

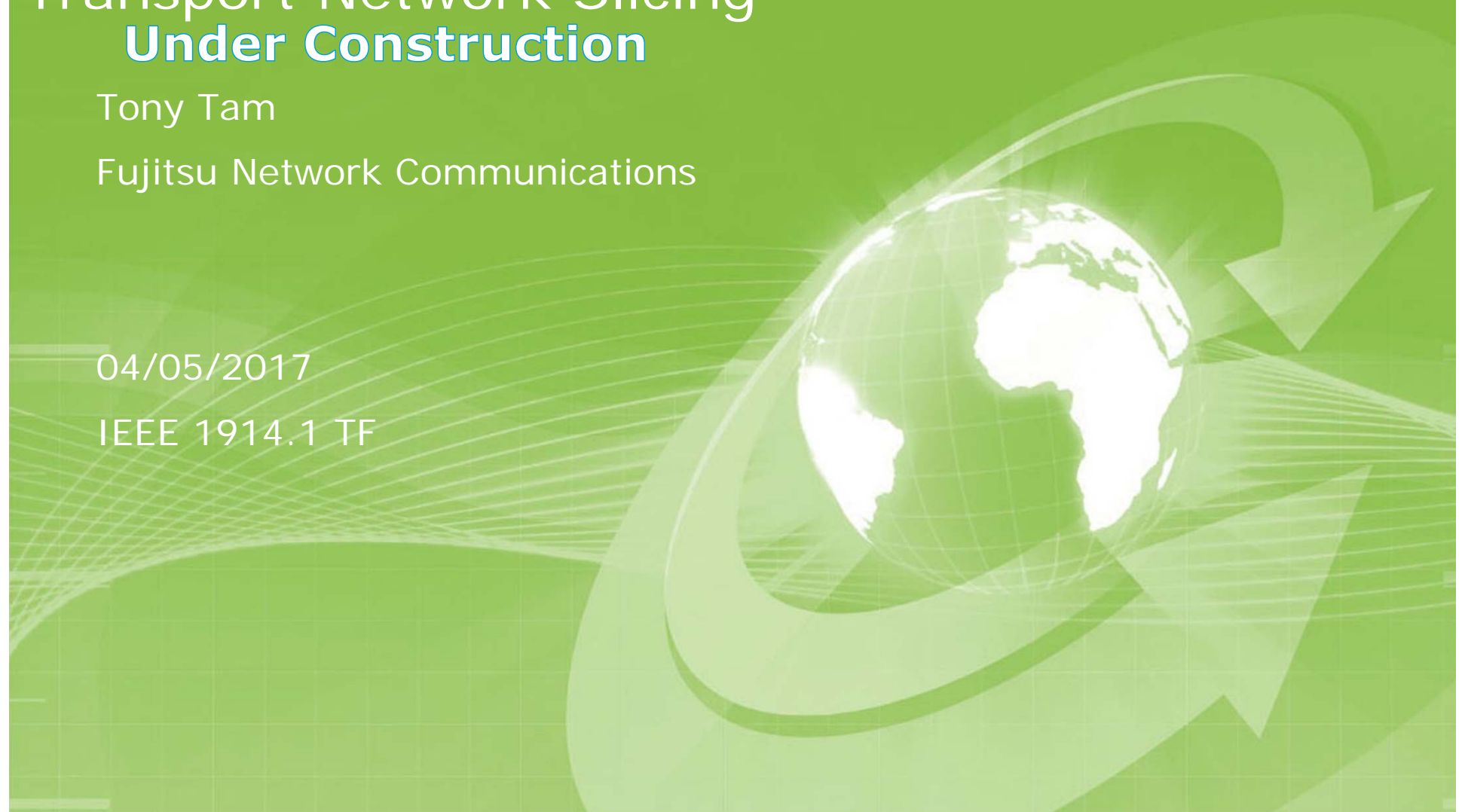
# Transport Network Slicing **Under Construction**

