



# **Wholesale Bitstream & VUA Products Process Manual**

**Version 1.1**  
**Effective from: April 2020**

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## Document Control

### Revision history

Version	Date	Status	Revision initials: Revision details
1.0	Apr 2020	Active	Published version
1.1	Apr 2020	Active	Published version

### Associated documents

Title	Location
Wholesale Bitstream and VUA Reference Offer	All available online at
Wholesale Bitstream and VUA Product Service Level Agreement	<a href="https://nbi.ie/industry/service-provider/">https://nbi.ie/industry/service-provider/</a>
Wholesale Bitstream and VUA Product Technical Manual	or from your NBI Account Manager
NBI Portal User & Admin Guide	

## Glossary of terms

AAA:	Authentication, Authorisation and Accounting
AF:	Assured Forwarding
BE:	Best Efforts
BSS:	Business Support Systems
Co-Lo:	Co-Location
CoS:	Class of Service
CPE:	End User Premises equipment
CSID:	Calling Station Identifier
DHCP:	Dynamic Host Configuration Protocol
DP:	Distribution Point
EF:	Expedited Forwarding
E-NNI:	External- Network to Network Interface
EVPL:	Ethernet Virtual Private Line
FTTH:	Fibre to the Home
FV-A:	Fast Visit Assurance
GPON:	Gigabit Passive Optic Network
IP:	Internet Protocol
JSON:	JavaScript Object Notation
MPLS:	Multi-Protocol Label Switching
NTU:	Network Terminating Unit
ODN:	Optical Distribution Network
ODP:	Optical Distribution Points
OLT:	Optical Line Terminal
OMCI:	Open Manage Control Interface
ONT:	Optical Network Terminal
OSS:	Operating Support Systems
PONR:	Point of no return
REST:	Representational State Transfer
RFS:	Ready For Service
SME:	Small and Medium Enterprises
SP:	Service Provider
S-VLAN:	Service Provider – VLAN
UWG:	Universal Wholesale Gateway
V-LAN:	Virtual Local Area Network
VPLS:	Virtual Private LAN Service
VUA:	Virtual Unbundled Access
XGS-PON:	10 Gigabit Symmetric–Passive Optic Network

# 1 Introduction

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***Consultation on the draft processes contained in this manual are ongoing with Industry. The processes will be presented at the monthly Industry forums for clarification and NBI has agreed to take on board changes or additions to the processes based on this valuable feedback. NBI expects the consultation process to continue until the end of Q2 2020 at which time the full suite of processes will have been consulted upon and any changes to the processes / documentation will have been agreed and completed. Any further changes to the processes will happen through NBI's product change request process.***

This Wholesale Bitstream & VUA Process Manual is a guide for Service Providers on the processes for Eligibility, Ordering, Assurance (Fault Management) and Billing. This document should be read in conjunction with other associated documents listed in the "Associated documents" section above.

This process manual covers the following broadband products:

- Wholesale Bitstream
- Wholesale Virtual Unbundled Access (VUA)

Service Providers may place orders via NBI's Web Portal or via their own internal systems through defined Application Programme Interfaces (APIs).

## 2 Deployment Information

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### Deployment Areas

The NBI network is designed around approximately 227\* deployment areas. Each Deployment Area is designed as an Optical Line Termination (OLT) unit location providing services to the premises within a defined geographic region served by the OLT. The traffic from the OLT regions is consolidated at 33 regional aggregation locations defined as Points of Handover (PoH). Depending on the Service Provider's setup, the Service Provider can interconnect with NBI at a regional PoH level and the traffic is handed over at the specified regional PoH, or, alternatively, NBI can carry traffic from these regional PoHs to two national PoH locations where a Service Provider can interconnect at a national level.

\* The actual number of OLT's may change over the project as LLD's complete.

### Deployment File

The Deployment File provides Service Providers with a view of the planned and actual rollout schedule for deployment areas within the NBI network. The Deployment File is issued monthly with updated data as the design and rollout progress.

The addresses and timelines for the deployment areas will be shared with Service Providers as follows:

- 1) All Deployment Areas and premises count will be listed in the Deployment File.
- 2) Survey information for Deployment Areas where a survey date is scheduled will be provided to Service Providers.
- 3) Build start and completion dates will be provided for Deployment Areas once a detailed survey has been completed and a known build start date has been confirmed.
- 4) Build information, address and total premises count will be provided for each Point of Handover.

The Deployment File contains two sets of information. The first set of information contains overall NBI network information and the second set contains the individual premises information.

The Deployment File "Network Information" contains the following data:

- PoH information
- OLT Information
- Indicative Ready for Service date

The Deployment File "Premises Information" contains the following data:

- Eircode
- Location Code
- Geo Co-ordinates
- Entry type/Build indicator
- Ready for Service date
- Address details



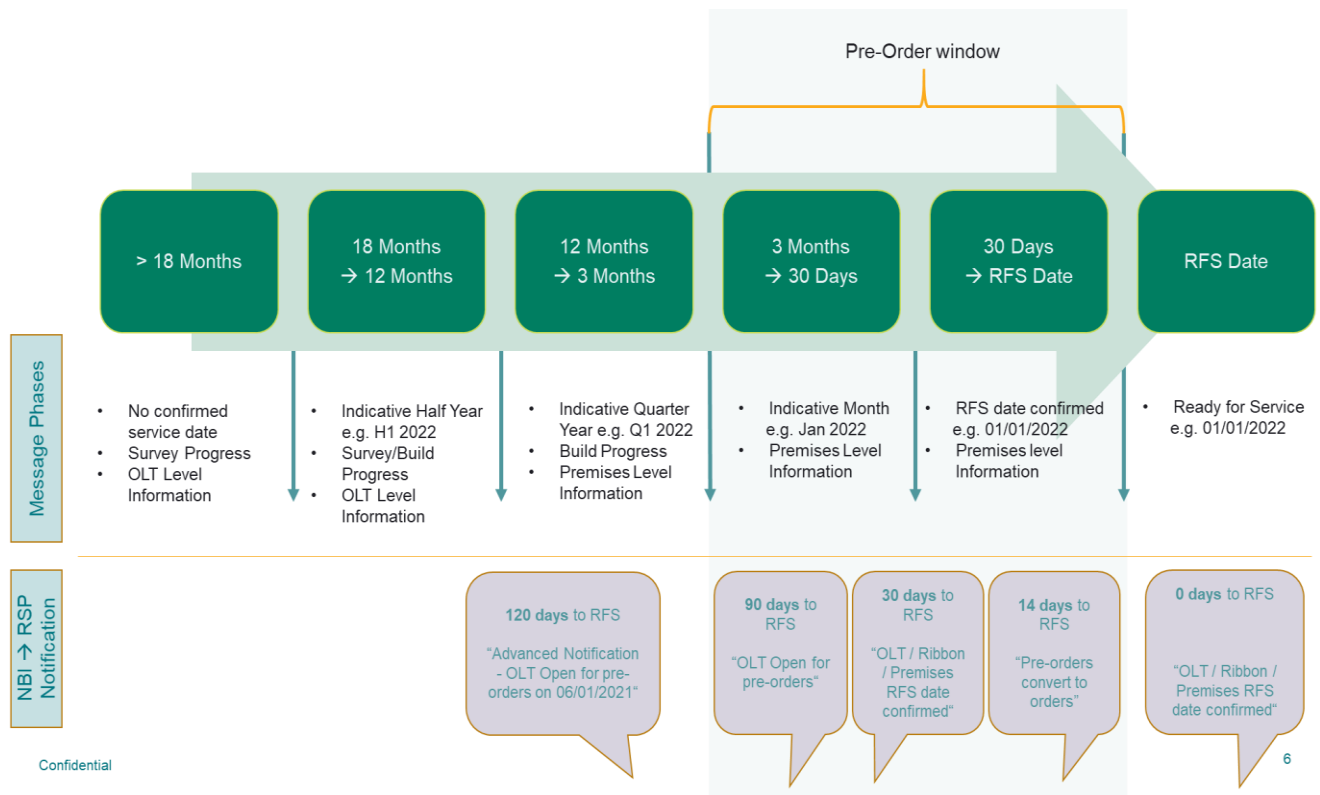


Figure 1: Deployment file information and notification timeline

## 3 NBI Operational Environment

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The NBI Operational Environment or Web Portal offers Service Providers access to the following key features for the Bitstream & VUA product set:

- Service eligibility at the premises
- Ordering connectivity including Appointments and Amending orders
- Management of the service in-life including product change, troubleshooting and cease
- Service Assurance / Fault Reporting (trouble ticket handling)
- Billing functionality
- Reporting

Service Providers can access the NBI Operational Environment via:

- Web Portal (GUI)
- REST API

These are explained in detail in the sections below.

