



Fibre Access Service Technical Overview

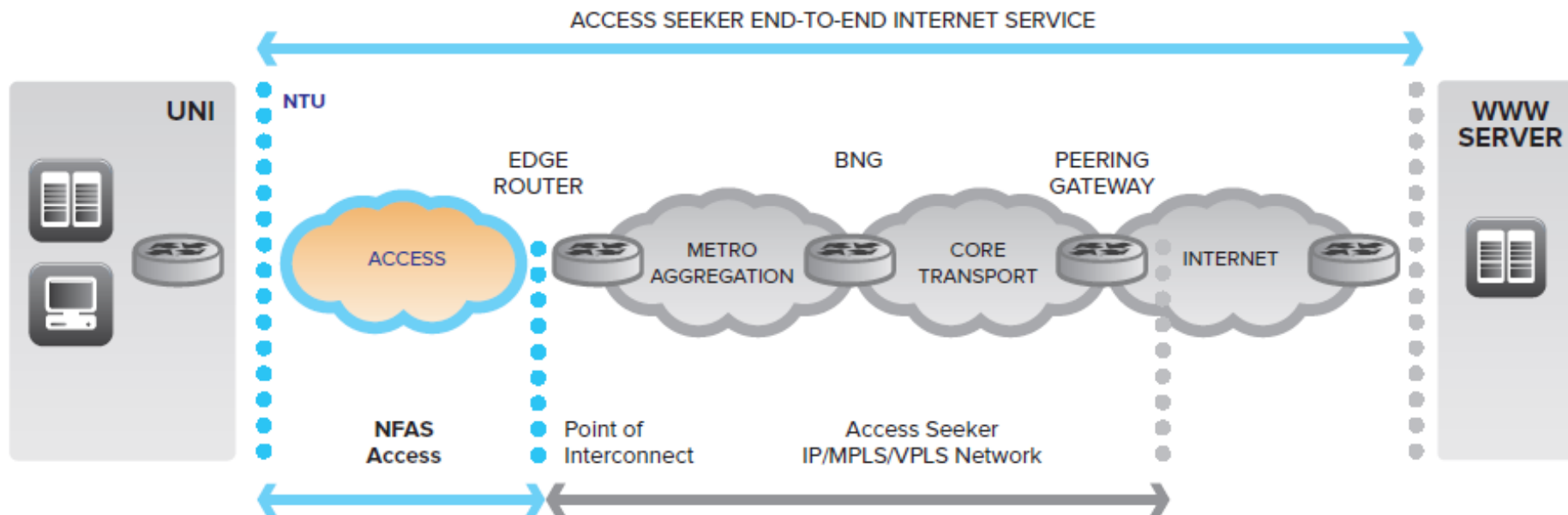
AUSNOG-04

Tom Sykes
Product Engineering, CTO Group
NBN Co Limited

Broadbanding
Australia



Where does NBN Co fit?

