

5G RAN SERVICE MODELING & DEFINITION in R6 Frankfurt

5G RAN Service Modeling & Definition in R5 Frankfurt

R5 CANDIDATE ENHANCEMENTS	IMPACT
Modelling	Evolution of Platform Info & Data model in support of 5G Service
SDC	Support for creation of a 5G Service (E2E integration only), Design Time.
Architecture	New Flows for 5G Services

BUSINESS DRIVERS

This section describes Business Drivers for this Use Case.

Executive Summary - This use case is will define a creating a 5G Service to represent a 5G gNB which will be important to attach 5G resources (PNFs /DU, VNFs/CU) such that the infrastructure to deliver a 5G service has been properly instantiated for the Day0/Day1 deployment.

Business Impact - This use case, defining a 5G service (representing a 5G gNB) is vital to underpin defining and modeling a Network Slice. This use case will identify some of the key gaps in defining a 5G service both in design time and run time. The 5G orchestration process needs to be defined. Examples of "what is a 5G Service" (i.e. does it include a RAN, Core, Transport?). Identifying Gaps in SDC and Controllers to orchestrate a 5G service. Bringing the open-source ONAP community and various involved platform components to come together to come to some common understanding and agreements as to what a 5G service should be, and how a 5G service would be orchestrated. ANR, Nested services.

Business Markets - Applies to Wireless domain market. In so much the transport is involved with getting a 5G service orchestrated, transport and optical domains are also important.

Funding/Financial Impacts - TBD.

Organization Mgmt, Sales Strategies - There is no additional organizational management or sales strategies for this use case outside of a service providers "normal" ONAP deployment and its attendant organizational resources from a service provider..