### 3.1 Web Portal Functions

The Web Portal is accessed via a web-based GUI allowing Service Providers to manage the ordering, provisioning and in-life management including fault handling of broadband services for their End Users. The Web Portal is a flexible GUI, enabling users to change the view of their orders, tickets, accounts, adding and removing fields and with filtering functionality.

A summary of the overall functionality offered to Service Providers includes:

#### **Access**

- login to Web Portal
- user management (for Service Provider Admin user)

#### **Eligibility Check**

- check eligibility by location / premises
- show eligibility results: display products available

#### **Order Management**

- create new order (from eligibility result) and associated appointment if needed
- view order details (including related appointment) – also show all order-related notifications
- update order details (including appointment contact details or reschedule appointment)
- cancel order
- retrieve notifications at regular intervals
- show list of all orders with order state
- update order, ticket status at required intervals usually linked to a new notification

#### **Service Management (Triage)**

- check status and performance of a specific service (diagnostics)
- reset ONT of specific service
- modify service

**Assurance Management**

- show trouble ticket history
- show open tickets
- create new ticket
- update ticket (and at required intervals from new notification or passing of a specific time)
- close ticket
- reject pending closure of ticket
- refresh ticket
- re-open ticket
- update order, ticket status at required intervals usually linked to a new notification

**Other:**

- Commercial (product material)
- Developer (API and GUI documentation)
- Infrastructure (network files)

### 3.1.1 User Administration Function

The Web Portal allows Service Providers to provide their Web Portal users variable configurable options within each order type (e.g. provide / cease / upgrade & downgrade/ run ONT check / raise fault). The functionality is fully configurable and managed directly by each Service Provider.

The Service Provider Administrator can set up individual user access and assign various roles for particular functionalities in the Web Portal. Depending on their role, a User can access the eligibility, order management, ticketing and assurance functionality as read only or read/write.

## 3.2 REST API

NBI's Platform exposes a set of services to the user via a REST (JSON based) API that enables a Service Provider to integrate their own internal software platforms to the NBI aggregation platform. The REST API exposes services which underlie Web Portal functionality as described in the above section.

NBI can provide the Service Provider with the API Development Pack documentation to assist in platform integration. This is available from the Service Provider's Account Manager.

### 3.2.1 API Format and Structure

The API format and structure are illustrated in Figure 2:

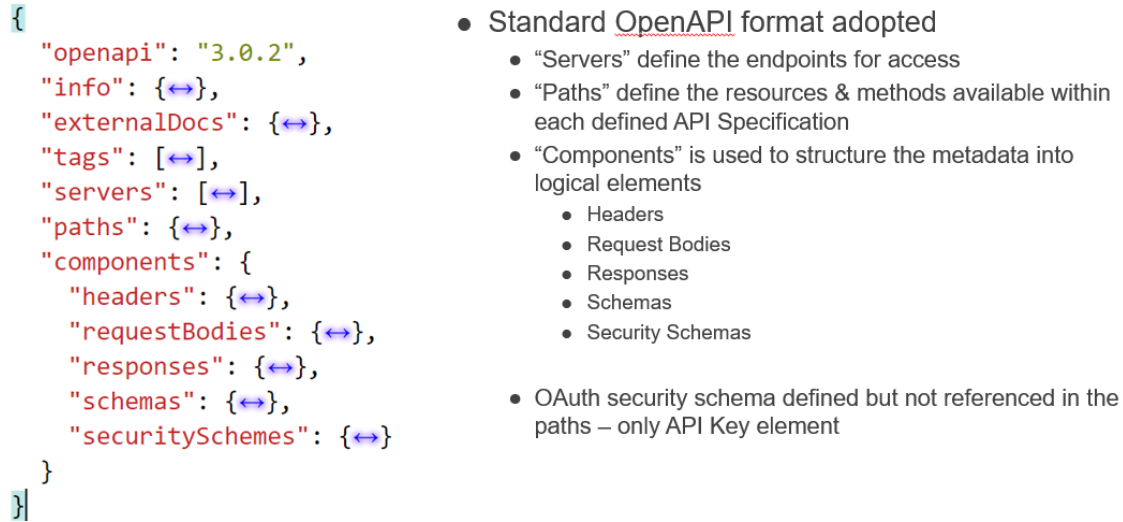


Figure 2: API Specification – Headers

Header	Required	Description
Accept	Optional	Only application/JSON supported
Content-Type	Optional	Not required for GET operations. Only application/json supported
x-client-id	Mandatory	As multiple connections are supported per Service Provider, a unique value to support investigation in the event of irregular pattern detection
x-order-reference	Mandatory	Unique value supplied by Service Provider to identify each individual transaction
x-transaction-id	Optional	Value supplied by Service Provider to permit grouping of transactions in a series – for example prospect id/customer id
Authorization	Mandatory	Contains the access token. Not required for virtual environment
x-api-key	Mandatory	Contains the API Key as issued by NBI to support usage plans

Table 1: API Specification - Headers

## 4 Orders & Faults: States and Notifications

All service order requests and fault tickets placed by Service Providers will have a range of states and various notifications associated with the specific service order request or fault that determine where the order is in its lifecycle.

For access service orders, the service order may exist in one of the state conditions for a period of time (e.g. several days), whereas a different order state may only take minutes or seconds to transit from one state to the next, or to be completed.

An example of a service order which may only take a matter of minutes or seconds to complete is an in-situ service order, where the service can be electronically enabled at the End User premises and no engineer appointment is required.

### 4.1 Service Order and Fault State

#### 4.1.1 Service Order Request State

A service order request can only be in one order state during its order journey. The state that a service order or information request can be in, as presented to the Service Provider via the Web Portal or API channels, are outlined in Table 1.

State	Description
Accepted	Where an order has been received and basic validation is performed
Pre-Order	Used to indicate infrastructure build needs to be completed and the order will take up to 3 months
Pending	May occur for several seconds when NBI is validating the order, before moving to "In Progress" or "Rejected". After the order is created and until NBI has accepted the order request ("Accepted" Notification)
Rejected	An order failed during the initial validation
In Progress	NBI has accepted the order and the order is not modifiable
Hold	Order cannot be delivered by NBI and is held by NBI pending resolution of an issue. e.g. "Live Network fault prevented installation completion"
Appointment Required	Service Provider is required to arrange an appointment with the End User.
Completed	Completed Notification received
Cancelled	An in-flight order has been successfully cancelled
Failed	Order has failed

Table 2: Order Lifecycle

#### 4.1.2 Fault States & Ticket types

The Web Portal will have service desk/trouble ticketing functionality.

The following Ticket Types shall be supported for Service Provider use, for both Fulfilment and Assurance:

- A. **IN: Incident** – A fault with an End User or a group of End Users. The action to resolve the Incident may require a Network Intervention.

- B. **CR: Change Request** – where a CR is a Container for handling a Change \*2 to FABRIC &/or NW-SERVICE against a Test- or Production Baseline. The action to make the Change may require formal Change Management; and that activity is tracked in a Network Intervention, see E below.
- C. **SR: Service Request**: A general request for service \*3 - i.e. NBI being asked to do something by some authorized Actor, where not one of the three Types above, which requires tracking.

Each Ticket Type has an associated list of Ticket Categories. For example, the Ticket Type Incident has the following Ticket Categories:

- End User Connection Issue (single End User)
- Other Issue/Query
- Network Issue (multi End User)
- Billing Issue
- Service Provider Portal Issue

The following Status Transition Diagram illustrates the ticket lifecycle.



It is divided into four stages: S1-S4, where:

**S1:** is the Initial/opening stage of the Ticket Lifecycle

**S2:** is the Opening stage of the Ticket Lifecycle, between Ticket opening and before the Ticket is assigned to any Handling-Queue. The Service Provider must populate the ticket with mandatory, minimum and sufficient details in order to facilitate swift resolution.

**S3:** is the core handling Stage of the Ticket Lifecycle.

**HandlingAssigned** and **HandlingStarted** indicate the assignment of a Ticket to a Handling Queue and Handling User; and the subsequent commencement of any substantive activity on the Ticket.

The Status: **WaitingForClient** and **WaitingForOther** represent periods during the Ticket Lifecycle during which the assigned Ticket-Handler is waiting for either the Service Provider to act on a request for action or additional information; or for some Other party to act e.g. for some analysis or field test or other action to complete.

A Remedy (Workaround or Preliminary Response) is distinguished from a Resolution (Fix or Final Response) in the Ticket Lifecycle; as demarked by Status: **HandlingRemedy** <Supplied | Rejected> and Status: **HandlingResolution**<Supplied | Rejected> respectively.

The Status: **HandlingComplete** is distinguished from Status: **Closed**.

