nbn Industry Consultation Product Construct Paper: **nbn**® Smart Communities

May 2023

Commercial-in-Confidence

nbn Product Construct Paper

nbn Smart Communities

May 2023

For those access technologies and products covered by nbn's Special Access Undertaking, this Product Construct Paper is provided in accordance with the requirements for a Product Idea, Product Construct Paper and Idea Development Plan as set out in the NBN® Co Special Access Undertaking.

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Environment

nbn asks that you consider the environment before printing this document.

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1. Introduction

1.1 Document Purpose

The purpose of this document is to continue to seek industry feedback on the product concept named 'nbn® Smart Communities' (previously referred to as **nbn** Smart Connect) and to gauge the level of interest in the product and any factors that may influence uptake.

We refer to the:

• **nbn** Product Construct Paper '**nbn**® Smart Connect' issued in August 2021; and

• **nbn** Industry Consultation Paper: '**nbn**® Smart Connect' issued in August 2021.

nbn is seeking feedback from interested Retail Service Providers, other carriage service providers, property developers, utilities providers, building system integrators, building management system equipment providers and users of non-broadband infrastructure to validate the desirability, feasibility, and viability of this new product construct idea, including its fitness for purpose and channel to market. As part of this consultation, **nbn** is welcoming of feedback on alternative solutions for the customer needs and market opportunities outlined in this paper and would welcome the opportunity to discuss these ideas with interested parties.

This document is being released through **nbn**'s Product Development Forum (PDF) mechanism. **nbn** utilises the PDF to consult with Retail Services Providers and consumer advocacy groups on the design and launch of **nbn** Products and features. Although in many cases consultation via the PDF occurs under the terms of, and for the purposes of **nbn**'s Special Access Undertaking (SAU), **nbn** can also use the PDF customer engagement mechanism to consult on matters outside the SAU's current scope. This document is also being released to the industry via the **nbn** website to seek industry participation and feedback on the proposed '**nbn** Smart Communities' Product construct – specifically from those industry participants who may not have an opportunity to provide feedback on **nbn's** product initiatives via the Product Development Forum (PDF). The intention of the consultation is to engage and obtain feedback from various property developers, utilities providers, building system integrators, building management companies, building system integrators, building management system equipment providers and users of non-broadband infrastructure to assist in understanding demand and other product-related issues.

nbn would be pleased to step through this paper with the Participants at any time. RSPs please contact your Account Manager or ContractManager@nbnco.com.au to arrange a workshop. Non-RSPs, please reach out to SmartCommunities@nbnco.com.au to arrange a workshop.

1.2 Document Audience

The intended audience of the documents are:

- Retail Service Providers (carriers and carriage service providers) who may wish to acquire the proposed '**nbn** Smart Communities' product as an input to the supply of a customer product to customers such as building management companies, building system integrators, building management system equipment providers, corporations and strata corporations/owners' corporations (**RSPs**);

- the potential downstream Building Service Providers such as building management companies, building system integrators, building management system equipment providers who may wish to resell the proposed '**nbn** Smart Communities' based retail product from the RSPs. (**Building Service Providers**); and

- Developers or Builders or any other entities who are responsible in the planning and construction of Multi Dwelling Units, aged care Independent Living Units and other similar types of private communities who

choose **nbn** as their preferred provider of Access Network for broadband and telephony services. (**Developers**); and

- the potential end customers of the proposed 'nbn Smart Communities' product such as property developers, building management companies, and strata corporations/owners' corporations (**End Customers**).

1.3 Executive Summary

In pursuit of its mission to lift the digital capability of Australia, **nbn** is continuing to design, build and operate broadband networks for new property developments across the country. To date, **nbn** has designed, built and is operating broadband networks reaching more than 1.2 million premises in new property developments across the country.

Increasingly, Developers are designing and constructing new property developments that depend on communication solutions to operate equipment, systems and technologies that manage and operate the building or site and enhance the experiences of occupants and communities within the building or site. Examples of these applications include intercom services, safety and security systems, smart locks, boom gates, health monitoring systems, smart meters, and renewable energy systems within the building or across the site (**Site**). The types of applications are continuing to grow as Developers innovate to enhance the liveability, sustainability, efficiency and effectiveness of their new property developments, including as Australians embrace the possibilities of Smart City philosophies and solutions. The infrastructure over which the communications solutions operate to enable these applications are commonly referred to as Integrated Communication Networks (**ICN**).

