconnection at this time. Any timetable for the migration and disconnection of non-premises services will require arrangements to be agreed between the Department of Communications and the Arts, nbn and Telstra, and may be subject to consultation with industry and relevant regulators.

6.6 Multi-dwelling unit common areas

The multi-dwelling unit common areas arrangements affect all services in the common area of a multi-dwelling unit (concierge desk phone, some fire alarm and lift phone services, etc.) that are currently provided over Telstra's local access network.

The building owner or manager who is responsible for purchasing the phone line over which the service operates is also responsible for taking action to migrate the service. Building owners and managers are encouraged to place orders to migrate services in multi-dwelling unit common areas early in the migration window to avoid service disruption. The migration of services to the NBN will trigger a business as usual disconnection from Telstra's local access network.

6.7 New real estate developments, new premises and 'knock-down, rebuilds'

Special care may be needed where new real estate developments or new premises are being built in an area where the nbn is not yet fully deployed. This includes 'knock-down, rebuild' scenarios (that is, where an existing premises is knocked down, and one or more new premises are built in its place) or extensive renovations where existing telecommunications cabling is removed during construction.

Connecting new developments or new premises can be complex and logistically challenging in normal circumstances. Additional complexities may arise in the lead up to and during the migration period.

The general arrangements for the provision of telecommunications in new real estate developments are set out in the Government's *Telecommunications in New Developments* (TIND) policy, which took effect from 1 March 2015.

The TIND policy applies to most types of new developments and new constructions, including single houses and multi-unit buildings, like apartment blocks and commercial premises. It also applies to

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significant refurbishments, for example, where a warehouse or factory is converted into residences. Basically the TIND policy applies to any new construction that requires a new telecommunications connection.

The TIND policy sets out the roles and responsibilities of developers, nbn, Telstra, retail service providers, consumers and other carriers (i.e. network operators) with a view to ensuring people moving into new premises have ready access to modern telecommunications when they take up occupancy.

The developer or person organising construction of a premises is responsible for organising the telecommunications facilities, just as they would organise other utilities.

It is a requirement under the *Telecommunications Act 1997* that developers that are corporations organise necessary pit and pipe for the development or premises, and this is generally required by carriers as a condition of provisioning their infrastructure in all instances. Developers also need to approach a carrier and obtain a contract for the provision of telecommunications infrastructure.

Developers should contract a carrier as early as possible, and no later than six months before the telecommunications services will be required. If a carrier is not contracted with a sufficient lead time, it may mean services cannot be provided when premises area occupied.

The developer or person organising construction may use any carrier they choose, but if they do not choose an alternative provider, they can contract with Telstra or nbn, which have the responsibility as infrastructure provider of last resort, depending on the circumstances.

Generally nbn is responsible in areas of its fixed line footprint where it has declared its network ready for service, where it has started rolling out the network and the network will be ready for service within 12 months, and where a development involves 100 or more lots or premises.

Telstra is generally responsible for all other developments and new premises, including new single premises in brownfield areas where nbn fixed line services are not yet being rolled out.

In the first instance, the developer or person organising construction should check nbn's network rollout map to determine if nbn is the appropriate infrastructure provider of last resort. nbn can be contacted to confirm its role via its website at www.nbnco.com.au/develop-or-plan-with-the-nbn/new-developments.html.

The developer or person organising construction can lodge an application for infrastructure provision with nbn, Telstra or other carrier online. Carriers usually charge for infrastructure to connect new premises—this can involve a backhaul charge, a charge to connect the building, a charge to connect a service (charged through a service provider) or a combination of these charges.

Generally the application will be accepted by the appropriate carrier as a matter of course, however, if responsibility for servicing the development or new premises cannot be resolved quickly with nbn and Telstra, the developer or person organising construction should contact the Construction Policy team in the Department of Communications and the Arts at greenfields@communications.gov.au.

If the developer or person organising construction contracts with Telstra to provide the infrastructure, Telstra would generally provide the same technology as other nearby premises which would be integrated into the nbn's network once the NBN roll out starts in that area. Services would then be migrated to the nbn network in accordance with the general migration processes described in this Framework.

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It is possible that the developer or person organising construction contracts with Telstra to provide the infrastructure to their premises but before construction nbn announces that it will be rolling out in the area. In these instances, nbn and Telstra will work with the developer on an appropriate solution.