**HandlingComplete** marks fulfillment of Ticket-Handling obligations for performance under the SLA; by delivery of an accepted Remedy and Resolution; and subsequent concluding the Ticket Handling by updating the Ticket Handling- and related DataSet to a closing standard. The Ticket Closing is a final action, by mutual agreement.

**S4:** is the concluding and closing stage in the Ticket Lifecycle. A Closed Ticket may be ReOpened if the fault re-occurs within 10 days.

## 4.2 Notifications

All service orders and faults will have associated notifications during the order or fault lifecycle. The notifications which a Service Provider can expect to receive for service orders and faults are outlined in Table 5. For eligibility notifications please see Section 6. Note: Table 5 TBC with industry.

The table below lists the service order notifications:

Order Notifications	Description and State Transition
Accepted	Issued when order has been accepted.
Complete	Issued when the order has successfully been completed.
Status	A change in the job status for the order, for example, an order now owned by NBI
Cancelled	Issued when an order is cancelled.
Local Arrangement (RELA)*	Issued when engineer has rescheduled an appointment locally with the End User.
Appointment	Issued when a reserved appointment was not successful, and a new appointment has been provided. This is also used where an appointment is rescheduled prior to field engineer dispatch, and in the pre-order process
Appointment Reschedule (RESP)	Issued when the appointment is not able to be delivered. The notification will specify the reason. The Service Provider must either reschedule an appointment or cancel the order.
Request to Cancel (RTC)**	Issued after 21 calendar days if the Service Provider has yet to Reschedule an appointment or cancel the order.

Order Notifications	Description and State Transition
Inventory Update	NBI has informed the Service Provider about a change in the inventory as part of the order lifecycle. Currently, only CSID changes are reported.
Early Life Fault	A valid issue or fault has been detected or logged within 10 working days of the installation complete.
CSID Update	Contains the details of the CSID for the line. This is issued once NBI take ownership of the appointment.
Notes	Informational update to Service Provider from NBI regarding the order.

Table 3: Order Notification

\*Appointment notifications are not always relevant for In-situ and Transfers/Migrations (only applicable if appointment requested)

\*\*Happens during Reschedule Service Provider notification if the Service Provider has not acted after 21 calendar days

### 4.2.1 Additional Information in Notifications

System Error Codes are provided to the Service Provider when system errors occur. For example, “Account Not Active” or “Appointment Expired”. For a full list of Error Codes please refer to Appendix 2.

NBI will provide further codes in Status Notifications to provide information on the progress of certain steps in the life cycle of an order. For example:

- “Installation In Progress”
- “Engineer On Route”
- “Engineer On Site”

These statuses are more for informational purposes only to describe the latest state of the order.

### 4.2.2 In-Life Fault Notifications

The notifications that can be sent during the access fault ticket life cycle will be defined in line with ticket status and flows defined in 4.1.2 Fault States & Ticket types.

These notifications will be updated in consultation with Industry.

## 4.3 Fault Codes

When the Service Provider submits an incident report/ticket, fault codes are used to describe the nature of the problem. They also help determine if an appointment is required to resolve the issue.

Fault Sub-codes are also available to provide further detail, for example:

- “Service Loss” with Sub-code options of “Authentication issue”

Suitable Fault Codes / Clear Codes based on current Industry Fibre best practice will be listed in Appendix 3.



## 5 Location

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### 5.1 Location Overview

The Location provides the master list of address information and associated geo-spatial information.

The Location is informed from:

- **GeoDirectory** – i.e. NBI will not maintain a separate list of Addresses
- **DCCAE Intervention Area Map** – Spatial Map defining the Amber Area(s)

Inclusion in the Intervention Area (IA) is determined by a spatial look-up between the geo-coordinates of the building as defined by GeoDirectory and the Amber Area Spatial Map provided by the DCCAE.

Where GeoDirectory does not provide an Eircode for a building, NBI will assign a unique 8-character Location Code for the property to support Eligibility & Order Management purposes.

Eligibility will be supported based on Eircode/Location Code – i.e. all connections to this Service Location are eligible for the same products

### 5.2 Location Key Concepts

GeoDirectory introduces three key concepts of particular relevance to NBI:

1. **Building** – A physical structure with associated geocoordinates
2. **Address Point [Unit]** – A separate and identifiable unit within the building
3. **Postal Point [Connection]** – The number of delivery points for post services. The Project Agreement with DCCAE defines this as the number of available subsidised connections at the building.

**Note:** Both Address Points and Postal Points are associated to the Building, but not to each other.

Address Points support various concepts including shops, flats, apartment complex, home office, farms etc. and may have an Eircode assigned at that level or may inherit the Eircode of the building.

NBI will auto-allocate an individual connection to each unit, and any remaining connections will be allocated at building level. The connections allocated at building level will be consumed on a first come, first served basis.

NBI will require Service Orders to be placed at Service Location (Eircode/Location code) level. Where an Eircode is shared across multiple units, the unit information will also need to be provided in the order.

## 6 Eligibility Request

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### 6.1 Eligibility Overview

The Eligibility request provides the details of Service Eligibility and Availability at a requested Service Location.

The Eligibility function is informed from the following:

- Intervention Area (IA) List
- NBI Deployment Information
- NBI detailed survey information
- Order Management processes

The Eligibility request functionality is available to Service Providers through either the Web Portal or API channels. The Eligibility check is synchronous and will typically be returned within 5 seconds to the Service Provider.

Note: If the Inventory check is requested on the Eligibility request, then there is a performance impact on the Eligibility response.

A subset of the information will be available each calendar month on the NBI Deployment File and issued to Service Providers (see section 6.2 for more information).

The Eligibility results will include the eligible products, add-ons and in-home services – depending on the setup that the Service Provider has with NBI.

If the premises already has an Order (or Pre Order) against it, the reservation details will also be returned on the Eligibility result.

### 6.2 Eligibility File

NBI generates and distributes a monthly Deployment File to enable Service Providers to perform manual searches of premises' service capability.

The Deployment File "Premises Information" contains the following data, which can be used for premises Eligibility:

- Eircode
- Location Code
- Geo Co-ordinates
- Entry type/Build indicator
- Ready for Service date
- Address details

### 6.3 Eligibility Input Parameters

The Service Provider can determine a premises eligibility on the platform primarily using the Eircode assigned to each residential/business address, but also can use the associated Location Code assigned to each premises. The NBI Web Portal supports address-to-Eircode lookup including organisational lookup which helps the user find the correct address during the search

## 6.4 Eligibility Results Overview

When a Service Provider submits an Eligibility check, NBI systems will first validate that PoH and Unicast connectivity is in place for the Service Provider performing the check. Once NBI have confirmed this, the Eligibility check is carried out on the NBI system. See section 10 for more information on PoH and Unicast setup)

The Eligibility check will provide the following information:

- **Building details** - including Intervention Area flag, listed Units and Multiple Premises flag
- **Eligibility details** - per service supported (FTTH or Wireless)
  - Availability - details of the actual or planned service availability at the premises
  - Products - list of eligible products and add-ons for the requesting Service Provider at the particular location
  - In-Home Services - list of in-home services the requesting Service Provider has subscribed to
  - CPE - list of End User Premises Equipment where an arrangement exists for the NBI engineers to carry in stock
- **Order Information** - information relevant to order management
  - Reservation Details - including the reason and date the reservation will be removed
  - Previous Installation - confirmation of a previous installation at this location
  - Survey Required - flag to indicate a survey is required before an order may be placed
  - Survey Details - provides the outcome of surveys where an End User contribution is required

## 6.5 Eligibility Results - Additional Information

A Premises can be in any of the following conditions:

- Ineligible: Premises outside the IA
- Planned: Premises targeted for the FTTH rollout, but service not yet passing premises
- Planned/Expected: within 90 calendar days used for Pre-order
- Allocated: FTTH available to the premises
- Reserved: Pending Order exists for the premises
- Active: Active service at the premises address
- Available: A ceased connection and ONT exists at the premises, which can potentially be remotely activated
- Service Availability Date
  - Ready for Service (RFS) date and Ready for Pre Order date can be calculated from this
- Drop Type (data required for non-connected addresses)
  - Indicates the installation work in place or required to deliver the service from the ODP to the premises. It helps determine the complexity of installation and associated manhours and expected delivery window for the purposes of establishing a suitable Appointment
  - Determined from previous Low-Level Design (LLD) work and / or survey notes to determine which type of connection is required
    - Standard connection (types 1-7 – specific details to follow)
    - Non-Standard (standard can be made non-standard)
- Technology Available
  - FTTH
  - Wireless Broadband (TBC)
- Check ONT Status (check if existing service is there active / inactive)
  - Powered On / Off

### 6.5.1 Multiple Premises

Eligibility introduces a concept of multiple premises. This concept is simply where the Eircode or Location Code submitted in the request, has more than one connection assigned to it – at either unit or building level.