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IEEE 1914.1 TF



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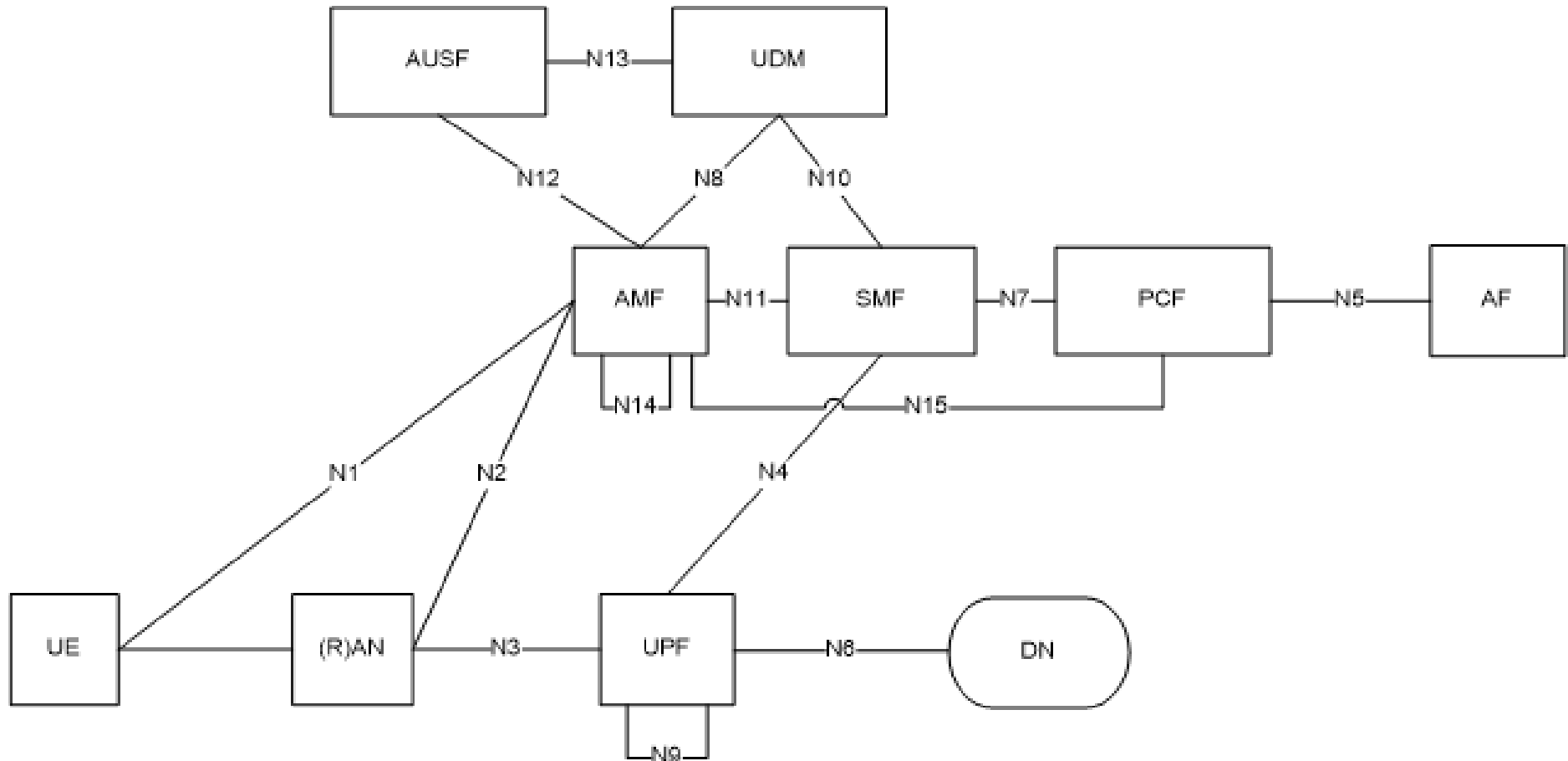
**IEEE 1914**  
**Next Generation Fronthaul Interface**  
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<b>Transport Network Slicing</b>			
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# Agenda