If nbn has started rolling out fixed line network in an area and the ready-for-service date is within 12 months, nbn would generally be the infrastructure provider of last resort. In this context, the developer or person organising construction could approach nbn for a provisioning contract. nbn would then provision network capacity for the new development or premises.

In circumstances where a premises is occupied (or about to be occupied) in an area that is not yet ready for service (i.e. has no nbn network), end users are entitled to ask for and receive an interim voice-only service as part of Telstra's Universal Service Obligation (USO). The USO does not include broadband.

In the event of a delay, affected occupants may need to source an alternative broadband solution on an interim basis (e.g. via mobile broadband if available), until such time as the nbn network is available in the area. If nbn is given at least six-month's notice of the need for a connection, the developer makes the pit and pipe infrastructure available but the premises is occupied before nbn's network in the area overall is ready for service, affected occupants may be provided with an interim broadband service by nbn. Eligibility for interim services is assessed on a case by case basis.

Once the nbn network is ready for service, the occupant in the new premises is responsible for contacting their preferred retail service provider to order and activate their nbn service, following any instructions given by their service provider and working with their service provider to ensure their services work after they have been migrated in accordance with the general migration processes described in this Framework.

The carrier servicing a development should keep the developer and any affected consumers informed of delays and services availability timeframes.

In all instances, the Government's objective is that consumers should have ready access to modern telecommunications as quickly and simply as possible. In the event that a developer or person organising construction is concerned they are not getting services in a timely fashion in line with their contract, they can contact the Construction Policy team in the Department of Communications and the Arts at greenfields@communications.gov.au.

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Appendix

A. Other migration related information

A.i Key industry data flows to support migration

Key data flows between nbn, Telstra (as the disconnecting party) and retail service providers include:

- the Historical Footprint List (HFL) which details premises and other locations that can be served by nbn's access technologies, including the address information and the service class for each premises included in that list
- the Fixed line Footprint List (FFL) which contains any premises that have been passed by nbn's fixed line network (or which nbn intends to pass) and forms the basis of the final disconnection list that is prepared by Telstra Operations
- the final disconnection list provided by Telstra to Telstra's Wholesale customers and Telstra Retail
- customer service and location identification data
- order information flows between Telstra and its customers
- information on active Telstra local access network services between Telstra Wholesale and Telstra Wholesale customers
- order information flows between retail service providers and nbn (under the Wholesale Broadband Agreement)
- information relating to the managed disconnection arrangement's in Telstra's Migration Plan, including for information on 'In-Train Orders'.

A.ii nbn Public Information on Migration program

During the rollout of the NBN fixed line network, nbn is required to undertake certain public information activities to support the smooth migration of services operating over Telstra's local access network to retail service providers' NBN-based services.

These activities are undertaken throughout the rollout on a national and local level, through a number of channels including television, radio and print advertising, community events, social media, and letterbox drops. Its public education campaign aims to raise general awareness and understanding of the NBN and the disconnection of local access networks, and to promote the positive benefits that connecting to the NBN can have for customers and businesses.

Once an area has been declared Ready For Service, nbn advises residents and businesses in that area that NBN services are available via a series of incrementally urgent direct mail messages. These messages include important information about switching services to the NBN, focussing on the specific actions they need to take including contacting their preferred retail service provider to place an order. Customers also receive information regarding:

- their Disconnection Date
- registering their over the top services
- the consequences for existing customers if they do not take action before the Disconnection Date, including the potential for existing over the top services to be disconnected or no longer operate.

nbn also undertakes local area marketing activities and engages with local communities via their council, business and community organisations.

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The key focus of the Public Information on Migration activities is to ensure that, to the maximum extent practicable, all customers who have a service to be migrated receive advance notice of the planned migration, and are familiar with the actions required to be taken to migrate.

As part of these activities, nbn provides consistent messaging to retail service providers and other industry participants for their use to improve customer understanding.

A range of groups have a stake in the successful migration of customers to the nbn, and so Public Information on Migration activities are developed and conducted by nbn in consultation with the Australian Government and Telstra (as the existing infrastructure provider). As part of a continuous improvement process, the Public Information on Migration Governance Framework allows community, industry and government groups the opportunity to provide feedback on Public Information on Migration activities.

