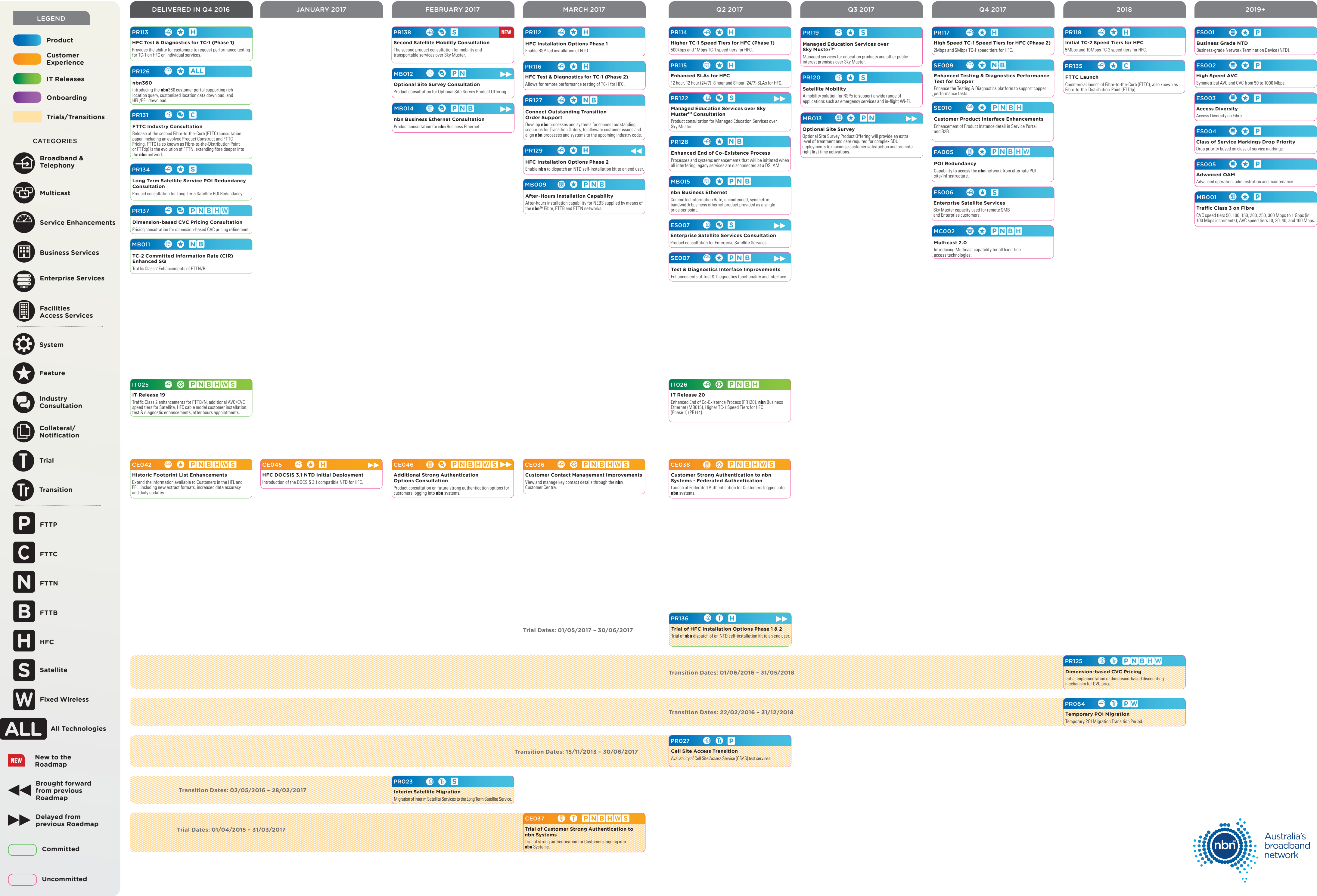


Integrated Product Roadmap as at January 2017



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ABOUT THIS DOCUMENT

Expanding on nbn's Initial Roadmap, which sets out key information and targeted timelines in relation to nbn's initial planned Product, Product Component and Product Feature releases, nbn has developed an Integrated Product Roadmap. The aim of the Integrated Product Roadmap is to provide a coordinated view of customer experience, IT enablement and on-boarding developments with the

details of the product feature releases. It should be noted that the forward looking statements set out in the Integrated Product Roadmap represent nbn's current position at the time of publication. This may change through further development and is not binding.