The matrix of multiple premises scenarios is outlined in Table 8:

Eircode	Connection	Multiple Premises	Notes
1	1	No	Single connection assigned to the Eircode
1	>1	Yes	All connections assigned to the Eircode, although some may be allocated to identified units
Many	Many	No	The number of Eircodes and connections align 1-1. Each Eircode is assigned 1 connection only
Many	Many	Yes	There are more connections assigned to the building than Eircodes. Each Eircode is assigned 1 connection only with the remainder assigned at building level

Table 4: Multiple Premises Scenarios

### 6.5.2 Reservations

Eligibility supports a concept of reservations. A reservation is placed against an Eircode & unit and restricts activities being performed by other Service Providers.

There are 2 types of reservations supported:

- **Extended** reservations – where reservations are in place for an extended period to support activities performed by NBI
- **Order** reservations – where a reservation is in place for 7 calendar days to support a Service Provider placing an Order

Reservation Reason	Reservation Duration	Notes
Pre-Order	4 months	Reservation Placed on the Unit until Pre-Order is processed or is cancelled
Survey Requested	2 months	Reservation Placed on the Unit until Survey has completed or is cancelled
Survey Completed	7 calendar days	Once survey completes, the requesting Service Provider is given a week to place an order for the End User
Transfer Indicated	7 calendar days	Once a transfer is indicated, the requesting Service Provider is given a week to place an order for the End User