A.iii Telstra Access for Everyone program

As part of its carrier licence condition, Telstra has in place a package of products and arrangements for low-income consumers. This package, called Access for Everyone, comprises initiatives that address a wide range of low-income consumer needs, including concessions to help offset line rental charges for eligible pensioners. This is a largely self-selecting package, enabling all those in need of assistance and benefits to claim them. Further information is available at www.telstra.com.au/abouttelstra/commitments/access-for-everyone.

A.iv Centrelink Telephone Allowance

Certain customers may be eligible for the Telephone Allowance paid by Centrelink. The allowance is intended to help with the costs of maintaining a telephone and a home internet service. At the time of publishing, there are two rates of Telephone Allowance, a Basic Rate (single or couple combined) of $27.80 per quarter and a Higher Rate (single or couple combined) of $41.40 a quarter. For further information, including eligibility requirements for the Telephone Allowance, please see www.humanservices.gov.au/customer/services/centrelink/telephone-allowance or contact Centrelink on 132 468.

A.v Mandatory disconnection

The mandatory disconnection of services provided over Telstra's local access networks is a core part of the Australian Government's policy to achieve the structural separation of Telstra. The process for mandatory disconnections is governed by Telstra's Migration Plan, which is subject to ACCC approval and oversight. In approving the Migration Plan and its variations, ACCC must determine if the Plan complies with the Migration Plan Principles and Specified Matters Instrument (further information can be found below in Appendix A.vii).

There may remain subsections of the community who do not migrate before the Disconnection Date. A portion of these may not be taking up an NBN service and understand their Telstra local access network service will be disconnected.

For customers at premises in the NBN fixed line footprint in a rollout region that remain on the Telstra local access network at the Disconnection Date for that rollout region, disconnection of services on these networks must occur in line with Telstra's obligations under its Migration Plan. In summary, for these customers, disconnection will occur in the following way:

1.   Services at premises that are not In-Train Order Premises (excluding Special Services) will, so far as practicable, receive a soft dial tone service no later than fifteen business days after the Disconnection Date. While Telstra implements soft dial tone service for retail and wholesale voice

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line rental customers where practicable, it will be up to the Unconditioned Local Loop Service based operators to decide whether they also wish to provide customers with soft dial tone or similar service restriction. Therefore while most premises will receive a soft dial tone, it will depend on the customer's retail service provider.

2.   Where a premises is connected to the NBN shortly before the Disconnection Date, or where there is a valid and open order for an NBN service at the premises and that order is received by nbn up to 25 business days after the Disconnection Date, existing Telstra local access network services at the premises will be kept in place for a period after the Disconnection Date. For the most part, this allows nbn and retail service providers a period of up to 175 business days after the Disconnection Date to complete the connection of an order and activation of an NBN service before the final backstop date at which any Telstra local access network services (other than Special Services) are mandatorily disconnected.

3.   If customers do not take action within sufficient time to have their retail service provider order placed with nbn and their NBN connection completed by their retail service provider, they risk disruption to their service. Failure to take any action within the timeframes specified above will result in their Telstra local access network service proceeding to be permanently disconnected shortly after the Disconnection Date.

Services provided over Optus' HFC network are also subject to mandatory disconnection, generally within 18 months of the Ready For Service date, although this period may vary in some cases.