NEW			
PR138	Second Satellite Mobility Consultation	PR137	Dimension-based CVC Pricing Consultation
SE007	Test & Diagnostics Interface Improvements		
CHANGED			
MB012	Optional Site Survey Consultation	CE045	HFC DOCSIS 3.1 NTD Initial Deployment
PR122	Managed Education Services over Sky Muster Consultation	MB013	Optional Site Survey
CE046	Additional Strong Authentication Options Consultation		
PR129	HFC Installation Options Phase 2	MB014	nbn Business Ethernet Consultation
PR136	Trial of HFC Installation Options Phase 1 & 2	ES007	Enterprise Satellite Services Consultation

BROADBAND AND TELEPHONY

PRO23 INTERIM SATELLITE MIGRATION

Migration of Interim Satellite Services to the Long Term Satellite Service.

Currently **nbn** is providing services to some of the most remote homes in Australia via the Interim Satellite Service. The Interim Satellite Service delivers an up to 6/1Mbps wholesale Layer 3 service. When the Long Term Satellite Service is introduced, the Interim Services will need to be migrated to the next generation **nbn** owned Satellite which **nbn** currently intends will deliver Layer 2 wholesale speeds of up to 12/1 Mbps and 25/5 Mbps.

PRO27 CELL SITE ACCESS TRANSITION

Availability of Cell Site Access Service (CSAS) test services. Availability of CSAS test services commencing 1 July 2016 and finishing 30 June 2017, which will enable RSPs to test the features of the CSAS product developed for commercial launch.

PRO64 TEMPORARY POI MIGRATION

Temporary POI Migration Transition Period. Migration commencement of CSAs currently serviced by Temporary POIs to Permanent POIs. Introduction of migration tools to assist Customer migrating one or more Ordered Products from a Temporary POI to a Permanent POI.

PR112 HFC INSTALLATION OPTIONS PHASE 1

Enable RSP-led installation of NTD. HFC Installation Options Phase 1 allows for RSPs to take control of the NTD installation process for certain Service Classes. This may be either installation by an RSP technician or End User self-installation.

PR113 HFC TEST & DIAGNOSTICS FOR TC-1 (PHASE 1)

Provides the ability for customers to request performance testing for TC-1 on HFC on individual services.

PR114 HIGHER TC-1 SPEED TIERS FOR HFC(PHASE 1)

500kbps and 1Mbps TC-1 speed tiers for HFC. Currently the HFC access platform supports low-speed TC-1 (150kbps & 300kbps). These TC-1 tiers are typically used by service providers for the provision of one or two voice services. The introduction of additional TC-1 speed tiers expands this to support additional voice services for small and medium business.

PR116 HFC TEST & DIAGNOSTICS FOR TC-1 (PHASE 2)

Allows for remote performance testing of TC-1 for HFC.

PR117 HIGH SPEED TC-1 SPEED TIERS FOR HFC(PHASE 2)

2Mbps and 5Mbps TC-1 speed tiers for HFC. This item expands on the functionality introduced in PR114 - Higher TC-1 Speed Tiers for HFC (Phase 1) by offering 2Mbps and 5Mbps speed tiers, further enhancing the voice services available for medium and large business.

PR118 INITIAL TC-2 SPEED TIERS FOR HFC

5Mbps and 10Mbps TC-2 speed tiers for HFC. Currently the HFC access platform does not support mid-speed committed information rate services. The introduction of these TC-2 tiers enables this capability on the HFC access platform. TC-2 speed tiers are typically used by service providers for the provision of Video Conferencing and medium business services.