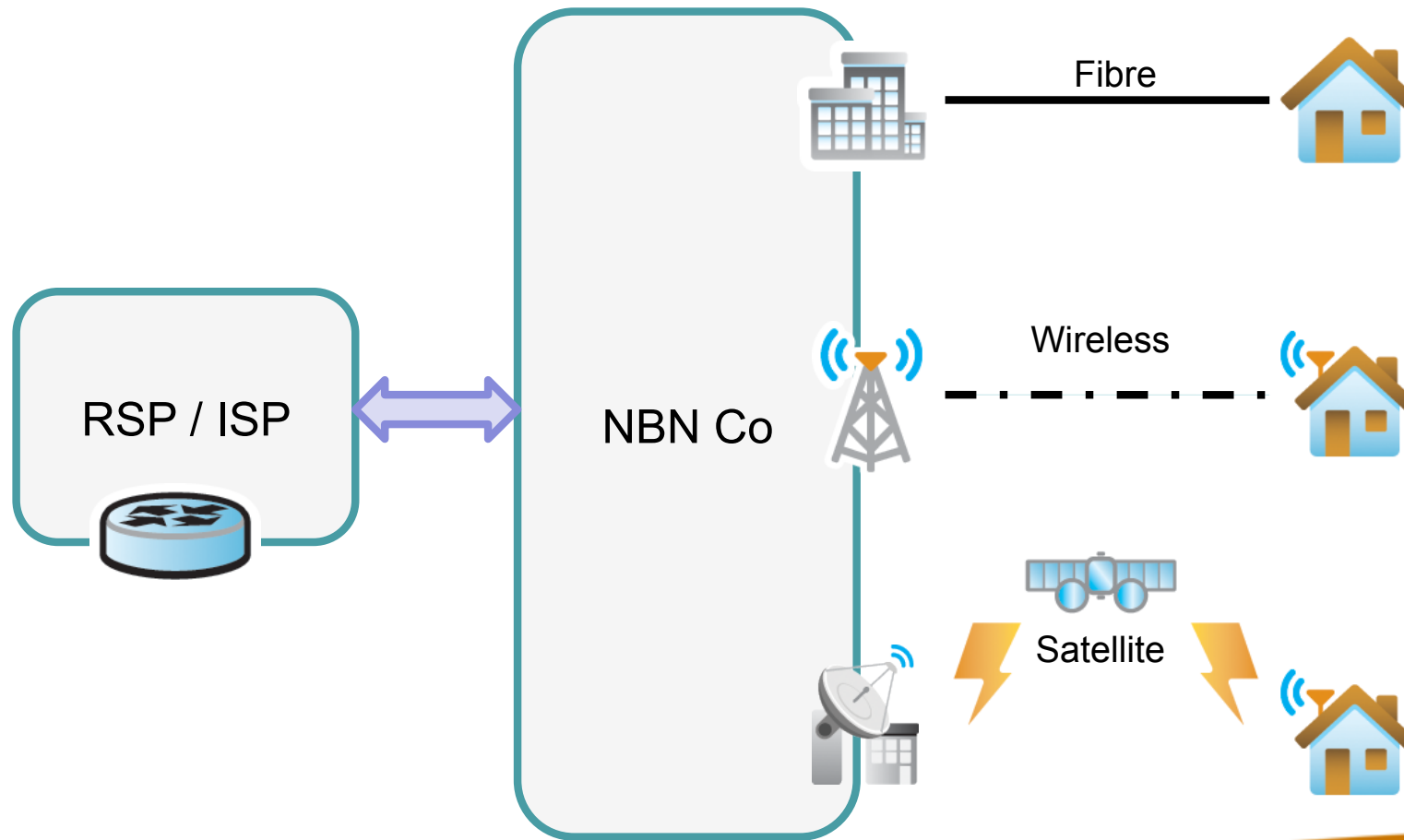


FAS represents the *Access Network* portion of an overall service provided by an RSP to an end-user