Table 5: Reservation Reasons

## 6.6 Eligibility Process Flows

### Eligibility: Ineligible(Not in the IA)

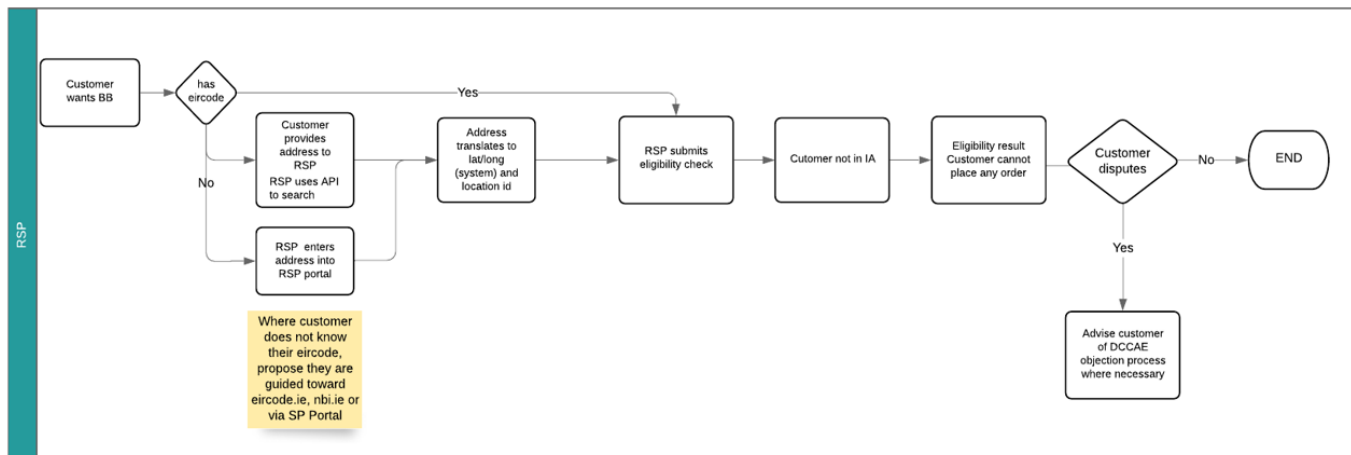


Figure 3: Ineligible Premises

### Eligibility: Planned – Pre-order - ( In the IA, RFS < 90days - Ready for Pre-order )

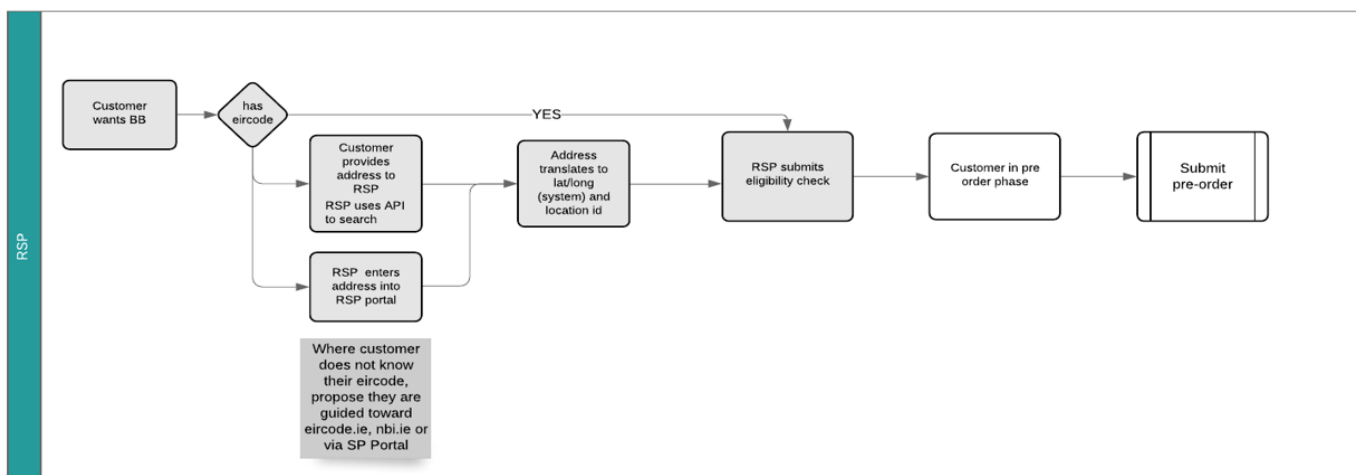


Figure 4: Premises Planned / Pre-Order

### Eligibility: Active - (In the IA, Ready for Service – Order can be placed)

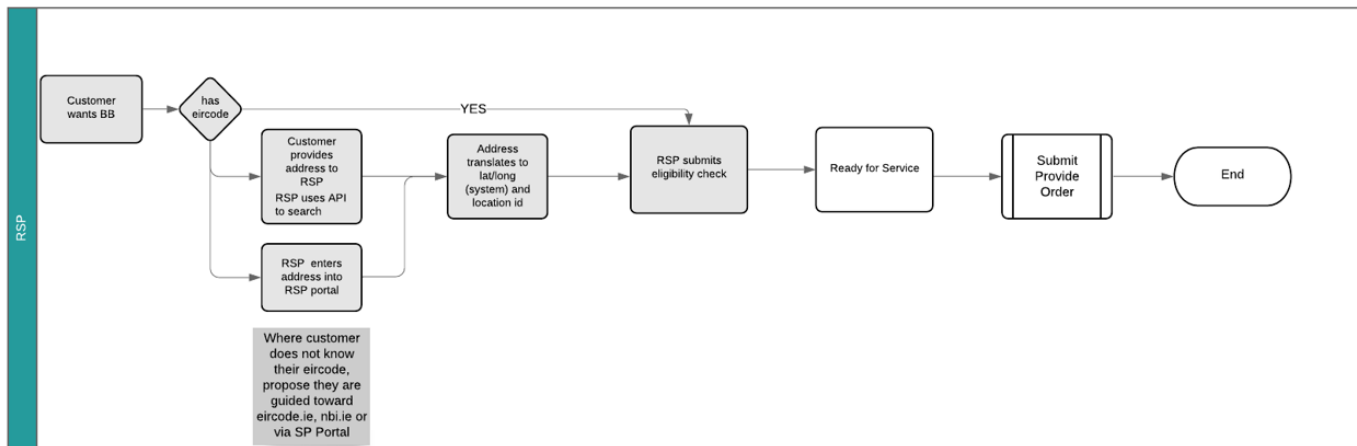


Figure 5: Premises Ready for Service

### Eligibility: Scenario 6 - ( In the IA, RFS <90 days, Pre-order phase with a reserve on the line)

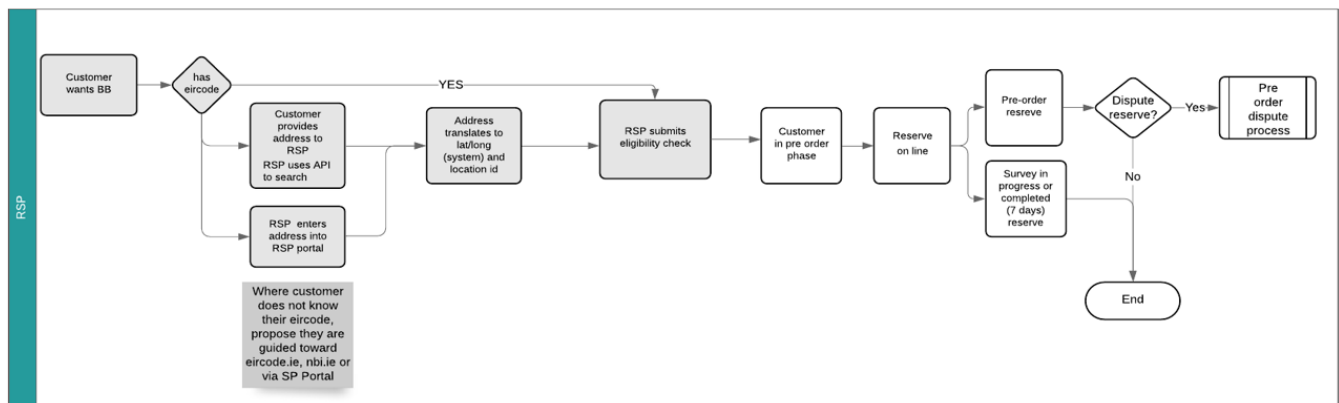


Figure 6: Premises Ready for Service &lt;90 days with Pre-Order reserve active

## 6.7 Eligibility Request State, Notifications and Error Messages

Eligibility requests can be in one of the following states:

State	Description
In Progress	An Eligibility request is in progress. No results have been received yet.
Complete	The Eligibility request is completed, and a positive response has been returned. The Eligibility request can be used for ordering a service.
Closed	An Eligibility request is closed when it has been used as part of an order. It cannot be re-used for another order.
Failed	The Eligibility request has failed due to internal system errors (e.g., network issues, resource issues) or a valid failure message. Failure message are shown in the notification tab (e.g. no BPU in place, PoH not set-up for Service Provider) and failure codes are detailed in Appendix 2
Expired	An Eligibility check is valid for 7 calendar days and will expire after this time.
Partially complete	The Eligibility request received a successful response. The Eligibility request can be used to order a service if a set of products/services is presented as part of the response.

Table 6: Eligibility Requests

State changes are triggered by messages and notifications/responses processed during the eligibility check.

## 7 Site Survey

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This section describes the various Site Survey scenarios associated with an End User premises within the IA.

Surveys are only supported once the Pre-Order window is open.

A survey may be required for the following scenarios:

1. Where the NBI survey team could not complete a survey during the network design phase (e.g. long driveway, restricted view)
2. A complex build where the cost for delivering service on the End User's premises may exceed the threshold

The outcome of these surveys will result in a Standard installation type or a Premium installation, where a financial contribution (above the Standard Connection charge) is required from the End User.

Where an additional financial contribution (above the Standard Connection charge) is required, the Service Provider will be required to select the Premium connection type when placing an order.

The eligibility check shows the various connection types associated with the premises, including the connection standards and connection complexity.

A survey may be requested in the following scenario (End User requested):

1. The End User requests a different connection type to the Standard connection type as determined during the survey phase (e.g. overhead span or underground)

Where the End User requests a different connection type, there will be a charge for the difference between the Standard connection type and the End User connection type. In this scenario, the contribution amount will be made available in the Eligibility check.

The Service Provider will have to agree and approve the End User additional financial contribution with the End User before placing an order.

Note: End User requested surveys are chargeable as defined in the Bitstream and VUA Price List.

### 7.1 Survey Types

Two different survey scenarios are supported:

- Standard
  - Eligibility returns a Survey Required = True
- End User
  - Eligibility returns "Survey Required = False"

For Standard surveys, the outcome will either be an InstallationType of Standard or Premium, and the survey will 'auto-approve'.

For End User surveys, the outcome will be an alternative InstallationType option of End User but requires the Service Provider to approve or reject the survey before proceeding. The inventory will only be updated



once the End User survey has been approved. It will expire after 7 calendar days where no response has been received.

The connection standard and connection complexity assigned as part of the survey process are detailed in Appendix 1.

## 7.2 Survey Process

Surveys are similar to service orders, where surveys have to be created as a standalone request for NBI to complete the task. The survey process supports the following notifications:

- Status Change
- Cancel Requested
- Cancelled
- Local Arrangement
- Notes
- Approval Required
- Completed

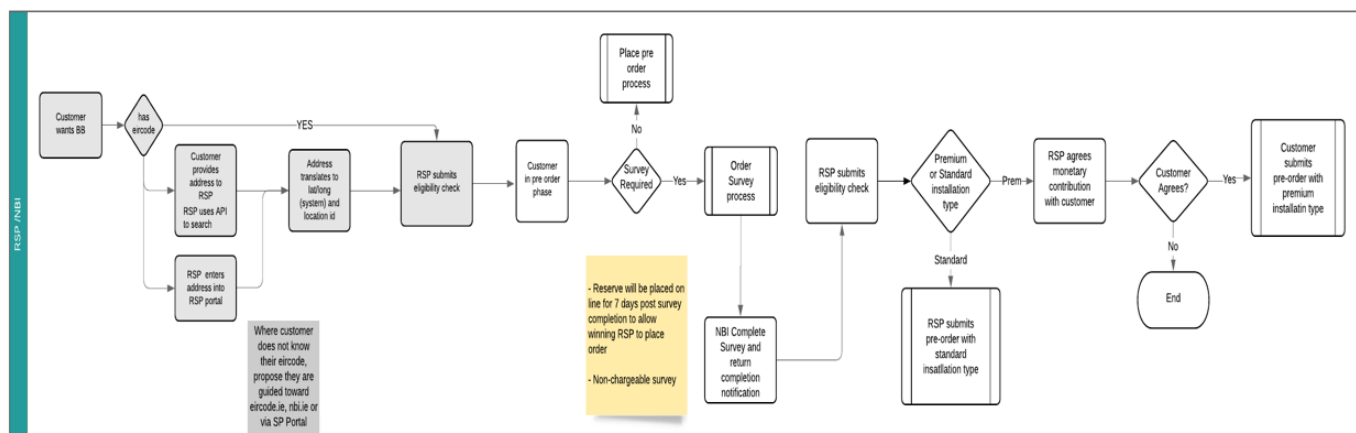


Figure 7: Survey Required

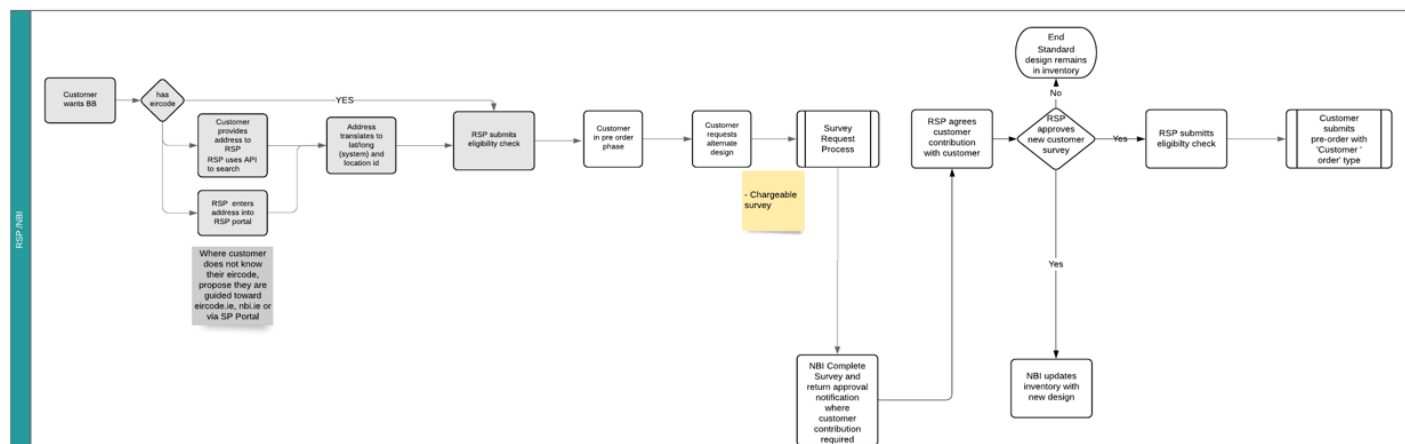


Figure 8: Survey Requested

Once a survey has completed and been approved (if necessary), only one active connection design will exist for the premises.

The following details will be returned on the Eligibility check, to indicate this connection design:

- Availability/InstallationType – Standard, Premium or End User
- SurveyDetails/InstallationType – Premium or End User
- SurveyDetails/EndUserContribution – Monetary Amount to be paid in addition to the standard connection charge
- SurveyDetails/SurveyStatus – Approved, Pending Approval, Rejected, Expired

An order will not be possible when the SurveyStatus is in Pending Approval.