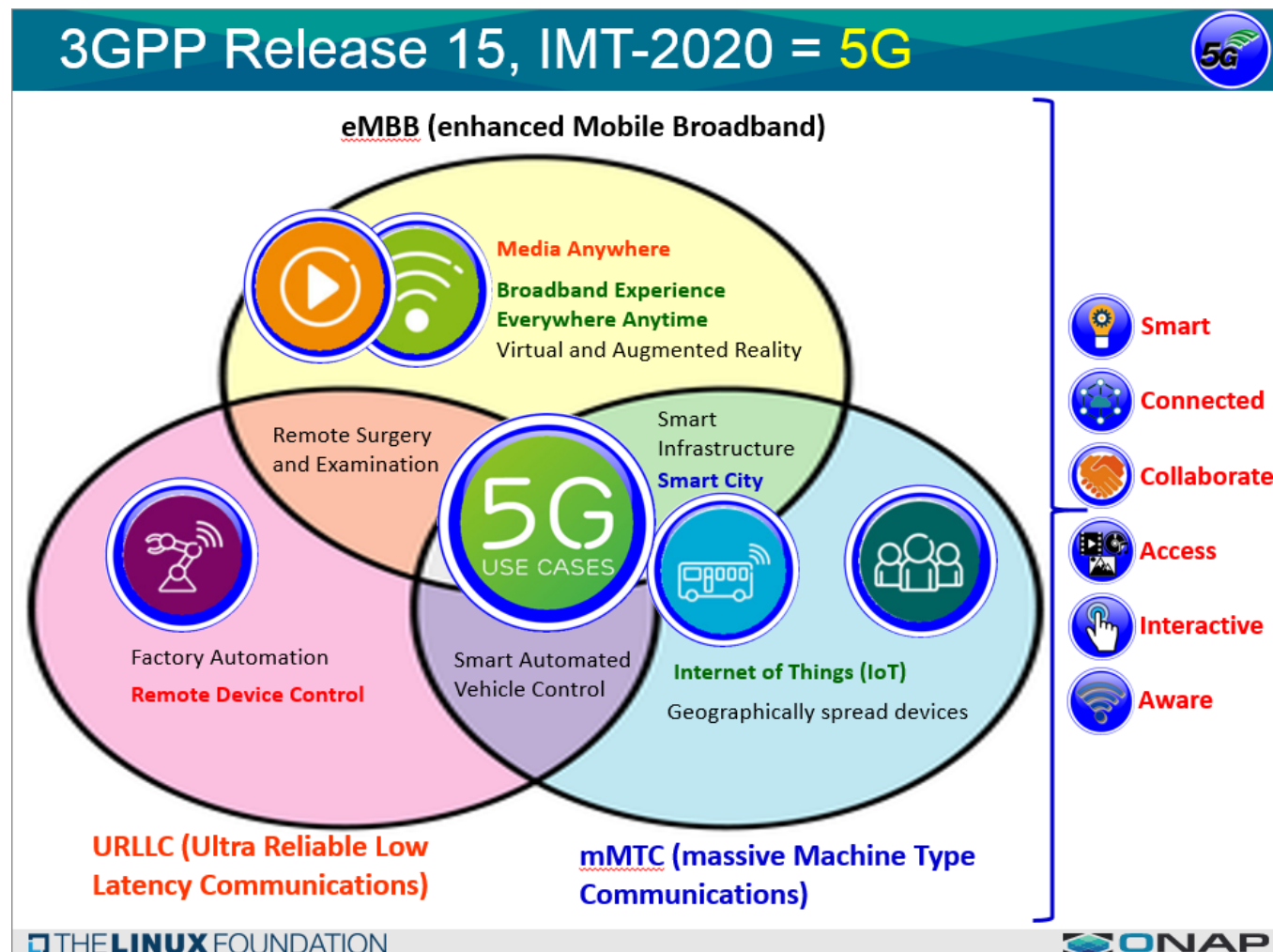
DEVELOPMENT IMPACTS

PROJECT	PTL	User Story / Epic	Requirement
A&AI	James Forsyth	Epic#1: Defining a 5G Service with associated xNFs	E1a. Potential A&AI schema update?
AAF	Jonathan Gathman	No Impact	
APPC	Takamune Cho	No Impact	
CLAMP	Gervais-Martial Nguoko	No Impact	
CC-SDK	Dan Timoney	No Impact	
DCAE	Vijay Venkatesh Kumar	No Impact	
DMaaP	Mandar Sawant	No Impact	
External API	Matthieu Geerebaert	No Impact	
MODELING	Hui Deng	Epic#1: Defining a 5G Service with associated xNFs	E1a. Modeling for 5G Service
Multi-VIM / Cloud	Bin Yang	No Impact	
OOF	Shankaranarayanan Puzhavakath Narayanan	No Impact	
POLICY	Pamela Dragosh	No Impact	
PORTAL	Manoop Talasila	No Impact	
SDN-C	Dan Timoney	No Impact	
SDC	Ofir Sonsino	Epic#1: Defining a 5G Service with associated xNFs	E1a. Modeling & Alignment POB/OB.
SO	Seshu Kumar Mudiganti	No Impact	
VID	Ittay Stern	No Impact	
VNFRQTS	Steven Wright	No Impact	
VNF-SDK	Weitao Gao	No Impact	

CDS	Yuriy Malakov	No Impact	
-----	---------------	-----------	--

List of PTLs: [All Approved Projects](#)

