

R6 5G Slicing Service Model Proposal

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Model Background and Achievements

- From use case:

[5G – Slicing \(https://wiki.onap.org/display/DW/5G+++Slicing\)](https://wiki.onap.org/display/DW/5G+++Slicing) in Dublin Release

- Model Achievements:

[Enhanced Service Information Model for Nested and Shared Services](https://wiki.onap.org/display/DW/Enhanced+Service+Information+Model+for+Nested+and+Shared+Services) – Basic instance filter function for nested service and support to describe capabilities and properties of a service.

<https://wiki.onap.org/display/DW/Enhanced+Service+Information+Model+for+Nested+and+Shared+Services>)

- New Features in R6:

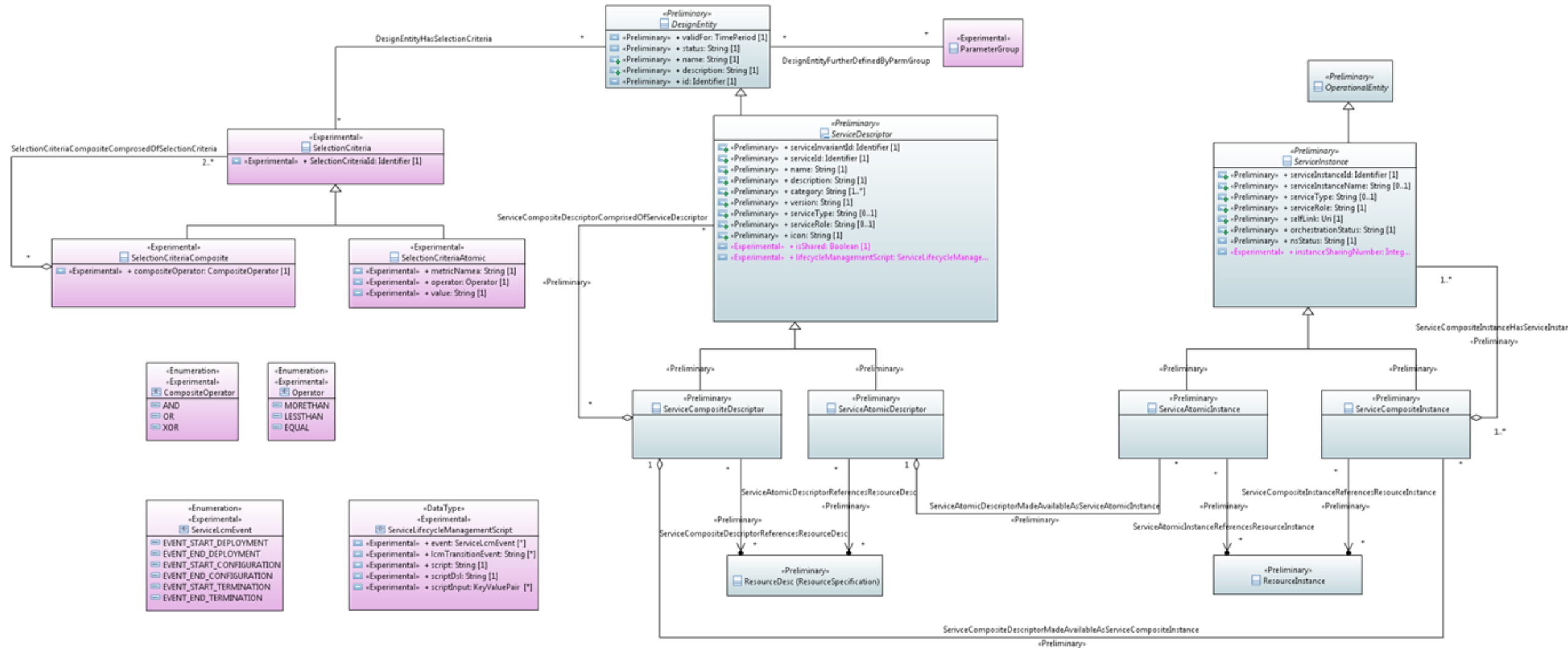
[NETWORK SLICING in R6 Frankfurt](https://wiki.onap.org/display/DW/NETWORK+SLICING+in+R6+Frankfurt)