Currently, Developers engage **nbn** (or other broadband network infrastructure operators) for broadband and telephony solutions, and other providers for Integrated Communication Networks.

With a view to reducing construction costs, simplifying construction processes, and making the most efficient use of available space in new development contexts, **nbn** is receiving increasing requests from Developers and utilities providers seeking an integrated network solution – a single network over which **nbn**-powered broadband and telephony can be provided, and over which an Integrated Communication Networks can run to operate the applications to manage and operate the building or Site, and to enhance the experiences of occupants and communities within the building or Site.

In response, **nbn** is considering developing 'nbn Smart Communities' as a product to enable RSPs to address this need of Developers, Building Service Providers and End Customers. The details of the proposed product construct and proposed wholesale service pricing are specified in this paper for consultation and feedback.

It is proposed that 'nbn Smart Communities' will only be offered to a Site where a Developer has entered into a fibre build agreement with **nbn** which includes equipment enabling the connectivity. Upon completion of the 'nbn Smart Communities' infrastructure build, the Site will be marked as serviceable for 'nbn Smart Communities' i.e., the product will be offered as a wholesale offer to an RSP who can then pass on the service to Building Service Providers or End Customers.

This product is targeted to solve challenges and create opportunities for Developers while enhancing **nbn**'s value proposition to the industry by creating a new marketplace for RSPs and Building Service Providers to deliver innovative and differentiated offers to End Customers.

2. Product Idea

2.1 Scope of the Product Idea

'**nbn** Smart Communities' can help enable a private and secure Integrated Communications Network to be deployed over the **nbn®** Fibre Network over the same physical infrastructure used for broadband and telephony applications. This connectivity is intended to support non-broadband, Ethernet-based applications within a Site, including intercom, metering, sensors, closed-circuit television etc. Whilst the same fibre infrastructure will be used, traffic will be segregated so that privacy and security can be maintained, without requiring duplicate communications infrastructure to be deployed.

nbn will provide this connectivity by carrying traffic from prescribed ports (UNI-D) of an **nbn** Fibre Network Termination Device (NTD) to prescribed ports (UNI-D) on one or more other **nbn** Fibre NTDs located within the same Site. This will occur through a Virtual Local Area Network (VLAN) based network which will route traffic within each VLAN, and not require this traffic to transit an RSP network.

'**nbn** Smart Communities' will be a wholesale product to be offered to RSPs. For a Developer or other entity to obtain '**nbn** Smart Communities', a Developer or other entity must have contracted with **nbn** to build **nbn** Fibre Network at a Site and selected the '**nbn** Smart Communities' option as part of that order. This will ensure **nbn** builds infrastructure over which it will be able to supply both **nbn** Ethernet (Fibre) and '**nbn** Smart Communities'.

However, once **nbn** has installed the **nbn** Fibre Network infrastructure to support both products, '**nbn** Smart Communities' will be available as a standalone orderable product for RSPs at that Site (offered by **nbn** separately to **nbn** Ethernet (Fibre) which will also be offered for Premises within that Site). A Site may have multiple Multi Dwelling Units within close proximity and individual buildings in a Site can be part of a stage application similar to **nbn** Ethernet (Fibre) i.e. '**nbn** Smart Communities' will also be available under a stage application. A logical '**Domain**' will be created with the '**nbn** Smart Communities' product for each individual Site in order to logically group the building/stages within the Site.

2.2 Applicability to network access technologies

'**nbn** Smart Communities' product will be delivered on **nbn** Fibre at Sites where the **nbn** Fibre Network has been enabled to deliver '**nbn** Smart Communities' services under the build agreement applicable to the relevant Site. At this stage **nbn** is proposing this for **nbn** Fibre at greenfield residential developments only. Commercial and **nbn** Fibre brownfield developments will be considered in future.

2.3 Priority of Product development

nbn proposes to develop this product as a medium priority, given the following reasons:

  i.   the amount and detail of information available to **nbn**;

  ii.   **nbn**'s confidence regarding the commercial, technical or regulatory viability of the Product Idea;

  iii. the utility of the proposed Product Idea (by reference to the long-term interest of end users or directions from its shareholders);

  iv.   the demand for specific Product Ideas from the industry;

  v.   the demonstrated need for the Product Idea.