An in-flight order has to be cancelled prior to an End User requested Survey is placed by the Service Provider.

## 8 Appointments

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This section details the scheduling and management of appointments for the End User in relation to service delivery/provisioning and repair/assurance.

### 8.1 Appointment Information

The NBI appointment functionality allows Service Providers to query appointment slots and subsequently reserve a single appointment slot.

Appointments are supported for a number of activities including:

- End User Connections (Installations)
- End User Transfers
- Product Changes (where ONT changes are required)
- In-Home Services
- Survey Requests

The following Appointment slots are offered (depending on the Drop Type or work required):

- AM 08:00-12:00
- PM 12:00-1600
- Evening 16:00-20:00
- Early Double Slot 08:00-16:00
- Late Double Slot 12:00-20:00
- Full Day 08:00-20:00
- Day+ TBD for non-standard work

### 8.2 Appointment Process

To schedule an appointment, the Service Provider must follow a 3-step process:

- 1) Query: query for available slots at given location, date range & activities
- 2) Reserve Appointment: reserve appointment for the agreed window (~20 minutes)\*
- 3) Place Order: place service order within 20 minutes, which triggers Appointment Confirmation

Note: The same appointment process is used to Reschedule Appointments.

An appointment query should be run after the eligibility check, to determine if a slot is available or alternatively show a list of appointment slots that are currently available. The desired appointment slot is reserved by the Service Provider and is consequently used in order submission.

\* The appointment slot is reserved for 20 minutes. If the appointment slot is no longer available/valid when the Service Provider submits the service order, then the next available appointment slot will be used. Service Providers will be notified in the acceptance notification if the appointment slot is different to the original requested appointment slot.

An appointment will be required for “Clean Boot” work, and a preferred appointment slot can be selected:

- Specifying a “from date”
- Selecting a time slot

If a slot is selected too close to the Point of No Return (PONR), there may be no time to cancel the order. A resultant late cancellation will incur a charge.

Some orders may not require a site visit (ceases, transfers, migration, re-activation). In these cases, the End User can select a date and time for the order action (see Delayed Activation Capability).

Appointments are required for certain order types depending on the premises status from the eligibility result. The Eligibility Drop Type information helps determine the slot length and delivery time to the End User. Eligibility Drop Type information is detailed in Appendix 1.

### 8.2.1 Delayed Activation Capability

Some orders may not require a site visit (ceases, transfers, migration, re-activation) but instead a future soft order activation date and time. This may be used to allow for equipment delivery of the gaining Service Provider or to allow losing Service Provider bill cycles to complete, for example.

### 8.2.2 Appointment for Survey

#### **Standard Service Survey for new Build**

This is required where a premises has been built after completion of the initial rollout.

Once the eligibility check has established that there is no ONT or connection at the site, a survey will be actioned. There is no charge for this survey.

Once the survey has been completed, the results will be added to the existing NBI network design and the premises database and associated network files will be updated. A notification will be sent to the Service Provider to re-run the eligibility check.

The survey will be included as part of BAU where contractor is out in the field with a five-day window.

#### **Non-Standard Service Survey**

A non-standard survey is required to establish the cost of connection where

- the standard solution is rejected by the End User (e.g. where the End User requests an underground (UG) solution instead of the standard overhead service)
- the solution is expected to cost over €5,000

The Service Provider will be charged up front for this type of Survey order. There may be differing survey costs depending on the expected scope of work -

- Desktop survey
- UG at typical estate
- UG at rural location

The cost will be incorporated into the connection charge if the order proceeds.

## 8.3 Appointment Rescheduling

There are 2 main categories of Appointment Rescheduling:

- 1) Service Provider led Rescheduling
- 2) Issue driven Rescheduling

Service Provider led Rescheduling is where the Service Provider may Reschedule the appointment up to 4pm on the day prior to the scheduled appointment. This may be because the End User needs to change the appointment for whatever reason, or where the Service Provider has other services (e.g. TV) to be installed which might require Rescheduling the appointment.

Issue-driven Rescheduling is where the order/appointment cannot be delivered and NBI will issue a Reason Code detailing why the appointment needs to be Rescheduled. In this instance, the Reason Codes used are: NBI, End User or Contractor. Full Reason Codes to be detailed in Appendix 4.

An order which is required to be Rescheduled will be notified via a RESP (Reschedule Service Provider) notification. When the Service Provider receives this notification, the order is required to be Rescheduled or cancelled within 21 calendar days. If this time period elapses, then NBI will issue an RTC (Request to Cancel) notification. If the Service Provider does not Reschedule or Cancel the order within an additional 7 calendar days after the RTC is issued, the Order will be cancelled by NBI.

### 8.3.1 Local Arrangement

The issue of an End User missing their appointment may be resolved by the engineer and the End User making a Local Arrangement. In these instances, NBI will issue a Local Arrangement (RELA) notification indicating that the engineer and End User have agreed a new appointment date. The new appointment details and reason will be included in the notification.

## 9 Ordering

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### 9.1 Pre Order Overview

Pre Orders will be supported where the Pre Order Flag is set to “True” on the Eligibility response. Pre Orders will be permitted from 90 calendar days prior to Ready for Service to 14 calendar days prior to the Ready for Service date.

NBI will update the Deployment File with addresses that have an indicative RFS date 90 calendar days in the future. The Pre Order is used to book a provision of the service up to 90 calendar days before the RFS date. Pre Orders will be converted to a full order 14 calendar days prior to Ready for Service, and the Service Provider will be notified via a “Processed” notification, which will provide the Order Reference Number.

Once a Pre Order has been placed at a location, a reservation is placed restricting other Service Providers from placing Pre Orders at the same location.

#### 9.1.1 Pre Order Notifications:

The following Pre Order notifications are used:

- **Revised** – in the event there has been a change to the projected RFS date for the Fibre Ribbon / premises.
- **Deferred** – during the build phase, certain premises may not be passed for a variety of reasons. These premises will be identified as Deferred Premises and will not be eligible for service at the same time as the other premises in that fibre ribbon. The Deferred Premises notification is to inform the Service Provider in the event that a Pre Order has been placed for one of these Deferred Premises.
- **Processed** – the Pre Order has been converted to a Service Order, 14 calendar days prior to Ready for Service.
- **Cancel Requested** – as a result of a dispute arising on the placement of a Pre Order and NBI determine that the order should be cancelled by the originating Service Provider.
- **Cancelled** – in the event that the originating Service Provider does not cancel the Pre Order- placed within a defined window, NBI will cancel the Pre Order. A Pre Order will never be cancelled without a prior cancel requested notification.

Pre Orders are similar to Service Orders but will differ slightly in the following areas:

- A Pre Order is always an installation order, whereas a Service Order could also include transfer orders, in-home service orders and product change orders.
- No appointment is captured for a Pre Order, so details normally assigned to an Appointment are now required to be included in the Pre Order. This includes In-Home Services, for example

## 9.2 Service Order

A Service Order is assigned a unique Order ID by NBI, unless specified on the Order by the Service Provider. A Service Order can only be created once a positive eligibility result is available and an appointment has been selected (if required).

### 9.2.1 Standard and Premium Connections

A connection type will be determined during the network survey phase where each premises will be defined into one of 7 categories (as detailed in Appendix 1)

## 9.3 Cancel Order

The Service Provider may cancel an in-progress order at any stage up until the engineer is on-site at the scheduled appointment date and time. The cancellation action is irreversible.

Depending on the order state at time of cancellation, there may be an associated cancellation charge as defined in the Bitstream and VUA Price List.

There is no charge, however, for Service Providers who cancel an order up until 4pm the working day prior to the scheduled appointment.

If the Service Provider requests to cancel the order after this state notification, then a cancellation charge will be applied.

If the Service Provider requests to cancel the order after the “Engineer Dispatched” notification, then an additional charge will be levied to the Service Provider.

Note: The End User may also request to cancel the order when the engineer is on site. If this scenario occurs, then the Service Provider will be notified via the order state notifications.

## 9.4 Update/Change Service

The Service Provider user can make changes to an End User’s active service. The change order request can make the following changes to an End User’s service:

1. The Product can be amended
  - a. Add or remove Multicast
  - b. Upgrade or downgrade speed
  - c. Change CoS
  - d. Change product to Business or Consumer Variant
2. The appointment details updated or
3. The contact details updated

### 9.4.1 Update Order – In-Flight only until the PONR

An order can only be updated while the order is in progress, not when the order is in a “Completed” state.