PR119 MANAGED EDUCATION SERVICES OVER SKY MUSTER™

Managed services for education products and other public interest premises over Sky Muster. Enhanced services for education including support for video and multicast, and managed plans to allow unmetered data over Sky Muster.

PR120 SATELLITE MOBILITY

A mobility solution for RSPs to support a wide range of applications such as emergency services and in-flight Wi-Fi. A mobility solution for RSPs to support a wide range of applications such as emergency services, health and education, transport industry and in-flight Wi-Fi.

PR122 MANAGED EDUCATION SERVICES OVER SKY MUSTER™ CONSULTATION

Product consultation for Managed Education Services over Sky Muster. Consultation for providing enhanced services for education including support for video and Multicast, and managed plans to allow unmetered data over Sky Muster.

PR125 DIMENSION-BASED CVC PRICING

Initial implementation of dimension-based discounting mechanism for CVC price. Initial implementation of a CVC price discounting mechanism that will reduce the effective CVC unit price as network dimensioning increases for a period of 24 months.

PR127 CONNECT OUTSTANDING TRANSITION ORDER SUPPORT

Develop **nbn** processes and systems for connect outstanding scenarios for Transition Orders, to alleviate customer issues and align **nbn** processes and systems to the upcoming industry code. Implement the ability for customers to place a Transition Order in a Connect Outstanding use case as defined by Industry Code where the service identifier required to be matched for successful order validation may not be known and is currently a block to placing an order.

PR128 ENHANCED END OF CO-EXISTENCE PROCESS

Processes and systems enhancements that will be initiated when all interfering legacy services are disconnected at a DSLAM. Enhancements to the process for managing network upgrades in support of the ending of the co-existence period. These changes will ensure customers have visibility of the co-existence upgrades and the status of premises for activation and assurance activities. In addition, **nbn** will be introducing the capability to commence removal of inactive exchange pair connections.

PR129 HFC INSTALLATION OPTIONS PHASE 2

Enable **nbn** to dispatch an NTD self-installation kit to an end user. HFC Installation Options Phase 2 facilitates **nbn** dispatching an NTD self-installation kit directly to the end user for SC23 premises. It will also instigate charging the RSP for an **nbn** professional truck roll for SC23 premises.

PR131 FTTC INDUSTRY CONSULTATION

Release of the second Fibre-to-the-Curb (FTTC) consultation paper, including an evolved Product Construct and FTTC Pricing. FTTC (also known as Fibre-to-the-Distribution Point or FTTd) is the evolution of FTTN, extending fibre deeper into the **nbn** network.

PR135 FTTC LAUNCH

Commercial launch of Fibre-to-the-Curb (FTTC), also known as Fibre-to-the-Distribution-Point (FTTd). Launching **nbn**'s Fibre-to-the-Curb (FTTC) product variant. FTTC is the evolution of FTTN, extending fibre deeper into the **nbn** network. FTTC delivers fibre to the curb, closer to the end user premises than FTTN, while leveraging the existing copper as the lead-in.

PR136 TRIAL OF HFC INSTALLATION OPTIONS PHASE 1 & 2

Trial of **nbn** dispatch of an NTD self-installation kit to an end user.

PR137 DIMENSION-BASED CVC PRICING CONSULTATION

Pricing consultation for dimension-based CVC pricing refinement.

PR138 SECOND SATELLITE MOBILITY CONSULTATION

The second product consultation for mobility and transportable services over Sky Muster. The second product consultation for a mobility solution for RSPs to support a wide range of applications such as emergency services, health and education, transport industry and in-flight Wi-Fi over Sky Muster.

ES006 ENTERPRISE SATELLITE SERVICES

Sky Muster capacity used for remote SMB and Enterprise customers.

nbn is planning to provide a range of Quality of Service(QoS) based Satellite Services targeted at the Enterprise, Small Business and Specialty Service markets using capacity on the new **nbn** 'Sky Muster' HTS satellite infrastructure hereafter referred to as Enterprise Services. An outsourced Managed Service Provider (MSP) model is proposed. The intent is that the MSP will provide wholesale **nbn** branded services for Access Seekers to on-sell to eligible end users. The MSP will provide Access Seeker service installation, support, and service management with reporting back to **nbn** for ongoing compliance. Services will target bandwidth and internet access.