A.vi Migration and the managed disconnection process—key documents
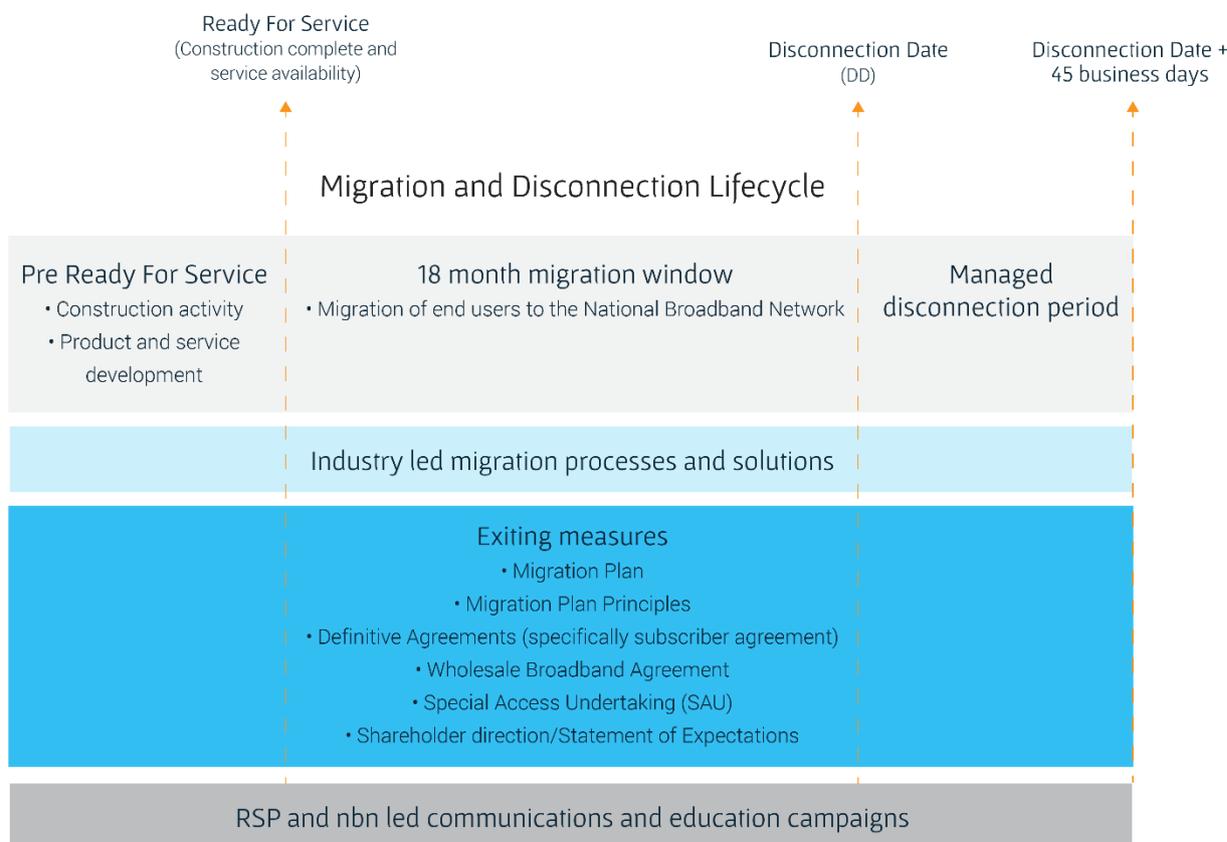
NB. This diagram is a simplification of the actual arrangements for diagrammatic purposes only.

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There are a number of commercial, regulatory and other arrangements that relate to aspects of the processes for disconnecting customers from Telstra local access networks and migrating them to the NBN. The summary below has been provided to assist stakeholders to better understand the current migration governance arrangements.

Definitive Agreements between nbn and Telstra

The Definitive Agreements set out the commercial arrangements for the disconnection of premises in the NBN fixed line footprint from Telstra's local access network (and also disconnection of interim wireless and interim fibre services provided by Telstra to premises in nbn's fixed line footprint). It also sets out nbn access to certain Telstra infrastructure. These arrangements facilitate the structural separation of Telstra. The disconnection arrangements are set out in the Disconnection Protocols which are part of the Definitive Agreements.

Migration Plan Principles and Specified Matters Instrument

The *Telecommunications Act 1997* provides that the Minister for Communications may make the Migration Plan Principles and associated Specified Matters Instrument, which set the required scope of Telstra's Migration Plan. The ACCC must accept Telstra's Migration Plan if it is satisfied the Plan complies with the Migration Plan Principles.

The Specified Matters Instrument sets out matters which may, or may not, be included in Telstra's Migration Plan and any additional matters not dealt with in the Migration Plan Principles.

Telstra's Migration Plan

On 27 February 2012, the ACCC approved Telstra's Migration Plan which sets out the actions Telstra will take when disconnecting customers from its local access networks. Disconnection under the Migration Plan gives effect to Telstra's Structural Separation Undertaking and reflects the commercial arrangements set out in the Disconnection Protocols.