Updatable items include:

- 1) Update product speed. Upgrade or downgrade within the same product family
- 2) Update appointment date (re-schedule) to a new date and time
- 3) Update appointment contact details

## 9.5 Cease Service

A Service Provider can cease an active service by finding the Account Details relating to the specific End User premises. The service must be active and there must be no in-progress orders for the specified End User.

## 9.6 Transfer of Service

All Transfer Orders require an eligibility check.

Migration of services can result in breaks of service for the End User, mainly due to CPE requirements. As a result, NBI and the Service Provider should aim to minimise the break in service for individual End Users. The gaining Service Provider initiates the transfer order capture process when attempting to provision a new service at a premises address where a service is currently active with another Service Provider.

Note: A transfer order may require an appointment if the ONT is offline or if additional CPE is requested.

Full process TBD with industry consultation.

## 9.7 Order Tracking

As detailed in the Notifications section in this document, orders will always be in a specific state, which indicates where they are in the order lifecycle.

Service orders may be tracked and viewed via the UWG / Web Portal.

## 9.8 Order Support Contacts

All orders must be submitted by the UWG / Web Portal. If the Service Provider has a query on an order, they should contact the order support team. As part of the initial On-boarding process, all Service Providers will be informed of the relevant Support Centre contact details.

Attached is a list of useful contact numbers who are available to assist in order processing queries

- Support Centre support is available 08:00 – 20:00, Monday - Saturday
- Network Support is 24/7/365

Escalation Level		Contact	Phone	Email
Service-Hours	Out-of-Hours			
First	First	NBI Service desk	+353 (01) <TBC>	<TBC>
Second		Wholesale Customer Operations Manager	+353 (08X) <TBC>	<TBC>
	Second	On Call Management Escalation	+353 (01) <TBC>	<TBC>
Third	Third	Operations Director	+353 (08X) <TBC>	<TBC>
Fourth	Fourth	COO	+353 (08X) <TBC>	<TBC>
Fifth	Fifth	CEO	+353 (08X) <TBC>	<TBC>

Table 7: Support Contact Details



## 9.9 Order Issue Escalation

See 11.8 also. Order Escalation Process to be mapped.

## 9.10 Additional Services: Data Port Extension

A Data Port Extension (DPE) socket is an optional piece of equipment that can be requested by the Service Provider on the initial service order, or by the End User during the install. The DPE socket extends the internal cabling by up to 30 metres. There is a charge for installing the DPE which is detailed in the Bitstream and VUA Price List.

The engineer will surface-mount the extension cable to accessible skirting boards / wall with agreement of the End User, but will not cable under carpet or floor, nor will they move furniture or carry out decorative work. A DPE kit will only be fitted if it can be completed within the existing appointment slot. The DPE is considered part of internal wiring and is the End User's responsibility.

The Service Provider should advise the End User that an electrical socket to power the ONT will be required. This power socket should be located within 1 meter of the ONT.

## 10 Logical Circuit Orders

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### 10.1 Prerequisites

A Service Provider must have a physical Interconnect in place before being able to place a Logical circuit. With the Interconnect in place, a Service Provider can then order the mandatory logical unicast circuit at each PoH they intend to serve End Users from.

A Service Provider must order a logical circuit from each PoH to their chosen Interconnect (national Interconnect for Bitstream and Regional Interconnect for VUA). These logical circuits are specific to each Service Provider and will carry the aggregated Service Provider traffic from the regional PoH across the network to the regional or national Interconnect. This logical connectivity is mandatory to ensure effective service and is required to be completed before a Service Provider can place orders for Bitstream and VUA Products for its End Users.

If a Service Provider has multiple resellers/connections from a single PoH, then each logical unicast connection will be assigned its own Egress Domain identifier. This Egress Domain identifier is used on End User orders to identify which specific Reseller/connection should be used. The same Egress Domains identifiers are used across all PoH sites.

For more information on logical circuits please refer to the Bitstream & VUA Technical Manual.

### 10.2 Bitstream and VUA - Logical Order Process

A Logical Order allows Service Providers to order each of the Logical Circuits for Bitstream and VUA. For full instructions on how to order Interconnects and Logical Orders please refer to the Interconnect & Symmetric Ethernet (SES) Process Manual.

## 11 Assurance Management

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This section defines the diagnostic and troubleshooting steps to take before raising an incident to NBI via UWG / Web Portal.

### 11.1 Assurance Summary

The Service Provider must follow the correct process when raising an incident:

- Ensure that all relevant diagnostic information, fault descriptions and fault codes are detailed in the relevant fault ticket
- Complete the fault diagnosis and the industry agreed common set of Tier 1 and Tier 2 Questions (to be agreed with Industry) to aid fault diagnosis
- Prove any fault out of its own network before reporting the fault to NBI
- Correlate individual End User faults against known network faults (Major Service Outages)
- The Service Provider End User or Reseller must not report a fault directly to NBI. NBI may speak directly to the End User during the Fault Management Process if the End User's co-operation is needed as part of the repair

### 11.2 Assurance Process (End User-Service Provider-NBI)

#### End User to Service Provider

- An End User reports a fault to the Service Provider.
- The Service Provider gathers the End User details and symptoms of the incident/fault as outlined in the industry agreed script (Tier 1 and Tier 2 sample questions to be determined with industry).
- The Service Provider proves the fault in/out of their network/service.
- If the fault is within the Service Provider network, its handled through their internal processes and resolved.
- If the fault is proved out of their network, the fault can be logged on the Web Portal or through UWG.

#### Service Provider to NBI

- The Service Provider completes Tier 1 and Tier 2 fault diagnosis and proves the fault is out of its network and CPE
- The Service Provider correlates the fault against highlighted network faults or incidents (Major Service Outages)
- The Service Provider raises a trouble ticket on UWG / Web Portal
- The trouble ticket must contain relevant symptoms and detail. Failure to provide the mandatory information will result in the trouble ticket being rejected
- NBI acknowledges receipt of the Trouble Ticket via UWG / Web Portal state updates
- NBI validates the Trouble Ticket and rejects or accepts the Trouble Ticket
- NBI will isolate, resolve and close the fault and notify the originating Service Provider

#### *Example Mandatory Questions (TBD with industry)*

- Was all appropriate CPE plugged in?
- Was the End User ONT switched on during diagnosis?
- Did the End User try rebooting their CPE (Home-gateway) and ONT?
- Was a Tier 1 test carried out?
- Has a fault diagnosis been carried out?
- Is this a repeat fault?
- Is it confirmed that the fault is not in the Service Provider's network or CPE?
- Is it confirmed that the fault is not in the End user's CPE?

## 11.3 Two Tier Approach

### Example Tier 1 Testing routine: (to be determined with industry)

- Check ONT Status returns the status of the remote end ONT
- Query the configuration status of an ONT Port
- Query the activation and the running status of an ONT
- Query details of product speed
- Query parameters of the optical module on the ONT NNI port

Expected data returned from an ONT check (to be determined with industry consultation):

- Test Date and Time
- Unique ID
- Product Speed
- Port Status
- ONT Run Status (Up (normal and online)/ Down)
- ONT Admin Status (Up/ Down)
- RX Power (Optical power in 0.01dBm)
- TX Power (Optical power in 0.01dBm)
- Last Time Up & Down
- Last Down Cause
- Serial Number of the ONT
- MAC address of the Home Gateway connected to the ONT (if available/possible)

### Check ONT History

Retrieves the last 10 (TBC) Check ONT results. This is useful when troubleshooting intermittent or repeat faults and querying the last time the ONT was up / down

### Tier 2 Testing

Example Tier 2 questions TBC

## 11.4 Assurance Definitions

Full details to be determined with industry.

## 11.5 End User Fault Symptoms

There are a number of different fault types that can be logged by the Service Provider to NBI.

Full details to be determined with industry.

## 11.6 Installation Failures (Early Life Failure)

Process TBD with industry

## 11.7 Support Contacts

Below is a list of useful contact numbers who are available to assist in End User fault.

- Support Centre support is available 08:00 – 20:00, Monday - Saturday
- Network Support is 24/7/365
- Initial point of contact when reporting/communicating, faults, problems and incidents

Escalation Level		Contact	Phone	Email
Service-Hours	Out-of-Hours			
First	First	NBI Service desk	+353 (01) <TBC>	<TBC>
Second		Wholesale Customer Operations Manager	+353 (08X) <TBC>	<TBC>
	Second	On Call Management Escalation	+353 (01) <TBC>	<TBC>
Third	Third	Operations Director	+353 (08X) <TBC>	<TBC>
Fourth	Fourth	COO	+353 (08X) <TBC>	<TBC>
Fifth	Fifth	CEO	+353 (08X) <TBC>	<TBC>

Table 8: Support Contact Details

## 11.8 Escalation

The escalation of an unresolved fault issue may occur at two levels. If the target times for response have elapsed and the fault is not cleared, the appropriate Level 1 escalation contact should be notified, and the appropriate action taken to resolve the fault.