ES007 ENTERPRISE SATELLITE SERVICES CONSULTATION

Product consultation for Enterprise Satellite Services.

CE036 CUSTOMER CONTACT MANAGEMENT IMPROVEMENTS

View and manage key contact details through the **nbn** Customer Centre. Enhancement to the **nbn** Customer Centre allowing the Customer to review and manage key nbn contact details including: · Updating Customer points of contact (by a user with appropriate authority) · View all Customer and **nbn** points of contact (by any Authorised User).

CE045 HFC DOCSIS 3.1 NTD INITIAL DEPLOYMENT

Introduction of the DOCSIS 3.1 compatible NTD for HFC.

IT RELEASES

IT025 IT RELEASE 19

Traffic Class 2 enhancements for FTTB/N, additional AVC/CVC speed tiers for Satellite, HFC cable model customer installation, test & diagnostic enhancements, after hours appointments. Introduction of Traffic Class 2 CIR enhancements for NEBS supplied by FTTB or FTTN. Introduction of additional AVC and CVC speed tiers and classes for NEBS supplied by Satellite. Test & Diagnostic enhancements including HFC loopback. Support for After Hours Appointments.

IT026 IT RELEASE 20

Enhanced End of Co-Existence Process (PR128). **nbn** Business Ethernet (MB015). Higher TC-1 Speed Tiers for HFC (Phase 1) (PR114). Enhanced End of Co-Existence Process (PR128). Introduction of **nbn** Business Ethernet including a single price per point business product and higher speed TC-2 for FTTB and FTTN. Introduction of higher speed TC-1 for HFC.

MULTICAST

MC002 MULTICAST 2.0

Introducing Multicast capability for all fixed-line access technologies. Expanding capabilities of the Multicast feature to support all fixed-line access technologies. Domain 0 access.

SERVICE ENHANCEMENTS

PR126 NBN360

Introducing the **nbn**360 customer portal supporting rich location query, customised location data download, and HFL/ PFL download. Introduce the **nbn**360 customer location self-service portal providing: -Flexible location queries that resolve to either an individual matching address or a set of matching addresses. -Export of location information with the ability to specify relevant information attributes. -Retrieval of standard **nbn** HFL/PFL datasets.

SE007 TEST & DIAGNOSTICS INTERFACE IMPROVEMENTS

Enhancements of Test & Diagnostics functionality and Interface. Enhancement of Test & Diagnostics Interface to minimise user input, automate testing and provision of relevant information at an appropriate level of detail depending on user requirement. Expand functionality for integration with B2B.

SE009 ENHANCED TESTING & DIAGNOSTICS PERFORMANCE TEST FOR COPPER

Enhance the Testing & Diagnostics platform to support copper performance tests. Enhance the Testing and Diagnostics platform to enable copper performance tests for Frame Delay, Frame Loss and Frame Delay variation.

SE010 CUSTOMER PRODUCT INTERFACE ENHANCEMENTS

Enhancement of Product Instance detail in Service Portal and B2B. Enhancement of Product Instance detail in Service Portal and B2B. This will enable a consolidated or 'single-pane of glass' view in Service Portal, and expose the content for consumption via B2B.

CE042 HISTORIC FOOTPRINT LIST ENHANCEMENTS

Extend the information available to Customers in the HFL and PFL, including new extract formats, increased data accuracy and daily updates. Extend the information available in the HFL and PFL. Additional daily updates. Increased data accuracy. Multiple additional extract formats made available. Existing HFL and PFL formats will continue to be available.

BUSINESS SERVICES

PR115 ENHANCED SLAS FOR HFC

12 hour, 12 hour (24/7), 8 hour and 8 hour (24/7) SLAs for HFC.