5G Overview

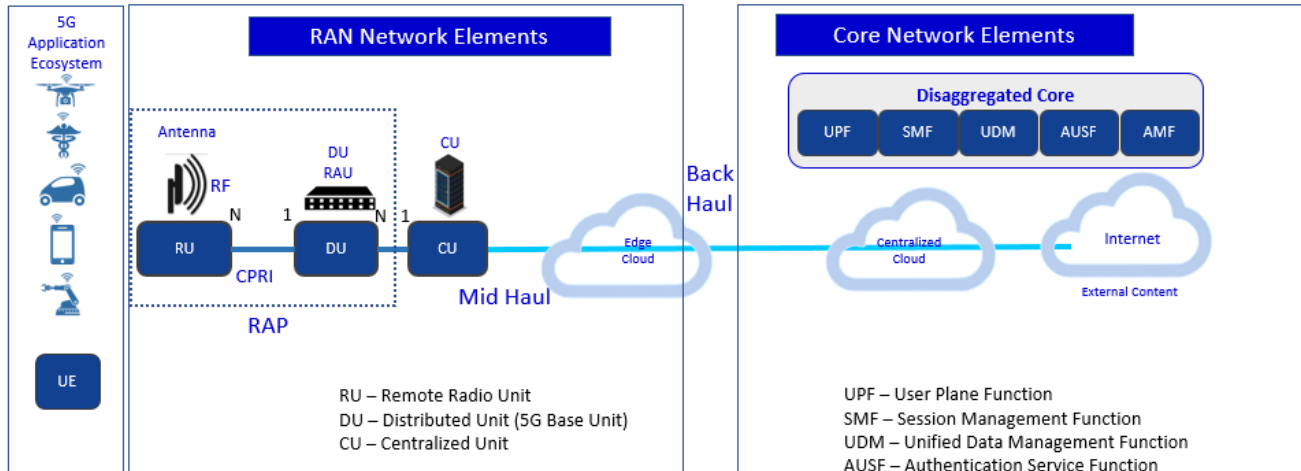


5G RAN Network

5G RAN Wireless Network



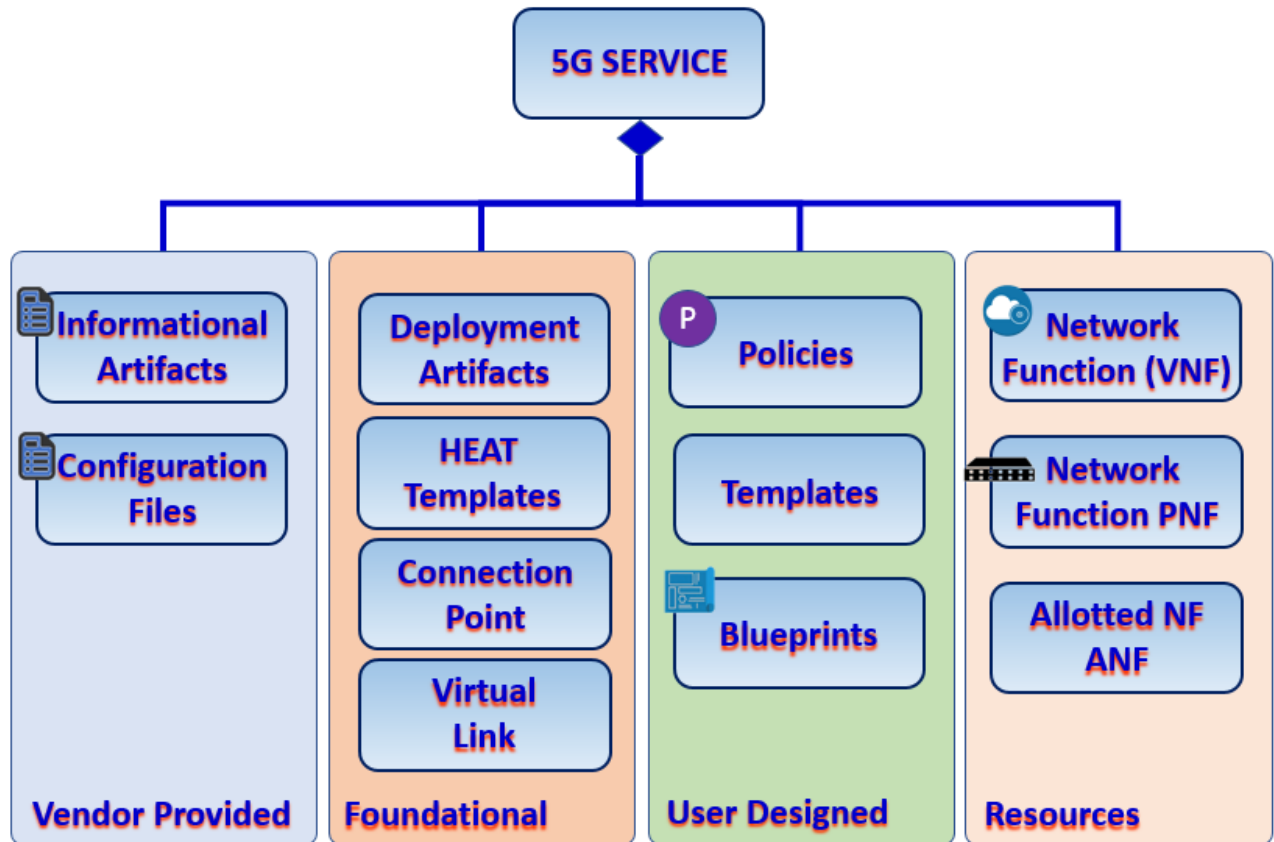
SO – Service Orchestrator
 SDN-C – Service Design Network Controller
 DCA&E – Data Collection Analytics & Events
 A&AI – Available & Active Inventory
 APP-C – Application Control