<https://wiki.onap.org/display/DW/NETWORK+SLICING+in+R6+Frankfurt>)

[Vertical Industry Oriented On-demand 5G Slice Service](https://wiki.onap.org/display/DW/Vertical+Industry+Oriented+On-demand+5G+Slice+Service)

<https://wiki.onap.org/display/DW/Vertical+Industry+Oriented+On-demand+5G+Slice+Service>)

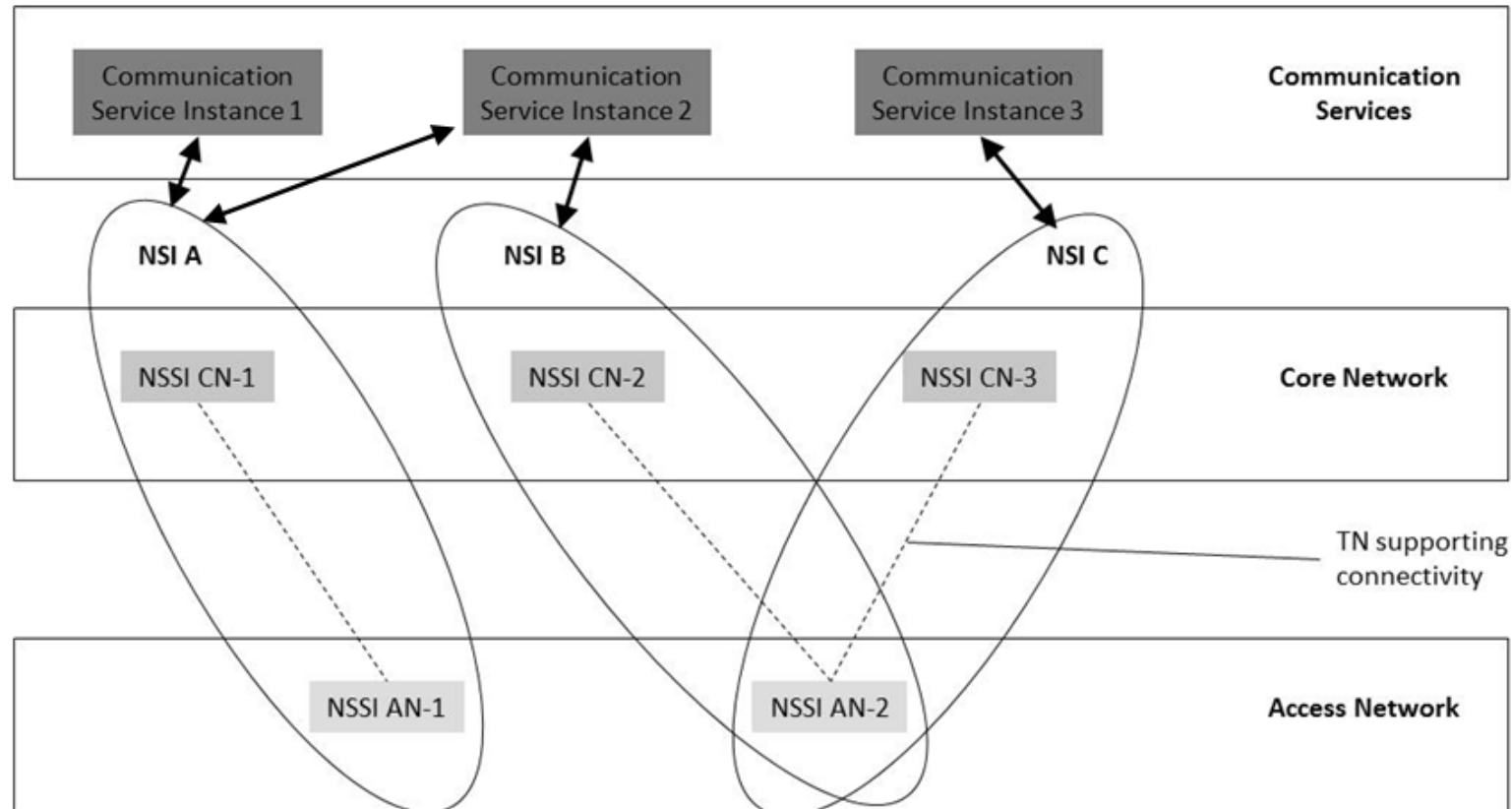
Current Service Model



Ongoing Work 1

➤ End-to-end Slicing model - Standard Network slice service model

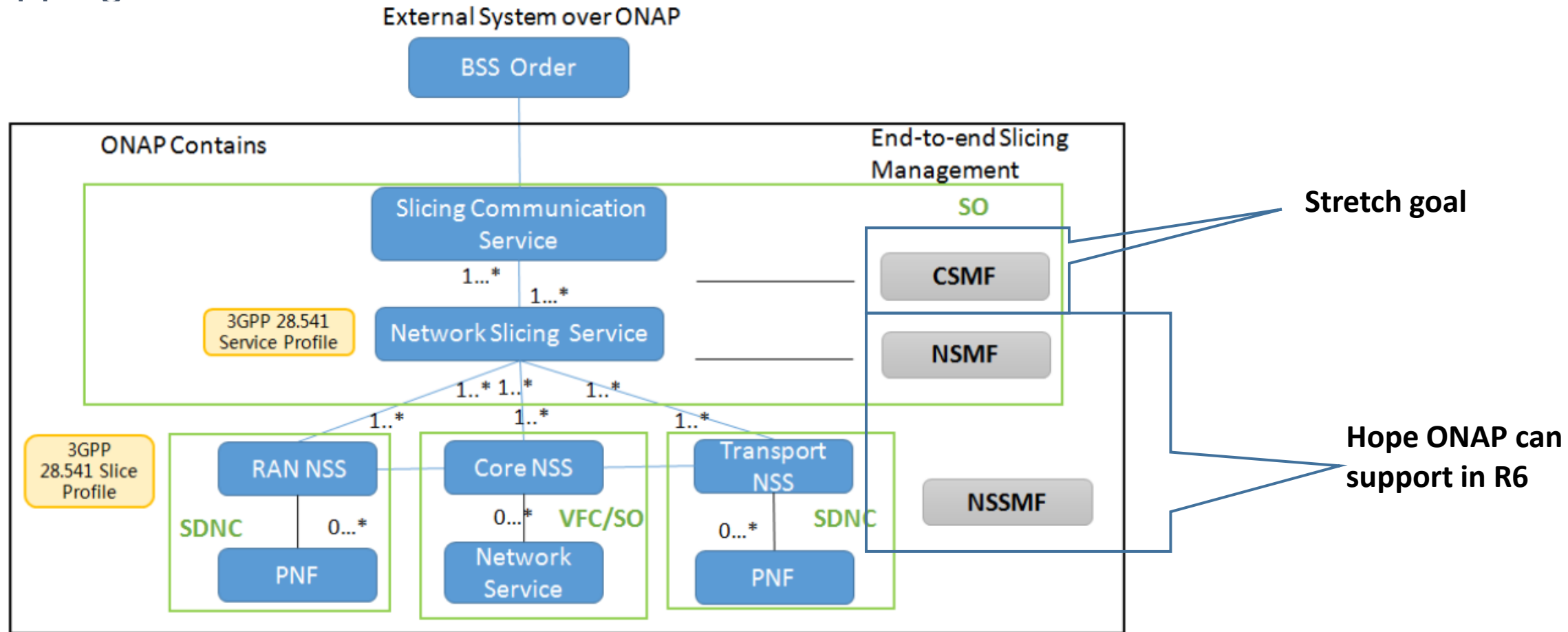
- Mapping between communication services instances and NSI(s) in 3GPP 28.530:



Ongoing Work 1

➤ End-to-end Slicing model - Standard Network slice service model

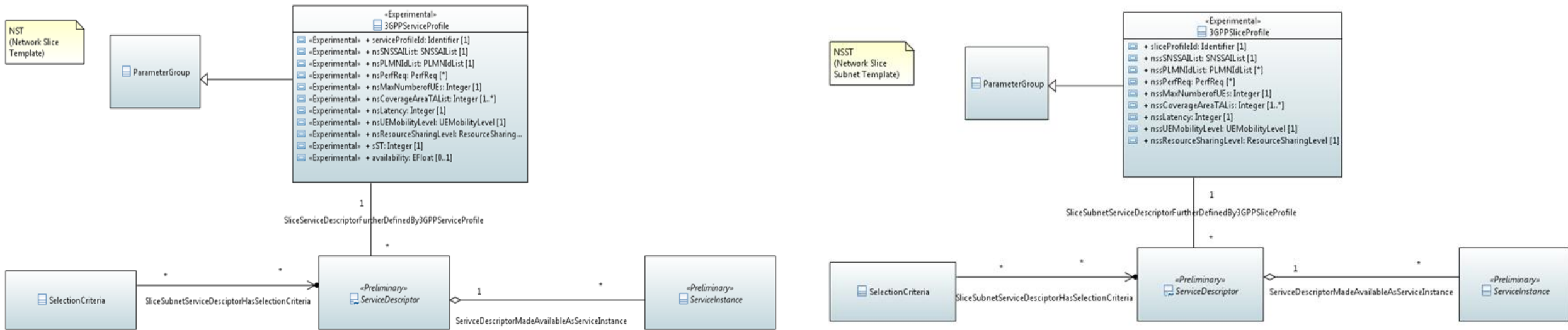
- Mapping between ONAP and 3GPP Slice model:



Ongoing Work 1

➤ End-to-end Slicing model - Standard Network slice service model

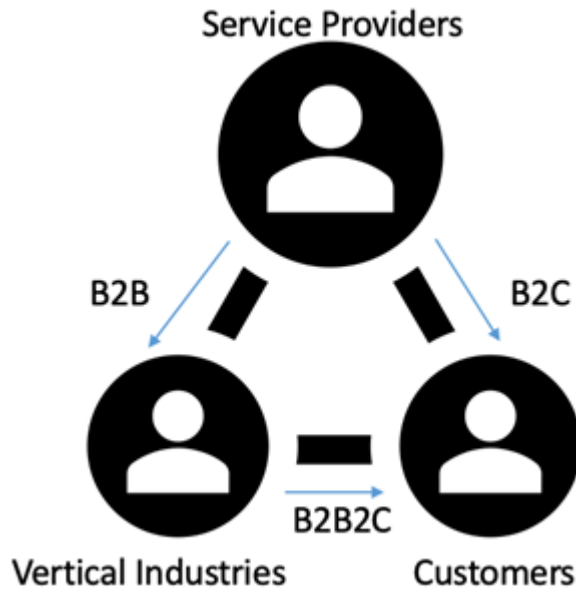
- NST and NSST:



Ongoing Work 2

➤ End-to-end Slicing management – Slice service KPI monitoring

- Use case :
Vertical Industry Oriented on-demand 5G Slice Service



- Specification Reference

3GPP TS 28.554 V16.1.0 (2019-06)