2.4 Target market for the Product Idea

'**nbn** Smart Communities' will be delivered on **nbn** Fibre and will be initially offered to greenfield deployments for Multi Dwelling Units and Independent Living Units and other similar types of private communities where the Developers will be required to select '**nbn** Smart Communities' as an option at the time they enter into the build

agreement. **nbn** will work with the industry to consider future design solutions for other building types for example brownfield deployment, commercial building etc in due course.

According to a report published by the Housing Industry Association, the growth in Multi Dwelling Unit market is expected to be supported by rising interest rates exacerbating existing affordability constraints, as well as rental shortages and the return of overseas migrants, students and tourists. They forecast 82,360 units will be built in 2024 with 2025 and 2026 having 84,560 and 86,410 construction starts respectively. **nbn** envisages that this will drive the demand for cost effective and innovate Smart City/Living concepts, which will be catered by '**nbn** Smart Communities'.

2.5 End User value proposition

It is envisioned that End Customers like Developers (in a Build to Rent scenario), building management companies, corporations and strata corporations/ owners' corporations will be able to obtain services from service providers in an open market to service their non-broadband ethernet based devices / applications on **nbn** Fibre.

This product will support fibre-based solutions to support Smart Living and Smart City concepts. A few examples of these are below.

		MDU	Broadacre	Retirement/ Lifestyle	Commercial
Intercom, Access & Amenity Controls	An ICN saves developers space, time and costs by removing the need to build or manage parallel infrastructure.	☑		☑	
Solar Energy Grid Controls	Fixed line solar energy grid management since a wireless solution doesn't have the low latency that is required.		☑	☑	
Fire Alarms & Safety Equipment	Fire Alarms and other safety installations are compulsory. **nbn** Smart Communities will enable a dual connectivity environment for all detectors across the development back to the headend equipment.	☑		☑	☑
Nurse Calls	Increased demand from retirement living for fixed line options as a backup for the current wireless solution.		☑	☑	

2.6 Developer value proposition

'**nbn** Smart Communities' could save significant cost and time for Developers to connect and integrate non-broadband ethernet based devices/applications by eradicating the need for duplicated communications infrastructure within the relevant Site. The traffic will be carried over **nbn** Fibre which will enable delivery of non-broadband ethernet based service traffic to a locally based Site Headend or to a cloud based Headend. The cost benefits realised are expected to vary depending on the use case(s) and build type used by the Developer in each development.

This can help enable Developers to achieve their Smart Building/Home vision and help differentiate their development to offer digitally enabled precincts to their End Customers.

2.7 Customer (RSP/Building Service Provider) value proposition

'**nbn** Smart Communities' is **not** a **nbn** Ethernet product, as it will not provide connectivity or carry traffic between the Premises and to External Network to Network Interface (E-NNI) at an **nbn** Point of Interconnect. Instead, the product is aimed at service providers who can use the product as an input to the supply of a relevant non–

broadband customer product providing connectivity solely within the relevant Site to support functions such as utilities metering, facility intercom, building services and security & health monitoring.

This provides a potential incremental revenue opportunity, a point of differentiation for service providers, as well increasing the potential market footprint for the **nbn** Ethernet product.

2.8 New functionality offered by the Product Idea

'**nbn** Smart Communities' will carry traffic of non-broadband ethernet based devices/ applications in new Multi Dwelling Unit and Independent Living Unit facilities and other similar types of private communities over **nbn** Fibre.

Unlike **nbn** Ethernet powered plans in which each individual premises has a choice of their preferred broadband and telephony service provider, '**nbn** Smart Communities' powered plans will be delivered on a 'whole-of-Domain' basis by service provider(s), intended to be chosen by the End Customer. The End Customer will have a choice of acquiring downstream services from any service provider(s) that offers such services.

For the avoidance of doubt, any **nbn** broadband services within the building separate to '**nbn** Smart Communities' services can be sourced from any available **nbn** Retail Service Provider.

Upon activation of '**nbn** Smart Communities', all the non-broadband ethernet based devices/applications will be able to communicate to the Site Headend without the need for **nbn** Ethernet to be activated at that Site or at Premises within that Site.