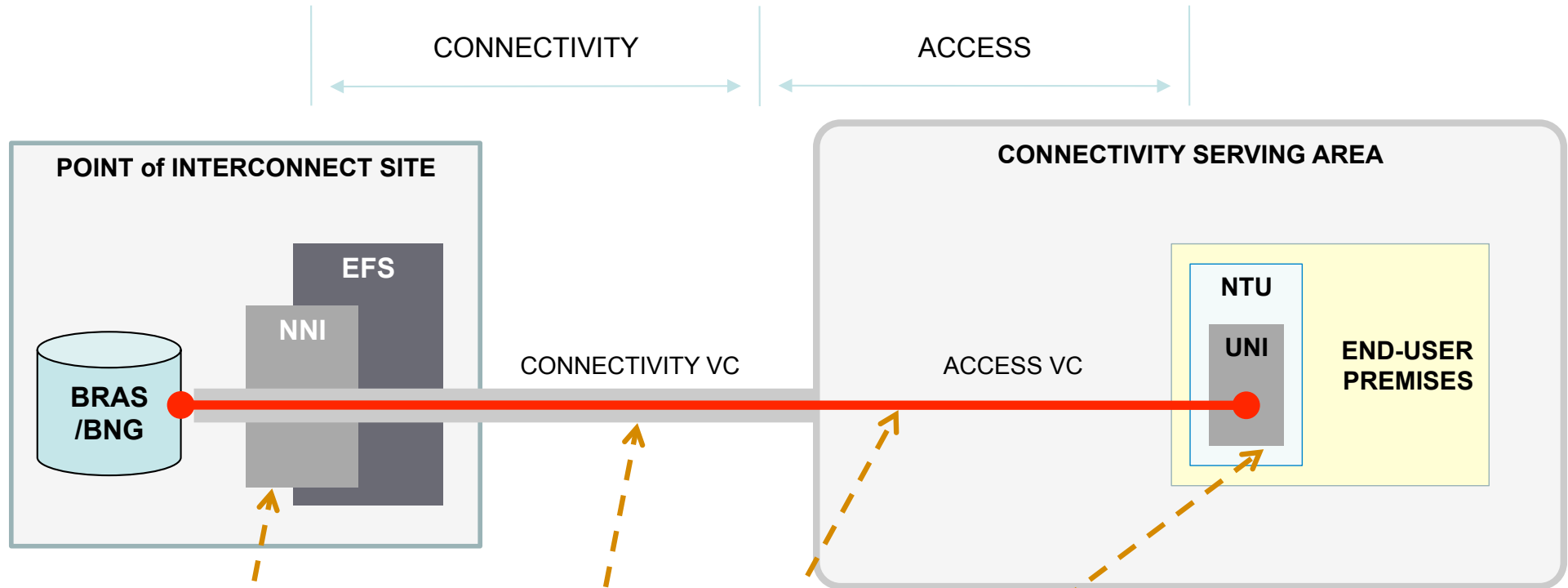
An extension of your network with tight integration

Product Structure

One product construct with 3 network platforms



Service Components



- Network-Network Interface**
 - 1G or 10GE
 - Short or Long Range optical
 - Protection options
- Connectivity VC**
 - Aggregation
 - Creates multiple paths
 - Logical circuit
- Access VC**
 - Logical circuit to a premises
 - Can be one or more
 - Unicast or Multicast
- User Network Interface**
 - Interface to end user
 - 10 Ethernet
 - VLANs
 - QoS tagging options

Access VC Bandwidth

Downstream PIR (Mbps)	Upstream PIR (Mbps)
12	1
25	10
50	20
100	40
250	100
500	200
1000	400

- CIR added as required for critical/premium applications
- End user service performance will depend upon a number of factors including their chosen retail plan, their hardware and in-premises wiring.

Network Termination Unit



DRAFT: Shown for illustrative purposes only.

VLAN Tagging

Within the NBN Co Network

- Based on 802.1ad – Double Tags

Beyond the Ethernet UNI

- Untagged Interface
- Priority Tagged
- Tagged (Multiple Access VCs)
- DSCP Mapped