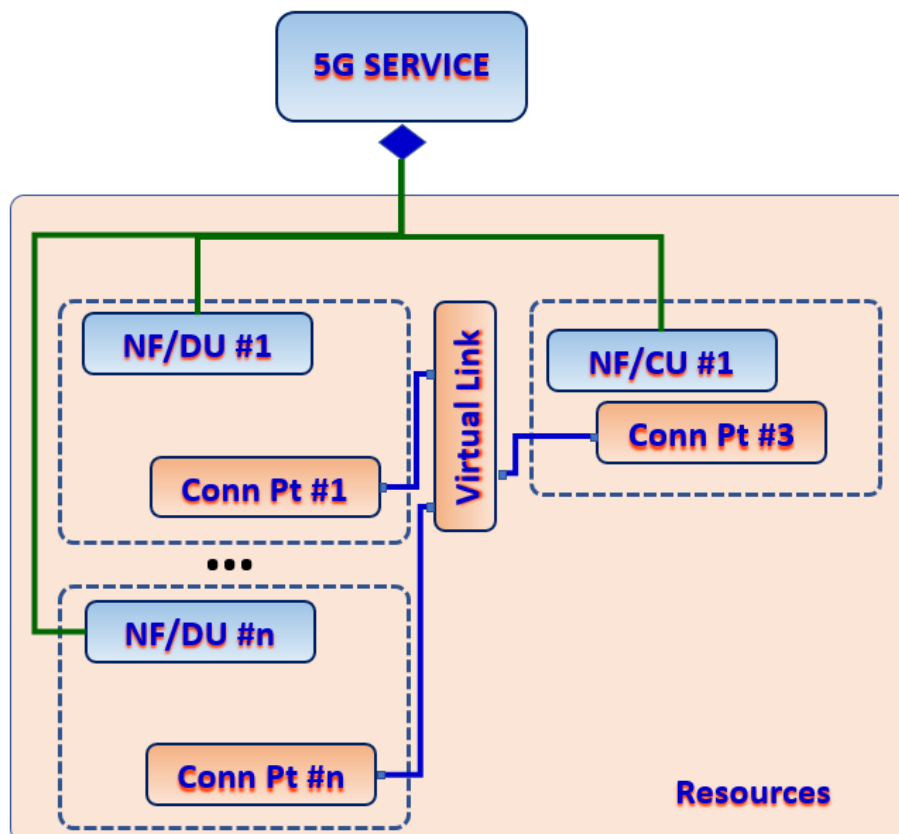
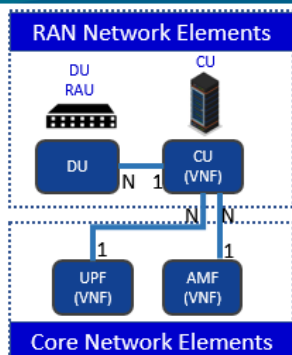
- Infrastructure orchestration - Core, Transport
- 5G RAN components/resources

5G DEFINING Service

R4: Modeling a 5G Service



R4: 5G Base Station (gNodeB)



THE LINUX FOUNDATION

ONAP

PRESENTATIONS

Documents	File
5G Service Modeling	<p>R6-5GServiceCreation.pdf</p>

The Platform Data & Information model needs to harmonize with models from the following standards bodies or modeling groups.

ETSI SOL001 ... 007

PNFD modeling (Model S/C)

5G Model (3GPP, SA5, 5GNRM)

ORAN (WGs) - NetConf/Yang WG4

Open ROADM (reconfig optical add/drop multiplexer)


ONF (equipment specific conditional package for wireless transport/air interface)



ISOMII

OTCC (Optical transport config & control)

GROUP	DOMAIN	MODELING EFFORTS
ETSI	Wireless	SOL001 PNFD, VNFD Model SOL004 PNF/VNF Package
ORAN	Wireless	WG6 E2E orchestration. CU (CU-CPM CU-UP)/DU/RIC NE. Flat model managed by ONAP. Service model to deploy a RAN at this location.
3GPP	Wireless	CRAN model CU/DU Split
Open ROADM	Optical	
ONF	Optical	
ISOMII	Optical	
OTCC	Optical	

SUPPORTING DOCUMENTATION

Description	File
3GPP TS28.540 / TS28.541 5G NRM (From 3GPP standards)	<div> 3GPPTS28541_01jn022020.xlsx</div>

3GPP TS28.540 / TS28.541 5G NRM (from 3GPP standards) Version Mar 2, 2020	 3GPPTS28541_01jn022020.xlsx
3GPP TS28.541	 28541-f40.doc

RECORDINGS & MEETINGS

Meeting Date	Recording	Description
8 Jan 2020	zoom_0.mp4	Presentation & Discussion with Modeling Sub-committee on 3GPP TS28.541 analysis (see spreadsheet above)