Telstra's Migration Plan seeks to provide wholesale customers with control over the timing of the migration of their customers' services to nbn's network (to the extent they can), although this migration must occur within the 18 month migration period. Telstra has committed to using existing 'business as usual' processes where possible for disconnecting premises. Telstra lodged a draft varied Migration Plan with the ACCC in May 2016, which was approved by the ACCC on 21 July 2016. For more information, please visit: www.accc.gov.au/regulated-infrastructure/communications/industry-reform/telstras-migration-plan/variation-to-the-migration-plan-approved.

nbn's Special Access Undertaking

nbn's Special Access Undertaking sets out the prices and non-price terms and conditions for access to its fibre, fixed wireless and satellite networks and related services. The ACCC accepted nbn's Special Access Undertaking under section 152CBA of Part XIC of the *Competition and Consumer Act 2010* on 13 December 2013. It expires in 2040.

For more information, please visit: www.nbnco.com.au/sell-nbn-services/special-access-undertaking-sau.html.

nbn's Wholesale Broadband Agreement

nbn's Wholesale Broadband Agreement is its standard form access agreement for the supply of NBN services to retail service providers. The terms of the Wholesale Broadband Agreement are consistent with those set out in nbn's Special Access Undertaking. For more information, please visit: www.nbnco.com.au/sell-nbn-services/supply-agreements/wba2.html.

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Shareholder direction/Statement of Expectations

nbn is a Government Business Enterprise and is wholly-owned by the Australian Government. From time to time, the Government issues nbn with a Statement of Expectations to guide the next steps in delivering on the Government's NBN policy. The current Statement of Expectations (August 2016) directs nbn by saying that nbn together with retail service providers should work to ensure a high quality customer experience through the migration and on-going service periods. For more information, please visit: www.nbnco.com.au/corporate-information/about-nbn-co.html.

Public Information on Migration

As part of its activities, nbn is required to conduct public information activities to ensure to the maximum extent practicable that every customer who has a service to be migrated to NBN receives advance notice of the planned migration, is familiar with the action required to migrate, and, unless they make a decision that they do not wish to take a NBN service, initiates the necessary migration process prior to the disconnection of the relevant service to their premises. For further details on these public information activities, refer to Appendix A.ii.

nbn and Optus Subscriber Agreement

The nbn and Optus Subscriber Agreement sets out commercial arrangements for the disconnection of premises in the Optus HFC footprint.

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A.vii NBN service class classifications

Fibre to the premises (FTTP)

Service class	Service class definition	Description
Service class 0 (SC0)	The location is planned to be serviceable by nbn's fixed line network.	The premises is in a NBN Ready For Service area, however this premises is currently not NBN serviceable for the purpose of nbn's fixed line network. Additional work is required to make this premises serviceable.
Service class 1 (SC1)	The location is serviceable by nbn's fixed line network, however the NBN Utility Box located outside the premises (also known as the Premises Connection Device (PCD)) is not installed or the NBN Connection Box located inside the premises (also known as the NTD) is not in installed.	A physical connection is not in place between the network access point and the PCD, including where: • the drop fibre has not been installed, or • some augmentation or patching between the PCD and network access point is required.
Service class 2 (SC2)	The location is serviceable by nbn's fixed line network, the PCD is installed, but no NTD is in place.	A physical connection is in place between the network access point and the PCD (including where the drop fibre and PCD are installed) and no augmentation or patching between the PCD and the network access point is required.
Service class 3 (SC3)	The location is serviceable by nbn's fixed line network, the PCD and NTD are installed.	A physical connection is in place between the network access point and the PCD and no augmentation or patching between the PCD and the network access point is required. The NTD has been installed, is receiving mains power and can be made operational. nbn can remotely provision the supply of telecommunication services.

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Fibre to the node (FTTN) and fibre to the basement (FTTB)

Service class	Service class definition	Description
Service class 10 (SC10)	The location is planned to be serviceable by copper.	The premises is currently not NBN serviceable for the purpose of nbn's fixed line network.
Service class 11 (SC11)	The location is planned to be serviceable by copper, copper lead-in required.	A physical connection is in place between the nbn exchange and node. No physical infrastructure in place in the premises on the existing copper network.
Service class 12 (SC12)	The location is serviceable by copper, jumpering at pillar is required.	nbn is required to attend the site to make a physical connection between the nbn node and copper pillar.
Service class 13 (SC13)	The location is serviceable by copper, infrastructure in place.	A physical connection is in place between the exchange, the node, the pillar and the premises. nbn can remotely provision the supply of telecommunication services.