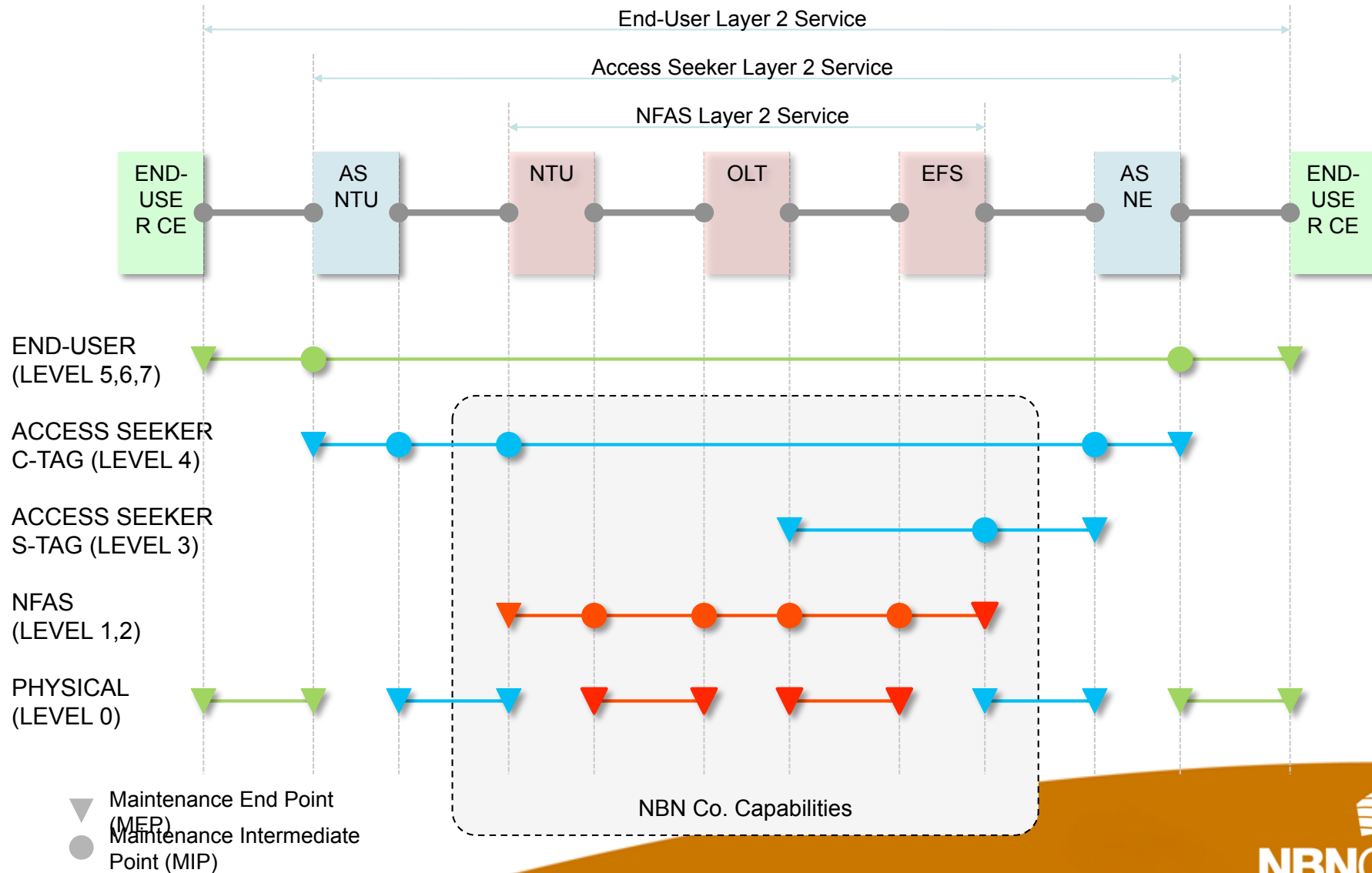
VLAN Remapping

- UNI and NNI

VLAN Transparency

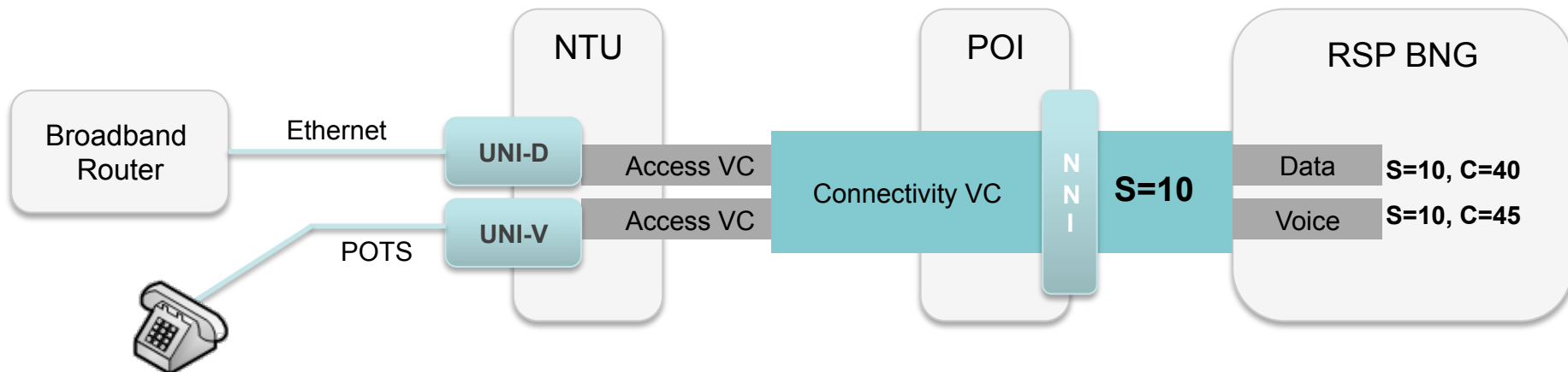
Ethernet Ops and Maintenance (OAM)