2.9 Technical specification

'**nbn** Smart Communities' will provide a connectivity path from a prescribed port of a NTD to prescribed ports on other **nbn** Fibre NTDs located within the same Domain which presents as a private local area network. A connectivity path will be enabled between the endpoint(s) and Headend. **nbn** will facilitate a VLAN based network and deploy centralised routers to route the traffic within each VLAN group.

In this configuration the NTD in the premises (Shared NTD) will have prescribed ports 3 and 4 reserved for '**nbn** Smart Communities' traffic with the remaining ports available for **nbn** Ethernet, other NTDs placed at common areas or the communication room and connected to Building Management Services equipment in the Site, referred to as '**nbn** Smart Communities' NTD, will use all the ports available to them for '**nbn** Smart Communities' traffic. All interfaces are RJ-45 and support up to 1000BASE-T gigabit Ethernet. **nbn** will support both tagged and untagged traffic as part of the '**nbn** Smart Communities' product hence the proposal to reserve two ports (3 & 4) in the Shared NTDs.

The network will facilitate connectivity between the Building Management Equipment via its Headend Equipment. This will not however enable any communication with **nbn** Ethernet services or with the Internet.

The '**nbn** Smart communities' connectivity network boundary ends at the UNI port on **nbn** NTD. In scenarios where the service needs to be extended to an offsite remote location or to a cloud network, it is the responsibility of the Building Service Provider to extend the connectivity beyond the Headend which is located within the Site. This includes the routing configurations required for routing traffic between an endpoint device to a remote Headend service that resides outside of the '**nbn** Smart Communities' IP subnet.

The '**nbn** Smart communities' product is designed as an Integrated Communications Network (ICN) for Building Management Services applications and is not suitable for broadband usage and applications.

2.10 Network and technology architecture

nbn seeks feedback from the industry on the high-level Network Architecture below to enable non-broadband ethernet based services to End Customers. Among other factors, consideration should be given to the following criteria:

1. Product compatibility and modularity;

2. Security considerations;

3. Network simplification (agnostic to vendor equipment);

4. Ease of connectivity; and

5. Interoperability.

The solution proposes the following principles and architecture:

1. The 'nbn Smart Communities' service is a private Local Area Network facilitated by Smart Community Virtual Circuits and routing instances. The Smart Community Virtual Circuit provides a connectivity path from the UNI-D on each NTD to the nbn routing instance.

2. Each user application (i.e. customer traffic or VLAN) would be mapped to a Smart Community Virtual Circuit. Multiple Smart Community Virtual Circuits can be enabled to support multiple applications/VLANs for segregating the traffic from different devices. For example, one VLAN can be used for closed-circuit television cameras and another VLAN for intercoms.

3. 'nbn Smart Communities' will support multiple VLANs on a single nbn UNI-D.

4. 'nbn Smart Communities' will support both tagged and untagged traffic.

5. Interconnectivity between Smart Community Virtual Circuits is performed within nbn's owned service router, housed within nbn's Transit Aggregation Nodes and Depots site(s).

6. Each VLAN group requires a dedicated routing stack (provided by 'nbn Smart Communities') to restrict inter-VLAN group communication.
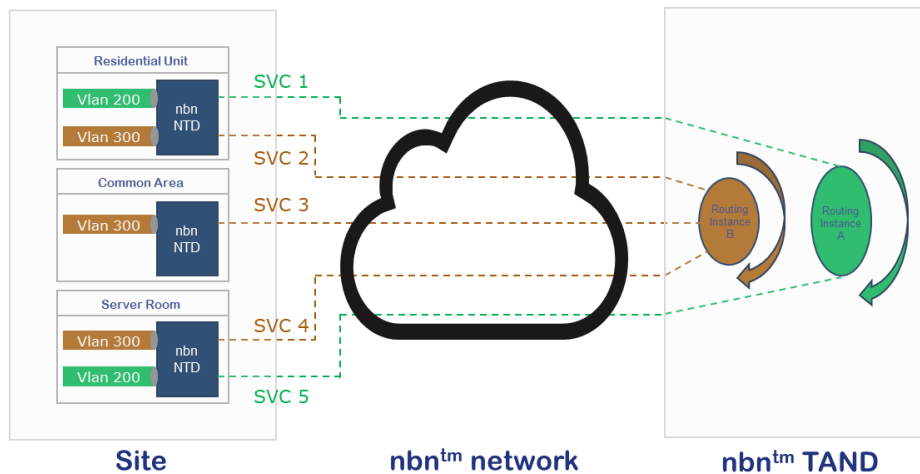