Hybrid-fibre coaxial (HFC)

Service class	Service class definition	Description
Service class 20 (SC20)	Premises within HFC footprint, but not serviceable	The premises is currently not NBN serviceable for the purpose of nbn's fixed line network.
Service class 21 (SC21)	Premises within HFC footprint, with available HFC street plant. - no Lead-in or PCD	A tap is available outside the premises but no physical connection (lead-in not in place between the tap and the premises boundary (external PCD))
Service class 22 (SC22)	Premises within HFC footprint, with Lead-in/PCD installed.- no Internal tier cables or Wall-plate/socket	A physical connection (lead-in) is in place between the tap outside the premises boundary and the external PCD within the premises boundary
Service class 23 (SC23)	Premises within HFC footprint, with PCD, internal tie-cable(s) from PCD to Wall-plate/socket	A physical connection (tie-cable) is in place between the external PCD and the internal wall-plate
Service class 24 (SC24)	Premises within HFC footprint, with PCD, internal tie-cable(s) from PCD to HFC-NTD	A physical connection (fly-lead) is in place between the internal wall-plate and the internal HFC NTD (NBN Connection Box)

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B. Glossary

Acronyms

Acronym	Full name
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
FTTB	Fibre to the basement
FTTN	Fibre to the node
HFC	Hybrid fibre coaxial
MAF	Migration Assurance Framework
MAP	Migration Assurance Policy
nbn	NBN Co Limited
NBN	National Broadband Network
NTD	Network Termination Device
PCD	Premises Connection Device
TIO	Telecommunications Industry Ombudsman
VoIP	Voice over Internet Protocol

Definitions

Access technology means an access technology used by nbn to connect a premises or a location to the NBN fixed line network, which may include:

(a)   fibre to the premises
(b)   fibre to the node
(c)   fibre to the basement
(d)   hybrid fibre coaxial cable.

Application service provider means a supplier or provider of any over the top services or applications supplied over a telecommunications network or using a carriage service, including (without limitation):

(a)   medical alarms
(b)   emergency alarms (e.g. fire alarms and indicator panels)
(c)   payment services (ATMs, EFTPOS, HICAPS)
(d)   lift phones
(e)   disability services and equipment
(f)   remote infrastructure.

Assurance processes means migration processes, and the processes and measures that ensure networks, products, services and operational capability exist, (and to the extent practicable) enable customers to have continuity of supply during disconnection from telecommunications networks and migration to the NBN.

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Brownfields are pre-existing commercial or residential sites with access to existing telecommunications infrastructure where no previous Open Access Wholesale fibre access has been provided to premises.

Business as usual refers to the normal conduct of business irrespective of a different working environment.

Business customers refers to a category of customers who order a service for either their own business or on behalf of an organisation they work for. Business customers include (without limitation):

(a)   home businesses
(b)   small businesses
(c)   medium businesses
(d)   large enterprises
(e)   government departments and agencies
(f)   non-government organisations.

Cease Sale refers to the regulatory arrangements set out in Telstra's Migration Plan that prohibit Telstra from connecting new local access network services to premises that have been declared Ready For Service in the NBN fixed line footprint.

Communications Alliance guidelines are documents produced for the telecommunication industry by Communications Alliance with which compliance is voluntary (although they may be enforceable through reference to the Guideline in a contract or through adoption by a regulator). They cover a range of industry topics including consumer, operational and technical matters. The industry guideline of main relevance to the MAF is NBN Migration Management Guideline G652:2016. For more information please visit: www.commsalliance.com.au/Documents/all/guidelines/G652.

Customer access module means a device that provides ring tone, ring current and battery feed to customers' equipment.

Customer premises equipment refers to a service provider's or customer's equipment located in the customer's premises.

Disconnection Date refers to, for a rollout region, the date that is generally 18 months after the region was declared Ready For Service by nbn and specified as the Disconnection Date for that region in the nbn Rollout Schedule published by Telstra from time to time in accordance with the Telstra Migration Plan.

Drop fibre is the fibre from the Network Access Point to the termination point at individual premises.