NBN Co. IEEE802.1ag Architecture (Proposed)



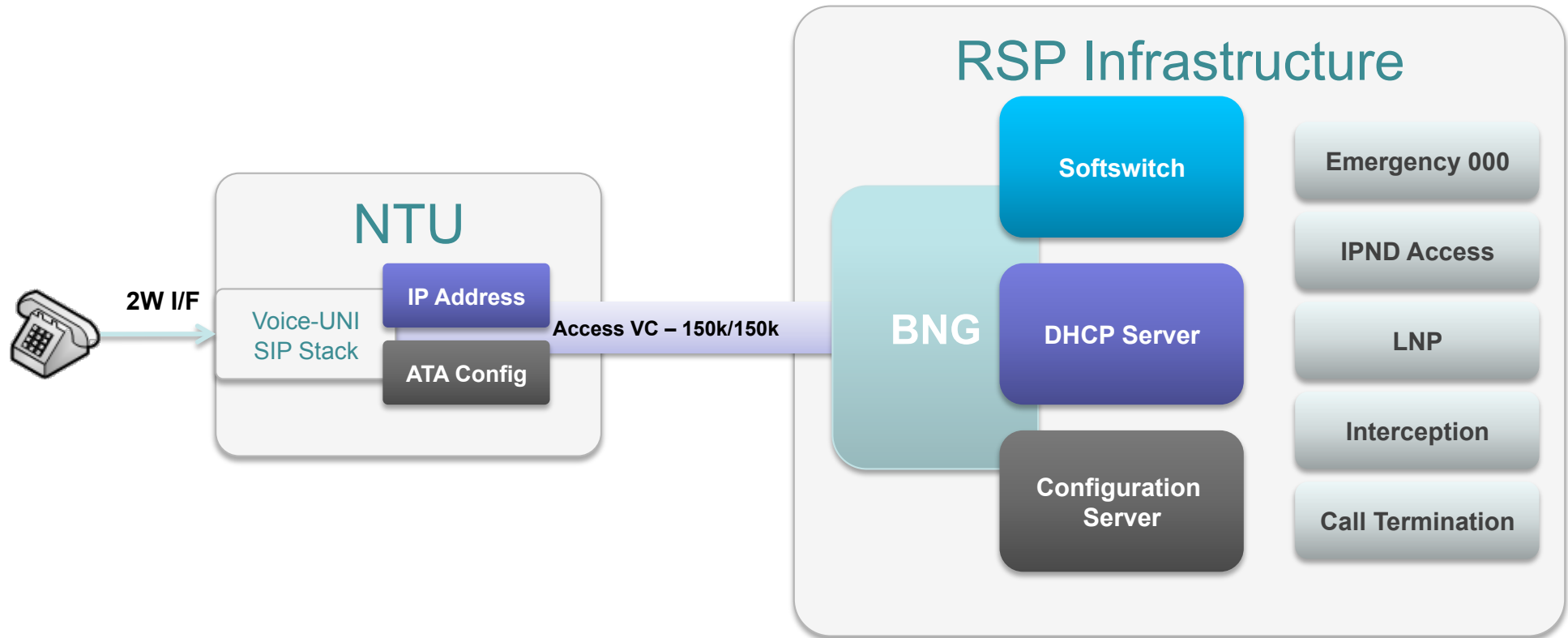
Deployment Example - Residential

- Each Access VC is presented at the NNI as a unique S,C tag pair.
- Each UNI has an associated Access VC
- The UNI is configured as an untagged interface