Figure 1: Network Architecture

2.11 Connection & Activation journey

The proposed end to end order to service enablement flow for '**nbn** Smart Communities' is as below:

Property Developer (PD) submit nbn New Developments application	PD submits stage application with requirements for nbn Smart Communities	Build Completion - Build Handover	BSP Requests SC Service and Service Configuration completed	Service Assurance
Outcome: Why is it required? • Engage **nbn** to deliver Smart Communities infrastructure to their New Developments	• Inform **nbn** of the requirement to build SC product as per specific stages	• To be able to ascertain that build is completed	• Service Order from the BSP in to nbn via the RSP as per PDs requirements	• Ongoing service assurance raised by the BSP in to nbn via the RSP as per PDs request
Input: What is required? • Smart Communities (SC) required: Yes/No • Stage where SC will be required: Multi-select stages • Number of Access Points (SC ONLY)	• Input application/opportunity ID • Pathway designs • No of access points required • Preference of NTD	• SC Physical Build completed • SC As-Built information captured • Testing tools determined and uplifted to be able to test SC connectivity to nbn network Boundary Point.	• Vlan configuration requirements • Testing tools determined and uplifted to be able to test SC connectivity post vlan set-up • **nbn** teams identified to perform the configuration and testing	• Service Incident raised with nbn • nbn team ascertained who will Connect and remediate issues (if any) found during testing
Outcome: What is the output? • Create an application/opportunity ID (per stage) in **nbn** systems to track opportunity for each stage • Provide this ID back to PD • Navigate PD mentioning that SC services can be connected via a list of retailers	• Update application /opportunity ID with the relevant build application details • SC Developer Build charges billed to the PD • Initiate Design and Build workflow	• Testing completed and results validated to meet specs • Build sign-off with PD /Practical Completion. • Build handover to PD	• Vlan configuration and testing • Results captured • **nbn** wholesale billing starts	• Troubleshooting and incident closed with appropriate remediation/action
Actors Property Developer, **nbn**	Property Developer, **nbn**	Property Developer, **nbn**	Property Developer, **nbn**, BSP, **nbn** RSP/whitelabeler	Property Developer, **nbn**, BSP, **nbn** RSP/whitelabeler

2.12 Assurance, service levels and remediation

It is **nbn**'s intention that the Service Levels Agreements (SLA) for activation and assurance be aligned with those of **nbn** Ethernet (Fibre) as set out in the Wholesale Broadband Agreement (WBA)**. nbn** will continue to monitor and operate **nbn** owned infrastructure and it is expected that the Site Headend and equipment required beyond the UNI to enable communication will be installed and operated by the RSPs or End Customers.

2.13 Sandpit

nbn will consider providing a platform for RSPs to integrate and test the functionality of the product.

3. Developer Build charges

3.1 Build Charges

The establishment of necessary infrastructure within a new development required to support the provision of 'nbn Smart Communities' services is anticipated to be arranged by **nbn** and the respective Developer/Builder. The responsibility for the various build activities, and the payment of any associated charges, has been established with reference to the provisions of the Telecommunications in New Developments (TIND) policy. (The Build activities, which include backhaul and network deployment contributions, when completed enable **nbn** services to be ordered and supplied under terms of the WBA. The associated charges are also Build Charges and not associated service charges.)

nbn proposes that the build charges apply to all NTDs (which may be used for **nbn** Ethernet or 'nbn Smart Communities' services).

The proposed related build charges to enable 'nbn Smart Communities' employs the following charging elements:

1. A 'Network Deployment contribution' charge: A charge will apply for the deployment of any additional NTD equipment to support the operation of 'nbn Smart Communities'. These contributions are chargeable to the Developer/Builder/Owner of the new development.

Chargeable Element	Rate inc. gst
Additional NTD installed for 'nbn Smart Communities'	$400 (Multi Dwelling Units); or $600 (Single Dwelling Unit)

2. A Network First Time Connection Charge contribution applicable to the first-time activation of each NTD within the Domain. This fee is chargeable to the Developer/Builder/Owner of the new development.