Customers are the final downstream customers of retail service providers. There are two broad types of customers—business customers and residential customers.

Fibre to the basement (FTTB) refers to an access technology involving the delivery of telecommunications services via a fibre optic cable from where nbn installs active equipment in the basement of an apartment block or complex. The final connection will delivered from this point to each apartment via existing copper cables using VDSL2 technology.

Fibre to the node (FTTN) refers to an access technology involving the delivery of telecommunications services via a fibre optic cable that will run from the exchange to the nodes (also called cabinets) in a local area. The final connection will be delivered via existing copper cables using vectored VDSL2 technology.

Fibre to the premises (FTTP) refers to an access technology involving the delivery of telecommunications services via a fibre optic cable from the exchange to an customer's premises.

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Customers in this footprint will have an NBN Utility Box (or PCD) and an NBN Connection Box (or NTD) installed at the premises to access the network.

Fire and Lift Register refers to the monitored fire alarm and lift phone register operated by nbn. For more information, please visit: www.nbnco.com.au/connect-home-or-business/information-for-home/device-compatibility/fire-and-lift-register.html.

Full national number (FNN) is an Australian fixed or mobile number in its 10 digit format, including the area code, starting with 0.

Hybrid fibre coaxial (HFC) is one of many technologies in the multi-technology mix that nbn will utilise. Under this technology, fibre will enter a distribution area where nbn installs an NBN Optical Node to deliver the final connection over cable TV/ coaxial network.

Industry Guidance Notes are documents created by Communications Alliance (sometimes with involvement of other relevant stakeholders) to address a need for further guidance and/or clarification for a specific topic that has caused confusion among industry participants in the past or has the potential to do so. The industry guidance note of most relevance to the MAF is IGN 004 Migration of Legacy Services and IGN 008 NBN FTTB/N Migration Processes.

In-Train Order is an order for an NBN service at a premises that is made NBN ready shortly before the Disconnection Date, or where there is a valid and open order for a NBN service at the premises which is received by nbn up to 25 business days after the Disconnection Date. Premises with In-Train Orders are provided with up to an extra 175 business days after the Disconnection Date to complete their migration activities. This is further defined in Telstra's Migration Plan.

Medical Alarm Register refers to the medical alarm register operated by nbn. For more information please visit: www.nbnco.com.au/connect-home-or-business/information-for-home/device-compatibility/medical-alarm-register.html.

Migration of Monitored Fire Alarms and Lift Phone Services Good Practice Guide[11] is a joint industry guide which sets out the roles and responsibilities of each party involved in the monitored fire alarm and lift phone migration process, the actions required to identify and successfully migrate services, and associated technical solutions to support migration processes. The Guide is expected to be released in December 2016.

Migration window for a rollout region, means the 18 month period commencing on the Ready For Service date and ending on the Disconnection Date for that rollout region.

Multi dwelling unit (MDU) means building or structure which comprises more than one premises (whether used for residential, business, government or other purposes) and which may include common areas.

Multi-technology mix utilises a mix of technologies to provide customers with access to telecommunication services using fibre optic cables.

NBN Connection Box, also known as the Network Termination Device (NTD), is a network termination device located inside the premises. The NBN Connection Box is owned, controlled, or operated by, or on behalf of nbn. It connects a premises to the nbn FTTP Network.

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[11] www.communications.gov.au/documents/migration-monitored-fire-alarm-and-lift-phone-services-good-practice-guide

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NBN fixed line network means any telecommunications network that is owned, controlled, or operated by, or on behalf of, nbn or a related entity of nbn. This includes FTTP, FTTB, FTTN, and HFC access technologies.

NBN Migration Management Industry Guideline refers to the document that was developed by the Communications Alliance Working Committee (WC63) to clarify the roles and responsibilities of relevant parties in the migration process and was first released on 22 December 2014.

NBN Utility Box, also known as the Premises Connection Device (PCD), is a device located on the exterior of a premises using FTTP and HFC access technology. It is the connection point for the external fibre from the street to the edge of the premises. An internal fibre is then connected from the PCD to the NTD installed inside the user's premises.

Network access point refers to the point on a local fibre cable where the drop cable is connected.

Network Termination Device (NTD) is also known as the NBN Connection Box. See NBN Connection Box for definition.

