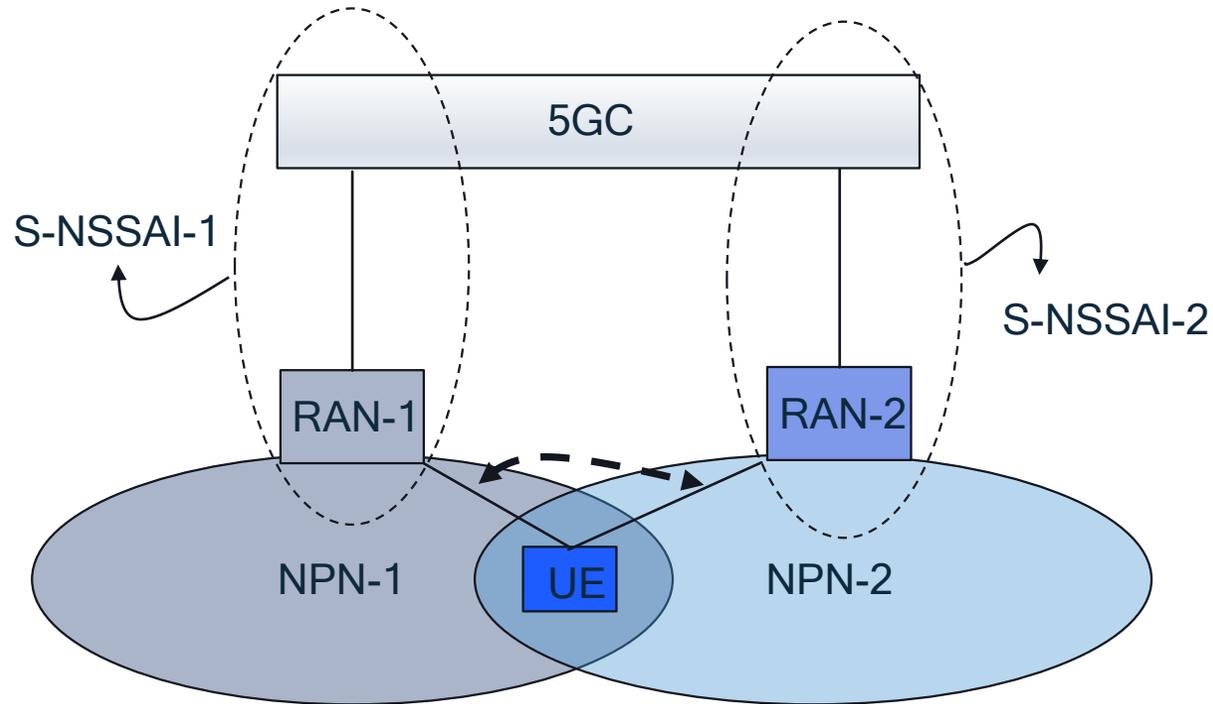


Proposal on human readable name for NW slices

Use Case 1

One PLMN, two NPNs, two Isolated Slices

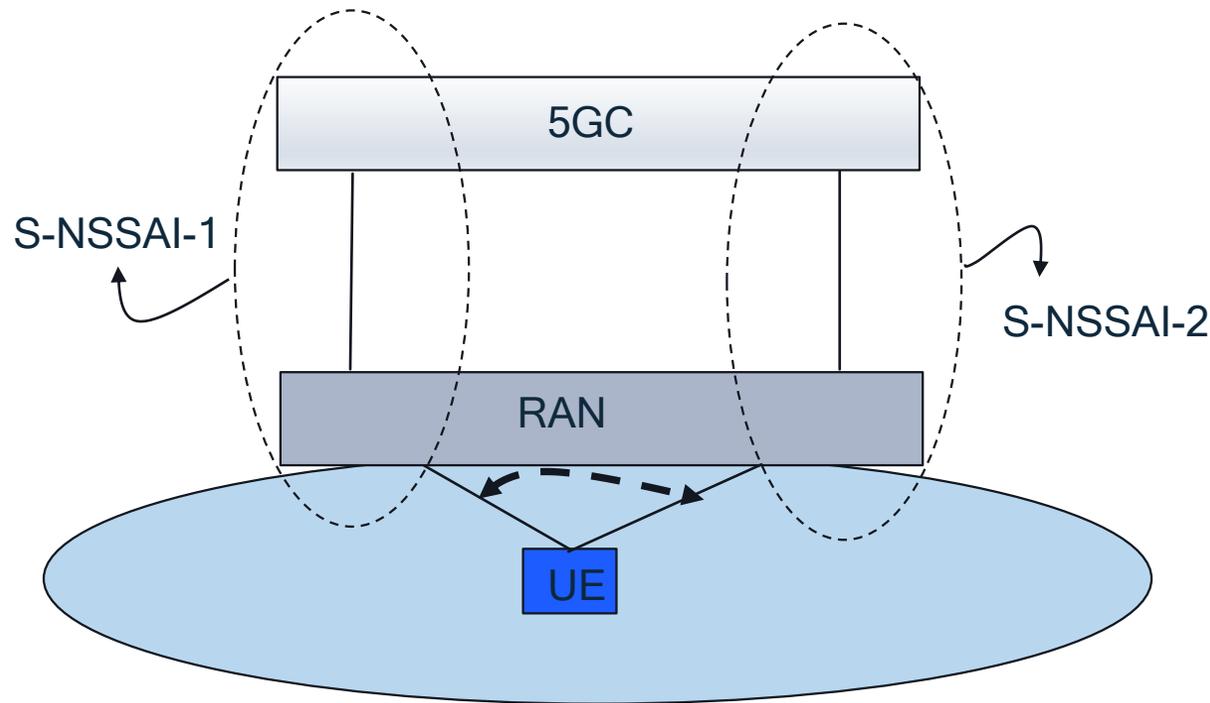


Which S-NSSAI is the user connected to?

- Large business park with multiple warehouses each belonging to different business enterprises
- Each warehouse has its own PNI-NPN (from the same PLMN)
- Each slice is isolated from each other and gives access to a network belonging to a specific enterprise (PNI-NPN)
- There is overlapping between NPNs/Slices
- **Problem**