Chargeable Element	Rate inc. gst
NTD	$300 (Multi Dwelling Units); $300 (Single Dwelling Unit).

If the Network First Time Connection Charge contribution is not recovered from the Developer/Builder/Owner, then an equivalent amount will be levied on the RSP as a service charge under the WBA.

4. 'nbn Smart Communities' Pricing

4.1 'nbn Smart Communities' Service Charges

A Recurring Usage charge applicable to each VLAN established across the active NTDs. This charge will be computed based on the service speed; the Traffic Class; and the number of NTDs, as tabled below[1]

Traffic Class	V-LAN Speed (Mbps)		Number (of Nodes)/V-LAN Mthly Recurring Charge (exc. gst)				
	Downlink	Uplink	2	5	10	40	80
Peak Information Rate (TC4)	1	1	$1.00	$2.50	$5.00	$20.00	$40.00
	1	5	$5.00	$12.50	$25.00	$100.00	$200.00
	1	10	$10	$25	$50	$200	$400
	5	20	$20	$50	$100	$400	$800
	100	100	$100	$250	$500	$2,000	$4,000
	1000	1000	$1,000	$2,500	$5,000	$20,000	$40,000
Committed Information Rate (TC2)	1	1	$10	$25	$50	$200	$400
	10	10	$100	$250	$500	$2,000	$4,000
	50	50	$500	$1,250	$2,500	$10,000	$20,000

It is proposed to waive recurring charges for the first 12-month period following application of the Build Charges.

Charges for Adds, Moves and Changes are proposed as follows:

Chargeable Element	Rate exc. gst
Amend V-LAN specification	$50 per Order

By way of a worked example, we look at a Multi Dwelling Unit with the following characteristics and use cases: -

- 15 floors
- 150 premises
- 1 comms room
- 2 boom gates
- 2 lifts
- 1 common foyer
- 2 solar panels in the roof
- Security cameras place on every floor, foyer and at 2 boom gates &
- 1 fire control panel

The monthly wholesale charges (exc. gst) are calculated as below:

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[1]Inherent limitations in relation to service frame overhead means the effective rate of the TC-4 1000/1000 Mbps profile will be limited to a maximum of less than 970Mbps.

	Usecase	Unit Speed and Traffic class	Headend speed and Traffic class	SVC	Outstation Rate	Head-End SVC	Head-End rate	Totals
1	Fire units :- Placed in all units, 1 every floor, comms room and the foyer.	1/1 TC2 for every SVC. There will be 150+15+1 = 167 access points	One 50/50 TC2 in the comms room	167	$5.00	1	$250.00	$1,085.00
2	Security cameras : Placed at every floor (15), 1 in the foyer and 2 at the boom gates	1/5 TC4 for every SVC. There will be 15+1+2 = 18 access points	One 5/20 TC4 in the comms room	18	$2.50	1	$10.00	$55.00
3	Door access controls : From all the 150 units and comms room to the door in the foyer and the 2 boom gates	1/1 TC4 for every SVC. There will be 150+1+1+2 = 154 access points	One 100/100 TC4 in the comms room	154	$0.50	1	$50.00	$127.00
4	Intercom :- From all the 150 units and comms room to the door in the foyer and the 2 boom gates	1/1 TC4 for every SVC. There will be 150+1+1+2 = 154 access points	One 100/100 TC4 in the comms room	154	$0.50	1	$50.00	$127.00
5	Solar Panels :- Two units on the roof to all the 150 units back in to the headend at the comms room.	1/1 TC4 for every SVC. There will be 150+2 = 152 access points	One 100/100 TC4 in the comms room	152	$0.50	1	$50.00	$126.00
							Total/Mth	$ 1,520.00
							No. Units	150
							Rate/Unit/Mth	$10.13

5.   Summary of Questions

1. What is your organisation's current role in servicing the new developments industry?
   a. If not current, does your organisation have any plans to service this industry, if so, how?

2. What is your organisation's current understanding of the needs and opportunities in the new developments industry?

3. Does your organisation feel **nbn** can add value to the new development industry by providing the '**nbn** Smart Communities' solution?