Open access network refers to a horizontally layered network architecture in telecommunications, and the business model that separates the physical access to the network from the delivery of services. The same open access network will be used by a number of different providers that share the investments and maintenance cost.

Over the top services are operated by application service providers over the top of voice telephony services on Telstra's local access networks. Examples can include medical alarms, security alarms, fire indicator panels, lift phones and payment services (EFTPOS and ATMs).

Parent rollout region, means, in respect of a Service Continuity Region, that rollout region that premises in the Service Continuity Region had formed part of before being removed to form the Service Continuity Region at 6 months before the Disconnection Date. For clarity, a Service Continuity Region cannot itself be a parent rollout region.

Passed, in relation to a premises, means that a premises is connected to, or nbn had determined is capable of being connected to, a NBN fixed line network.

Pay TV means subscription based television services.

Premises means each of the following:

(a)   an addressable location currently used on an on-going basis for residential, business (whether for profit or not), government, health or educational purposes
(b)   a school as defined by the Department of Education and Training
(c)   a location within a new development at an addressable location for which nbn is the wholesale provider of last resort
(d)   an addressable location for a standard telephone service which is activated in compliance with the universal service obligation
(e)   a payphone at a location at which Telstra is required to install or maintain a payphone in accordance with an instrument made under section 12EF of the *Telecommunications (Consumer Protection and Service Standards) Act 1999*
(f)   a location which nbn is directed by the Minister to connect to nbn's fixed line network
(g)   a multi dwelling unit common area where, and for so long as, it is notified by nbn to Telstra as being included in the fixed line footprint in a rollout region.

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Premises Connection Device (PCD) is also known as the NBN Utility Box. See NBN Utility Box for definition.

Priority assistance is designed to help customers who have (or are living with someone who has) a diagnosed life-threatening medical condition, and whose life may be at risk without access to a fully operational phone service. For more information, please visit www.telstra.com.au/consumer-advice/customer-service/priority-assistance.

Public Switched Telephone Network refers to the standard home telephone service, delivered over underground copper wires.

Ready For Service means an area is ready to accept/provision service orders from retail service providers for serviceable premises.

Residential customers refers to customers who order a service for their home or personal use.

Retail service provider are those service providers that provide telecommunications services and have a direct customer relationship with customers.

Rollout region refers to an area (which may be a service area module) that nbn intends to serve using the NBN fixed line network.

Service area module is an area, selected by nbn in accordance with nbn's design rules that covers a maximum of 5,000 premises.

Serviceability means the ability of one of nbn's retail service provider customers to place a NBN connection order into nbn's ordering systems for a specified premises.

Service continuity refers to an customer's ability to access substitute telecommunications services in a seamless manner during the 18 month migration window to the NBN, and after the Disconnection Date.

Service Continuity Region means a rollout region created six months before the Disconnection Date for that rollout region. Premises in a Service Continuity Region are given a new Disconnection Date **for Telstra's local access network** that is six months later than the original Disconnection Date for the parent rollout region

Soft dial tone means a service restriction that allows an customer at a premises with a line rental service to call Telstra's customer service and fault centre numbers and to make emergency calls, but does not otherwise allow customers to make or receive other calls, or to receive other network services.

Telecommunications service aggregator refers to a telecommunication provider that has established agreements with their wholesale provider to resell their services to customers.

Telstra's local access networks refer generally to Telstra's copper and HFC networks.

Telstra Migration Plan means the Migration Plan given by Telstra Corporation Limited to the ACCC under section 577BDA of the Telecommunications Act, as amended from time to time.

Unconditioned Local Loop Service means the use of unconditioned communications wire between the boundary of a telecommunications network at an customer's premises and a point on a telecommunications network that is a potential point of interconnection located at or associated with a customer access module (refers to a device that provides ring tone, ring current and battery feed to customers' equipment) and located on the customer side of the Customer Access Module.

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Unconditioned Local Loop Service 161-number refers to a ten character number issued by Telstra to identify the unconditioned metallic path that constitutes the unconditioned local loop.

UNI-V refers to the port on an NBN Connection Box (also known as the NTD), where home-phones can be connected.

White paper refers to a paper published by nbn which sets out a proposal for a Special Service product release in accordance with the Subscriber Agreement between nbn and Telstra.

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