- ❑ 3GPP Network Architecture and Network Slicing
- ❑ Network Slicing Across UE, RAN, Core, and Transport Network
- ❑ Transport Network Slicing (To be added)

# 5G System Architecture



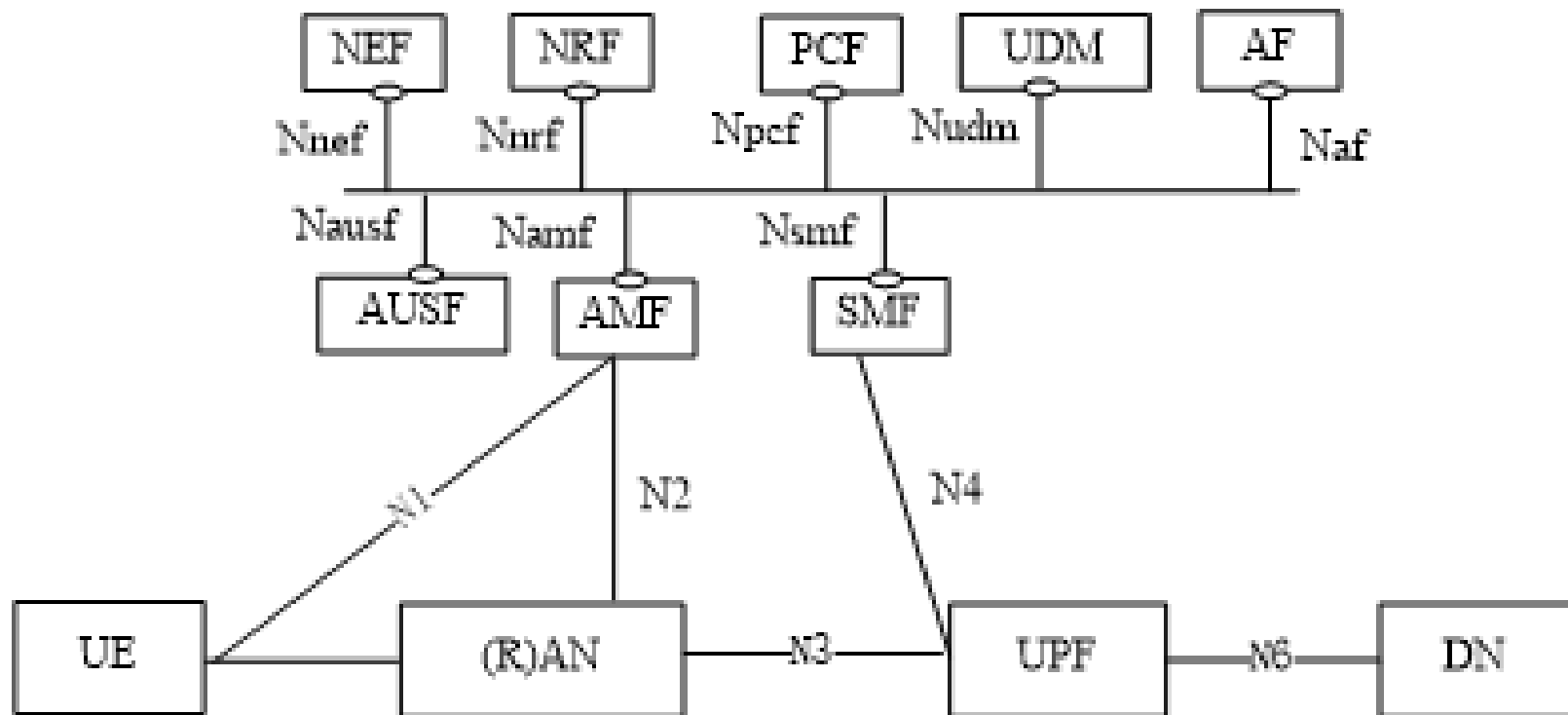
3GPP TS 23.501

# 5G System Architecture Terms

- Authentication Server Function (AUSF)
- Core Access and Mobility Management Function (AMF)
- Data network (DN), e.g. operator services, Internet access or 3rd party services
- Structured Data Storage network function (SDSF)
- Unstructured Data Storage network function (UDSF)
- Network Exposure Function (NEF)
- NF Repository Function (NRF)
- Policy Control function (PCF)
- Session Management Function (SMF)
- Unified Data Management (UDM)
- User plane Function (UPF)
- Application Function (AF)
- User Equipment (UE)
- (Radio) Access Network ((R)AN)