 - How does the user know to which S-NSSAI is connected at a certain time?
 - And other NSSAIs (not)available?

Use Case 2

One PLMN (or NPN), two isolated slices



Which S-NSSAI is the user connected to?

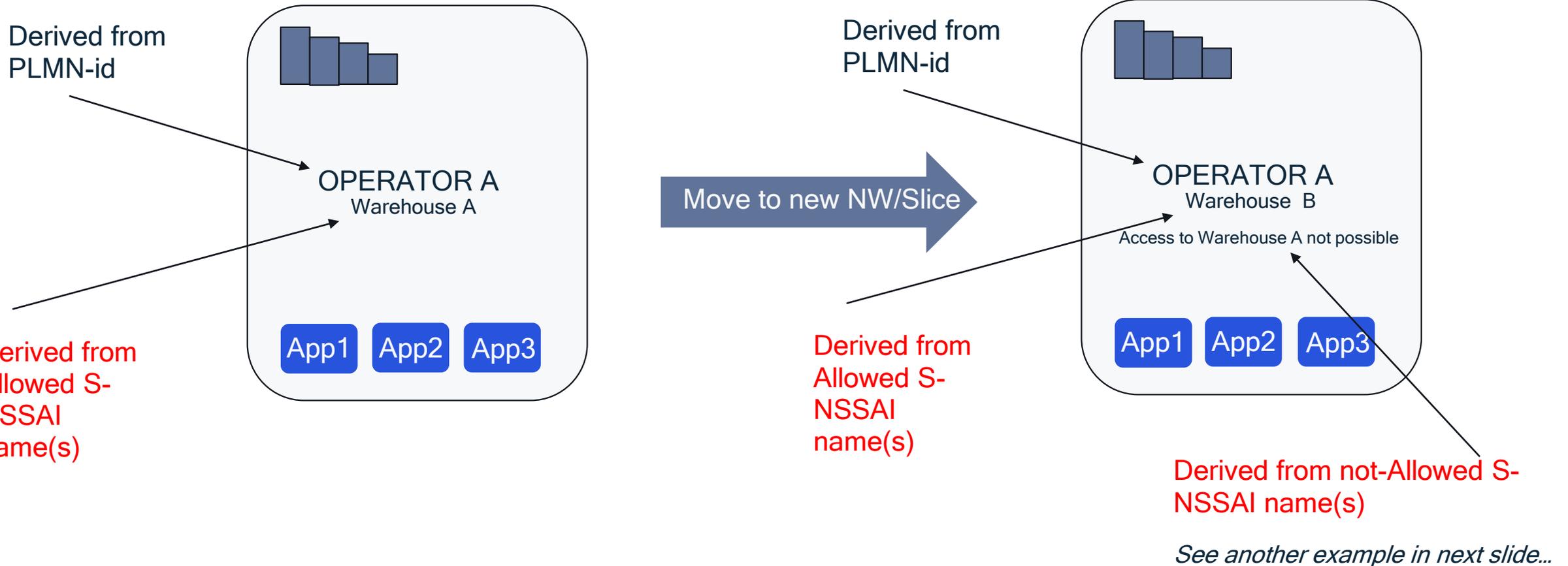
- One PLMN (or PNI-NPN)
- Each enterprise has its own S-NSSAI
- Slices are available over the entire PLMN
- Each slice (S-NSSAI) is isolated from each other and gives access to services belonging to a specific enterprise
- **Problem**
 - How does the user know to which S-NSSAI is connected at a given time?
 - And other NSSAIs (not)available?