MB001 TRAFFIC CLASS 3 ON FIBRE

CVC speed tiers 50, 100, 150, 200, 250, 300 Mbps to 1 Gbps (in 100 Mbps increments) AVC speed tiers 10, 20, 40, and 100 Mbps.

Medium Business Phase 2 plans to include the release of symmetric bandwidth profiles with the introduction of Traffic Class 3. Traffic Class 3 has been designed to provide a committed capacity with an ability to burst to a peak speed. The symmetric Traffic Class 3 AVC bandwidths being introduced are: • 10 Megabits per second, 20 Megabits per second, 40 Megabits per second and 100 Megabits per second. The symmetric Traffic Class 3 CVC bandwidths being introduced are: • 50 Megabits per second, 100 Megabits per second, 150 Megabits per second, 200 Megabits per second, 250 Megabits per second, 300 Megabits per second to 1 Gigabit per second (in 100Mbps increments).

MB009 AFTER-HOURS INSTALLATION CAPABILITY

After-hours installation capability for NEBS supplied by means of the **nbn**™ Fibre, FTTB and FTTN networks. **nbn** is proposing to introduce an after-hours installation capability for NEBS for those business end users who are unable to migrate to the **nbn** network during normal business hours of operation. The new appointment windows which are being contemplated as part of this new after-hours installation capability are as follows: 1. 5pm - 9pm (Monday to Friday) 2. 9am - 12pm (Saturday and Sunday) 3. 1pm - 5pm (Saturday and Sunday)

MB011 TC-2 COMMITTED INFORMATION RATE (CIR) ENHANCED SQ

Traffic Class 2 Enhancements of FTTN/B. Proposed enhancements to Traffic Class 2 on FTTN/B following completion of the **nbn**™ White Paper number 1 for Ethernet Lite/ Wholesale Business (BDSL) are being introduced to further assist with the migration of existing Designated Special Services.

MB012 OPTIONAL SITE SURVEY CONSULTATION

Product consultation for Optional Site Survey Product Offering. The principle for the development of the Optional Site Survey Product Offering is off the back of customer deep dives with business customers who reside in complex SDU dwellings. It was confirmed that additional feasibility/walkout activities are required to ensure right-first-time installations and to provide the industry with the confidence of migrating their complex business premises onto the **nbn**.

MB013 OPTIONAL SITE SURVEY

Optional Site Survey Product Offering will provide an extra level of treatment and care required for complex SDU deployments to maximise customer satisfaction and promote right first time activations. The principle for the development of the Optional Site Survey Product Offering is off the back of customer deep dives with business customers who reside in complex SDU dwellings. It was confirmed that additional feasibility/walkout activities are required to ensure right-first-time installations and to provide the industry with the confidence of migrating their complex business premises onto the **nbn**.

MB014 NBN BUSINESS ETHERNET CONSULTATION

Product consultation for **nbn** Business Ethernet. Medium Business Phase 4 plans to introduce: **nbn** Business Ethernet. A single price per point business product that will provide a committed information rate (CIR), uncontended, symmetric bandwidth service. The **nbn** Business Ethernet bandwidth profiles planned to be introduced are: 5/5Mbps; 10/10Mbps; 20/20Mbps;30/30Mbps; 40/40Mbps; 50/50Mbps; 60/60Mbps; 70/70Mbps; 80/80Mbps; 90/90Mbps;100/100Mbps. FTTN and FTTB shall provide bandwidth profiles from 5/5Mbps to 40/40Mbps; with FTP profiles available from 5/5Mbps to 100/100Mbps.

MB015 NBN BUSINESS ETHERNET

Committed Information Rate, uncontended, symmetric bandwidth business ethernet product provided as a single price per point. A single price per point business product that will provide a committed information rate (CIR), uncontended, symmetric bandwidth service. The **nbn** Business Ethernet bandwidth profiles being introduce are: 5/5Mbps; 10/10Mbps; 20/20Mbps; 30/30Mbps;40/40Mbps; 50/50Mbps; 60/60Mbps; 70/70Mbps; 80/80Mbps; 90/90Mbps; 100/100Mbps. FTTN and FTTB shall provide bandwidth profiles from 5/5Mbps to 40/40Mbps; with FTP profiles available from 5/5Mbps to 100/100Mbps.