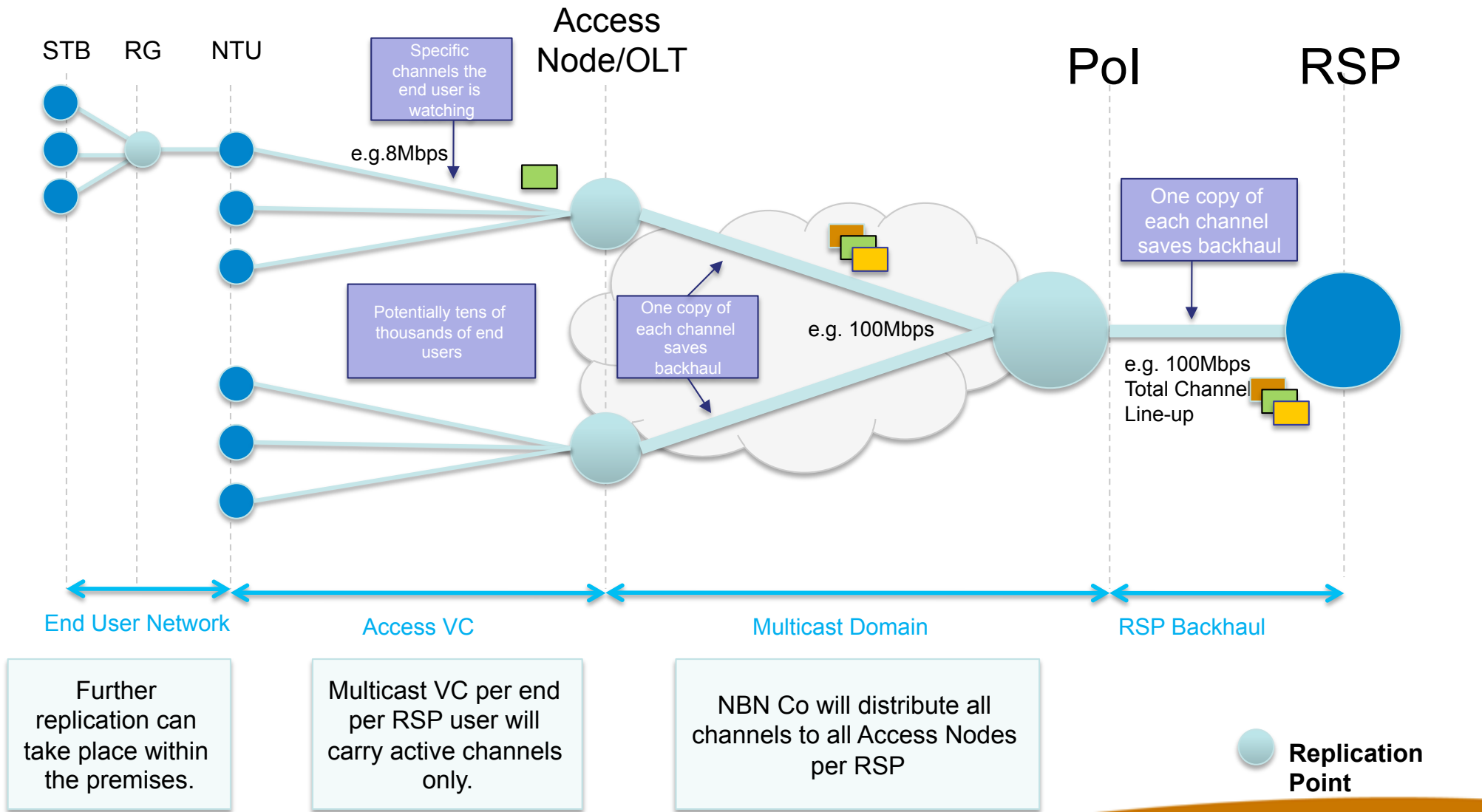


Telephony Capability

Two SIP based ATA ports

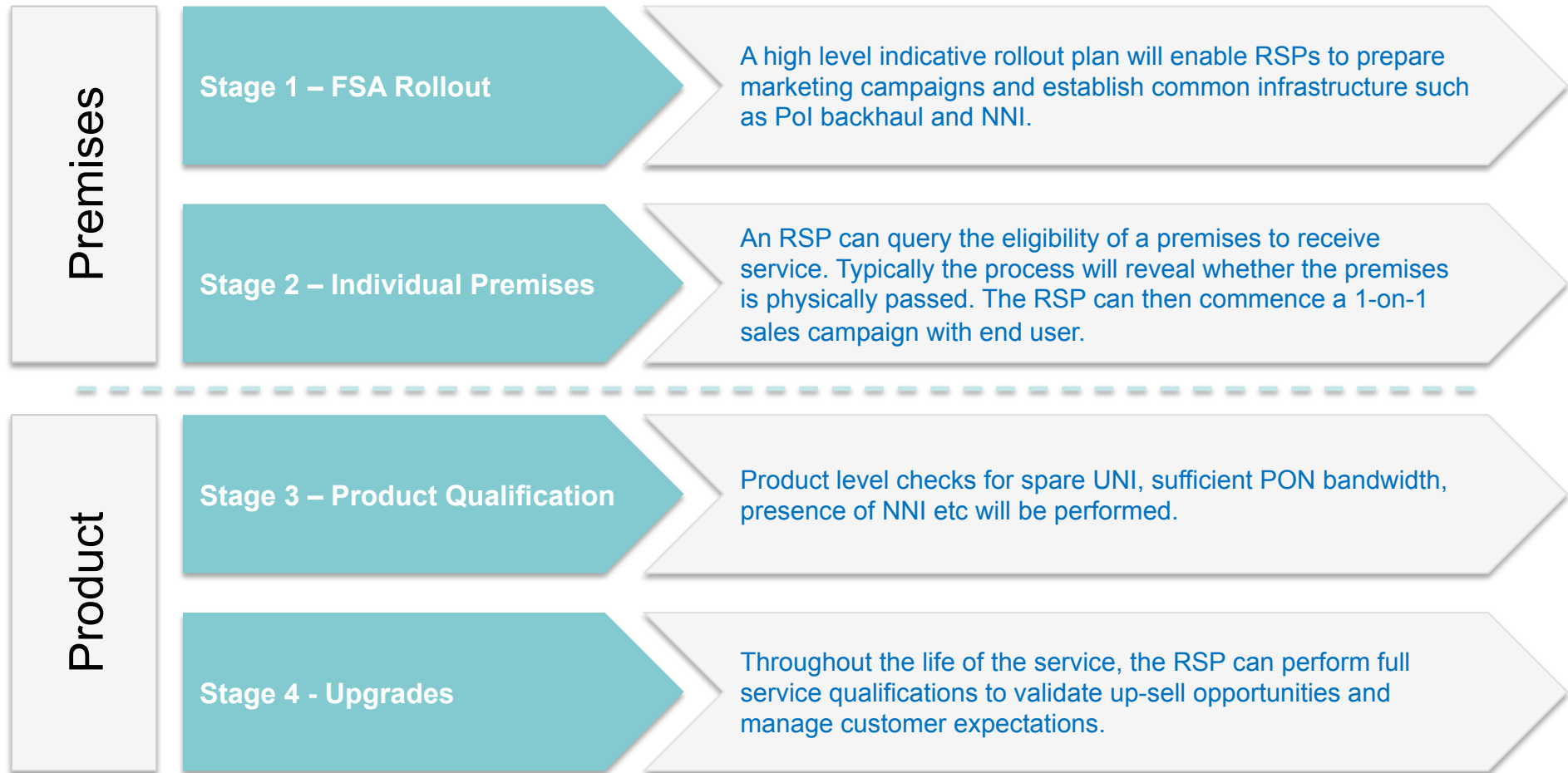


Multicast



Service Qualification

- The SQ tool will cater for all stages of the sales and ordering process



Summing Up

- Consultative product development
- Abstraction of the Wholesale product from network technology
- Component based product construct
- A focus on OSS/BSS