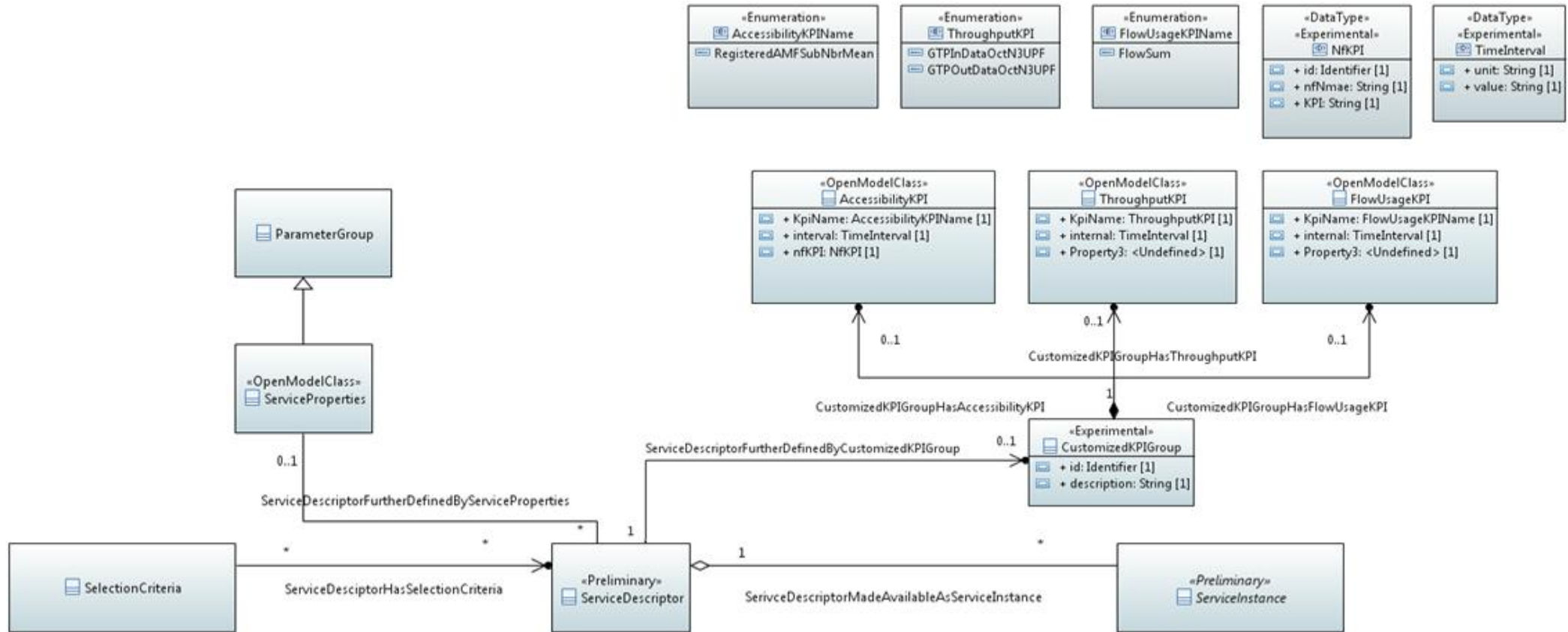
Technical Specification

**3rd Generation Partnership Project;
Technical Specification Group Services and System
Aspects; Management and orchestration;
5G end to end Key Performance Indicators (KPI)
(Release 16)**



Ongoing Work 2

➤ End-to-end Slicing management – Slice service KPI monitoring



Ongoing Work 2

Customized KPI template:

AccessibilityKPI

KPI Name:

RegisteredAMFSubNbrMean

Description:

This KPI describe the total number of subscribers which is obtained by counting the subscribers in AMF that are registered to a network slice.

Time interval:

15min

NfKPI:

id: amf_id_1

nfNname: AMF

KPI: RegisteredAMFSubNbrMean

id: amf_id_2

nfNname: AMF

KPI: RegisteredAMFSubNbrMean

...

Logical formula definition:

RSSNSI=sum(amf_id_1, amf_id_2,...)

ThroughputKPI

KPI Name:

GTPIInDataOctN3UPF

Description:

This KPI is obtained by upstream throughput provided by N3 interface from NG-RAN to all UPFs which are related to the single network slice instance.

Time interval:

10min

NfKPI:

id: amf_id_1

nfNname: AMF

KPI: GTPIInDataOctN3UPF

id: amf_id_2

nfNname: AMF

KPI: GTPIInDataOctN3UPF

...

Logical formula definition:

UTSNSI=sum(amf_id_1, amf_id_2,...)

KPI Name:

GTPOutDataOctN3UPF

Description:

This KPI is obtained by downstream throughput provided by N3 interface from all UPFs to NG-RAN which are related to the single network slice instance.

Time interval:

10min

NfKPI:

id: upf_id_1

nfNname: UPF

KPI: GTPOutDataOctN3UPF

id: upf_id_y

nfNname: UPF

KPI: GTPOutDataOctN3UPF

...

Logical formula definition:

UTSNSI=sum(upf_id_1, upf_id_2,...)



ONAP

OPEN NETWORK AUTOMATION PLATFORM

Thank you