ENTERPRISE SERVICES

ES001 BUSINESS GRADE NTD

Business-grade Network Termination Device (NTD). The business-grade Network Termination Device used for the Enterprise Ethernet Service is proposed to be backwards compatible to support a Gigabit Passive Optical Network uplink interface. This allows Service Providers to build a solution with a device that is capable of delivering features and bandwidths consistent with the NFAS offering, while at the same time enabling an efficient and transparent migration path to direct fibre point-to-point (Enterprise Ethernet Service) when their end-users/ customers require additional bandwidth and scalability. **nbn** will release a full description of the Business NTD device including additional technical details closer to launch.

ES002 HIGH SPEED AVC

Symmetrical AVC and CVC from 50 to 1000 Mbps. **nbn**'s Enterprise Ethernet Service is intended to support the needs of large, more complex enterprises and government customers, by providing very high capacity, transparency and redundancy. **nbn**'s Enterprise Ethernet Service is intended to be delivered via a dedicated point-to-point Access Fibre from the end-user's premises to the Fibre Access Node using a business-grade Network Termination Device, with symmetrical speeds from 50 Megabits per second to in excess of one Gigabit per second.

ES003 ACCESS DIVERSITY

Access Diversity on Fibre. In addition to the Standard Single Uplink connectivity, the Enterprise Ethernet Service plans to provide access diversity/resiliency options to enable high and ultra-high service availability. These will include: 1. Dual Diverse Uplink Access with Single Network Aggregation Element – Single Network Termination Device connected using diverse lead-in fibres, distribution fibres – using a single port from different line termination cards on the same Network Aggregation element at the Fibre Access Node site. 2. Dual Diverse Uplink Access with Dual Network Aggregation Elements – Single Network Termination Device connected using diverse lead-in fibres, distribution fibres – using a single port from different line termination cards on physically separate and diverse Network Aggregation elements. 3. Fully Redundant Access – Two Network Termination Devices connected using diverse lead-in fibres, distribution fibres – using a single port from different line termination cards on different Network Aggregation Elements.

ES004 CLASS OF SERVICE MARKINGS DROP PRIORITY

Drop priority based on class of service markings. This service is intended to be delivered via a dedicated point-to-point Access Fibre from the end-user's premises to the Fibre Access Node using a business-grade Network Termination Device. **nbn** is proposing a semi-intelligent pipe model with drop priority based on the Service Provider's Class of Service (Priority Code Point/Priority-Bit), which is important for contended services that may experience congestion.

Service Providers will have the opportunity to provide an uncontended (1:1) AVC and CVC bandwidth contention ratio or potentially contend AVC connections into a CVC using the semi-intelligent pipe model, thus ensuring traffic prioritisation through their network, during times of congestion.

ES005 ADVANCED OAM

Advanced operation, administration and maintenance. **nbn** plans to offer Advanced Service Operations, Administration and Maintenance features, including 802.Tag Connectivity Fault Management with the potential for Operations Administration and Maintenance peering for Fault Propagation and early fault detection for Service Providers.

FACILITIES ACCESS SERVICES

FA005 POI REDUNDANCY

Capability to access the **nbn** network from alternate POI site/infrastructure. Redundant POI Access for NNI to enable additional redundancy options and higher availability.

CE037 TRIAL OF CUSTOMER STRONG AUTHENTICATION TO NBN SYSTEMS

Trial of strong authentication for Customers logging into **nbn** systems.

CE038 CUSTOMER STRONG AUTHENTICATION TO NBN SYSTEMS - FEDERATED AUTHENTICATION

Launch of Federated Authentication for Customers logging into **nbn** systems.

CE046 ADDITIONAL STRONG AUTHENTICATION OPTIONS CONSULTATION

Product consultation on future strong authentication options for customers logging into **nbn** systems.