In the event that the fault is still not cleared within a further eight working hours, and no evidence of progress exists, the Level 2 escalation contact should be used to agree appropriate action to clear the fault.

Escalations for all Products within the SLA must be "accepted" by NBI and vice versa. If the relevant previous escalations have not been made, or if the time intervals have not been observed, the escalation may be rejected by NBI. Escalation will depend on the priority of the fault.

## 11.9 Timescales

Fault management timescales are as per the Service Level Agreement for the NBI Service.

### 11.10 Escalation of Tickets

Escalation process TBD

## 12 Fault Reporting

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Expanding on 4.1.2 Fault States & Ticket types, this section will define in details the process for Fault Reporting to NBI. A Service Provider may use the UWG / Web Portal functionality to log, view and cancel End User Trouble Tickets.

### 12.1 Create Trouble Ticket

The UWG / Web Portal allows for the Service Provider to create Trouble Tickets.  
Full process TBC.

### 12.2 View Trouble Ticket

The UWG / Web Portal allows Service Providers to view Trouble Tickets.  
Full process TBC.

### 12.3 Track Fault/Incident & Summary View

Service Providers can track the progress of faults that have been submitted via the UWG / Web Portal.  
Full process TBC.

### 12.4 Cancel Trouble Ticket

The Service Provider may cancel a Trouble Ticket via the UWG / Web Portal.  
Full process TBC.

### 12.5 Fault Validation Hours

Support Centre 08:00-20:00, Monday to Saturday.

### 12.6 Peer to Peer Communication of Critical Faults

All faults should be reported via the UWG / Web Portal, however, for network faults which affect an entire PoH, for example, the Service Providers' NOC may contact the NBI NOC directly.

### 12.7 Service Provider Tickets

All Trouble Tickets generated by the Service Provider are assigned a unique identifier by NBI. Optionally, the Service Provider may additionally also enter its own reference identifier.

### 12.8 Assurance Responsibility and Physical Demarcation Points

Physical demarcation points are the points identified as those where responsibility ends for one Service Provider and begins for the other. Demarcation points help ensure effective and accurate fault isolation on VUA and Bitstream services.

The FTTH Bitstream, VUA and SES Service demarcation Point is the ONT in the End User premises.  
The Interconnect Service demarcation point is the PE router in the POH

A fault location matrix of responsibility (i.e. whether the fault is NBI's or Service Provider's responsibility) will be provided as soon as agreed at industry.

## 13 Service Provider Assurance tools

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The Fault Report (Trouble Ticket) must have sufficient information to enable effective analysis of the possible fault. The Service Provider must carry out the requisite diagnostics to help generate relevant fault codes to associate with the generated ticket.

The NBI solution supports the following diagnostic functions:

Functions TBC – expected tools and functions are listed in sections below.

### 13.1 Run/View Diagnostics

The Service Provider may run/view diagnostics via the UWG / Web Portal.  
Full process TBC with Industry

### 13.2 Restart ONT

The Service Provider may reset/restart the ONT via the UWG / Web Portal.  
Full process TBC with industry

## 14 UWG / Web Portal Reporting

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### Section TBC

NBI provides several reports to Service Providers, examples are shown below:

- Product Performance
- System Performance
- Network Performance
- Service And Support Performance



## Appendix 1 Eligibility Information

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**Products:**

- Bitstream Consumer Standard (this is known as Minimum Bitstream Wholesale Product)
- Bitstream Consumer Premium
- Bitstream Consumer Elite
- Bitstream Business Standard
- Bitstream Business Premium
- Bitstream Business Elite
- VUA Consumer Standard (this is known as Minimum VUA Wholesale Product)
- VUA Consumer Premium
- VUA Consumer Elite
- VUA Business Standard
- VUA Business Premium
- VUA Business Elite

**Add-Ons:**

- MULTICAST
- CONSUMER EF
- BUSINESS EF STANDARD
- BUSINESS EF PREMIUM

**Connection Standard:**

- Standard 1
- Standard 2
- Standard 3
- Standard 4
- Standard 5
- Standard 6
- Standard 7
- NotSurveyed
- SurveyPending

**Connection Complexity:**

- Low
- Medium
- High
- NotSurveyed
- Electronic

**Drop Types:**

- Aerial
- Underground
- Wireless

**Survey Connection Type:**

- PREMIUM
- END USER

## Appendix 2 System Error & Order Feedback Codes

Error Description	Service Provider Action Required	Action
Access Details cannot be retrieved	N	Access id associated to an access fault cannot be retrieved from BSS database.
Account not active	N	The End-user Account Number supplied by the Service Provider is no longer active
Account provided by end-user does not exist on BSS	Y	Account given to the Service Provider does not exist on BSS. Service Provider should validate if correct.
Account provided by end-user does not match existing Premises Account	Y	The End-user-provided Service Address Id and Account Number do not match. Service Provider should validate if correct.
Account subscription is deactivated	Y	Account is deactivated on Loss Service Provider side. Service Provider should validate if the introduced value is correct.
Appointment cannot be rescheduled	N	The Order is in a state where the appointment cannot be rescheduled
Appointment has expired	Y	Order submitted but appointment reservation period has expired. Service Provider can submit a new order with a new appointment
Appointment not found	Y	Confirm if appointment details has not timed out & that the appointment id is correct and matches an appointment that exists in BSS
Appointment not required for this Fault Type and Sub Type	Y	This Fault Type and Sub Type does not require an appointment. Service Provider can submit the request without appointment.
Appointment not reserved	Y	Appointment supplied has not been reserved during Order Process. Service Provider should submit a new order with a new reserved appointment.
Appointment required for this Fault Type	Y	Access Fault requires an appointment, but this has not been supplied. Service Provider can resubmit request with an appointment.
Appointment Type must be "Installation"	Y	Service Provider has incorrectly supplied a non "Installation" Appointment Type on a New Provide order. Use Installation Appointments for New Provides.
No POI Connection.	Y	Order submitted for a premises in area where the Service Provider has no POI connection. They can submit a new order when they have a POI connection.
No port currently available for this service	Y	No port available on Order submitted for this premises. NBI will advise when Ports are available, and Service Provider can then issue a new Order.
No Subscription found for Account Number	Y	Account Number not found or is no longer active. Service Provider can submit request with the correct Account Number

Service Provider does not have connectivity for this premises	Y	Service Provider to contact NBI if they think this premises should have connectivity to the POI
Service Provider not found	N	Service Provider code not in reference table
Order cannot be cancelled	N	The Order is in a state whereby it cannot be cancelled.
Order Id not found	Y	Service Provider has provided an incorrect order id in a cancellation request. Correct the Order Id and resubmit request.
Pending orders exist for this premises	N	Cannot proceed as pending order exists
Pre-Order must be in "appointment required" state	Y	The Service Provider must wait until the Pre-order is in "appointment required" state
Pre-Order Required. Cannot Issue New Provide as additional build indicator is required for this premises.	Y	Occurs when Service Provider Service Provider issued a New Provide, when the premises was only eligible for a Pre-Order.
Premises already has an active connection.	N	The premises is already connected active or inactive connected, so cannot have a New Provide
Premises are Not Eligible For Pre-Order	N	Service Provider has submitted a Pre-Order for a premises which is not eligible for Pre-Order. Premises state must be reassessed.
Premises Eligibility Not Found	N	The system was unable to retrieve Eligibility information. Try again later, or query with NBI.
Premises has Inflight Order	Y	Cannot proceed with order, while there is a pending order
Premises is not passed for fibre	N	Service Provider should not be provisioning for such a premises
Premises not found	Y	Confirm if correct Service Address ID provided?
Product does not have Fibre Service	N	Service Provider has submitted a fault ticket for an account that is no longer active
Product is not active	Y	The Account Number supplied by Service Provider is no longer active
Product not found	Y	The Account Number supplied by the Service Provider was not found. Need to resubmit request with the correct Account Number
Product Offering "X" Expired.	Y	Service Provider has requested a Product Offering Id for a product that has expired. They can resubmit request with a valid Product Offering Id.
Product offering not found	Y	Confirm product codes are correct
Product offering not found	Y	The Service Provider has supplied an incorrect Product Offering ID. The request can be resubmitted with the correct Id.

Table 9: System Error &amp; Order Feedback Codes

## Appendix 3 Fault Code & Clear Codes

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The Fault Category and Fault Code help to describe the type of issue the End User is experiencing. This acts as a guide to better resolve the issue.

These are TBD.

## Appendix 4 Reason Codes

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Reason Codes TBD