4. In what manner is your organisation interested in partnering with **nbn**
   a. For RSPs: do you see an opportunity to resell the proposed '**nbn** Smart Communities' product directly to your customers or developers?
   b. For RSPs: do you see an opportunity to resell the proposed '**nbn** Smart Communities' product indirectly via branded wholesale or whitelabel options?
   c. For Building Service Providers – what is your preferred resale or partner model in offering the proposed '**nbn** Smart Communities' product to the new developments industry?

5. What concerns, risks or suggestions does your organisation have for **nbn** to consider in bringing the proposed '**nbn** Smart Communities' solution to market?

6. What are your organisations views on the proposed product construct?

7. Do you have any feedback on the proposed wholesale '**nbn** Smart Communities' pricing structure?

8. As an RSP, do you see '**nbn** Smart Communities' as just an infrastructure solution for the Developers or will you provide the Smart City/Living application solution on top; or both?

9. What are your organisations views on the technical specification?

10. Do you agree with the potential need for two UNI-D ports for '**nbn** Smart Communities'?

11. As a RSP or Building Service Provider, what are your views on managing a VLAN based solution for the End Customers?

12. What other network traffic characteristics does your organisation envisage might be used, or would be required?

13. What mechanisms would RSP/Building Service Provider use in terms of dynamic IP Address management? Would the RSP/Building Service Provider be open to using one or more specified ranges provided by **nbn** and managed within their existing DHCP mechanisms? Would RFC1918 addressing be used for these purposes?

14. Does the RSP/Building Service Provider need **nbn** to interface with a Headend router?

15. Can the RSP/Building Service Provider share subnets for devices behind the router so **nbn** can route communications from end points?

16. Are the existing SLAs in the WBA adequate? Should '**nbn** Smart Communities' have different SLAs to **nbn** Ethernet (Fibre)?

17. Should enhanced SLAs (eSLAs) be offered for '**nbn** Smart Communities'? Provide detail on specific requirements.

18. Will your organisation provide or facilitate backup connectivity solution options for critical services that require 100% uptime in the unlikely event of an **nbn** outage impacting the '**nbn** Smart Communities' service?

19. Does your organisation foresee need for additional bandwidth? If so, please clarify the device or application type?

6.   Consultation

nbn seeks feedback from interested Retail Service Providers, other carriage service providers, Developers, utilities providers, building system integrators, building management system equipment providers and users of non-broadband infrastructure for industry collaboration to ensure and validate the desirability, feasibility, and viability of this new product construct idea.

The objective of this early consultation is to improve the effectiveness of the intended product and ensure it is fit for purpose across all audiences.

We are seeking feedback from the industry to form an end-to-end solution that incorporates the needs of the Development and Construction Industry and explores the desirability and viability of the channels to market.

nbn invites written submissions from Access Seekers and Consumer Advocacy Groups registered with the Product Development Forum (PDF Participants), by:

<div align="center">

5.00pm on 16th June 2023

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PDF Participants should provide their comments to **nbn** via their registered Product Development Forum Representative to their PDF Web Tool private workspace.

nbn may elect to extend the closing date for submissions. If so, all participants will be notified.

nbn will circulate submissions to PDF Participants via the PDF Web Tool, subject to any claims of confidentiality. Please note whether your submission should be treated as confidential when providing it to **nbn**. Where appropriate, please provide a redacted version of any confidential submission so that it may be circulated via the PDF Web Tool.

This consultation and all submissions must be treated as commercial-in-confidence by **nbn** and PDF Participants.

Next steps:

nbn is still in the very early stages of developing its overall 'nbn Smart Communities' strategy. **nbn** anticipates target launch to be at some point in H2 FY2024. Feedback on this consultation paper will enable **nbn** to better understand the opportunities and challenges associated with the product concept, after which **nbn** will communicate target launch timing via the Integrated Product Roadmap.

nbn welcomes the opportunity to work collaboratively with service providers over the coming months to fully understand their use cases and product requirements.

As part of this consultation, **nbn** welcomes the opportunity to meet with PDF and non-PDF Participants to discuss the proposed construct in more detail and obtain feedback. PDF Participants please contact your **nbn** Account Executive or email pdf@nbnco.com.au to request a meeting. Non-PDF Participants, please email smartcommunities@nbnco.com.au to request a meeting or to provide written feedback.

nbn welcomes any Participants to express their interest to participate in Proof-of-Concept testing and co-design of the Product.