Human readable name per S-NSSAI - Service Flow

- Serving PLMN or NPN
 - Provides NSSAI(s) to the UE together with associated human readable name(s), e.g. during UE registration
- UE
 - UE displays the human readable name per S-NSSAI in the user interface (device screen) in addition to PLMN/NPN Network name, if received
 - UE may also display the human readable name of a S-NSSAI for which a data session for the associated application can not be established

Human readable name per S-NSSAI - Examples

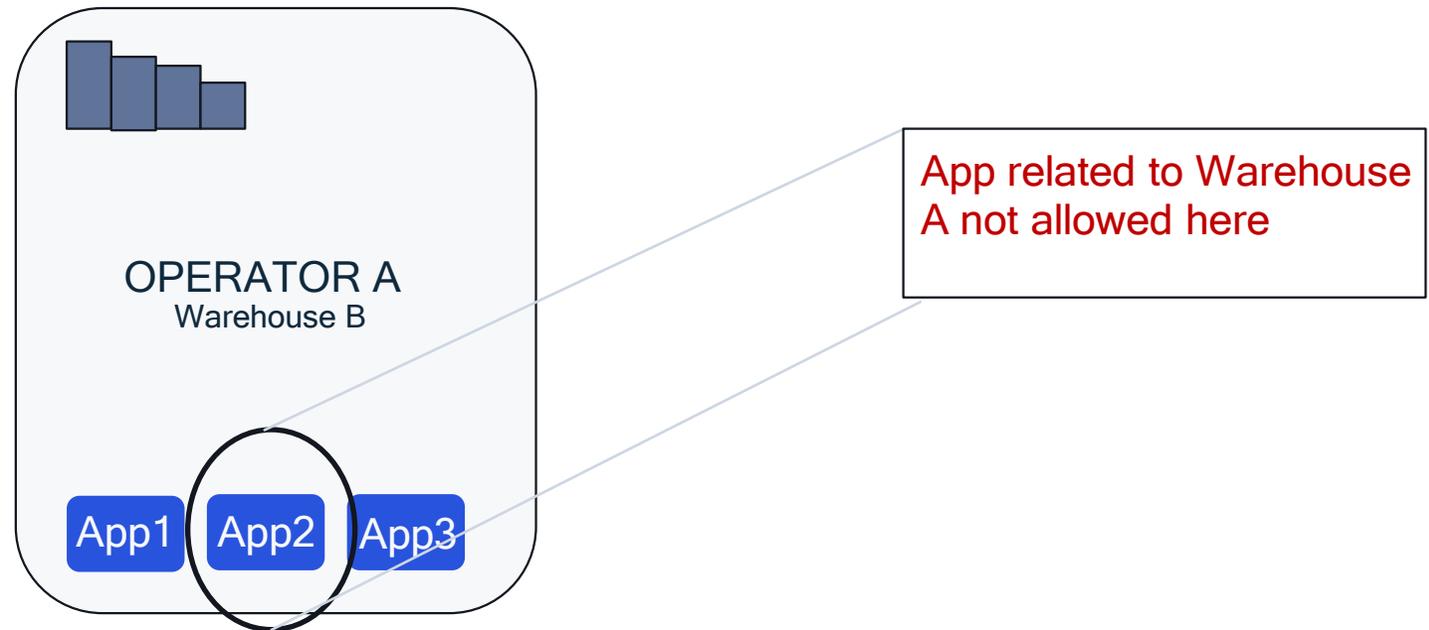
Examples of User's display



Human readable name per S-NSSAI - Examples

Examples of User's display - Cont.

Example#2: when user presses e.g. App2 and UE tries to establish PDU session to the associated S-NSSAI, if UE knows that is not allowed UI can pop up a message indicating the human readable name of the non-allowed S-NSSAI



Existing requirements and gaps

Existing requirements

- 22.261 includes a requirement on broadcasting HRNN for NPNs (sec.6.25):

The 5G system may broadcast a human readable network name that a UE may display for manual selection of a non-public network.

- There are also other reqs on displaying PLMN network name, in 22.101 and 22.042
 - Including different mechanisms to derive NW name, e.g. *broadcast, USIM/UE based, NITZ*

Gap: existing requirements do not cover the ability to associate human readable names to specific NW slices, used or (not)allowed for a certain UE

Proposal for SA1

For S1 discussion & approval

Add a new requirement, part of NW slice requirements in 22.261 (sec. 6.1), i.e.

The 5G system shall support mechanisms for the network to provide UEs with human readable name(s) associated to network slices, e.g. during or after registration, to be displayed to the user.

NOTE 3: the requirement covers scenarios where multiple network slices, belonging to one PLMN (can be multiple NPNs) cannot be simultaneously used by the UE (e.g. due to radio frequency restrictions or geographical isolation)

Procedurally (WI code), the change is proposed under Rel-18 EASNS (cat. C CR)

- Open to discuss other options, e.g. TEI-18