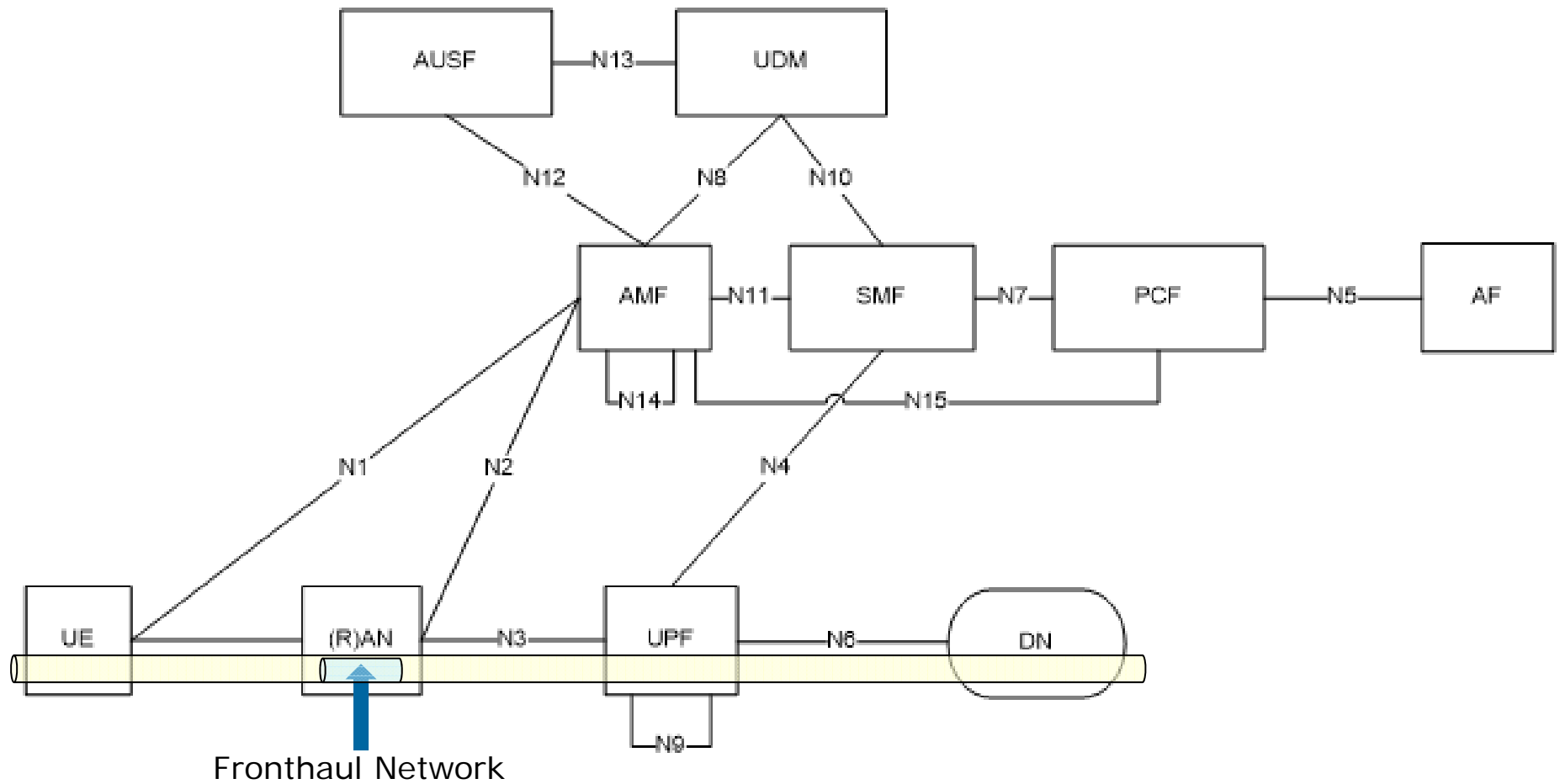
3GPP TS 23.501

# 5G System Service-Based Architecture



3GPP TS 23.501

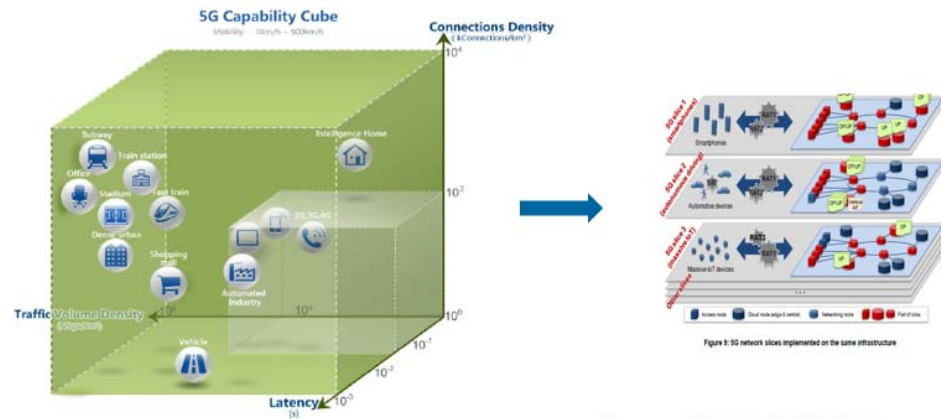
# 5G System Architecture – Fronthaul Network



3GPP TS 23.501

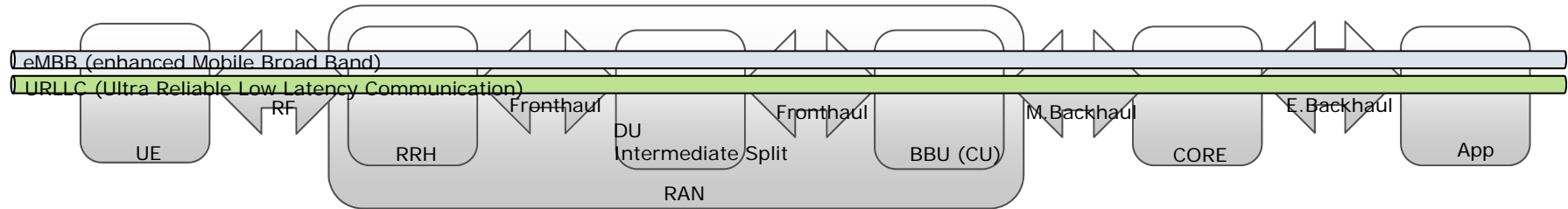


# 5G E-2-E Network Slicing



Highly Diversified

Network Slicing  
Customized for EACH



- ❑ E-2-E Network Slicing is a Team Work and a coherent one including Mobile Fronthaul and Backhaul
- ❑ Fronthaul is intertwined within RAN

# 5G Network Slicing

## Mobile Ethernet Control & User Plane

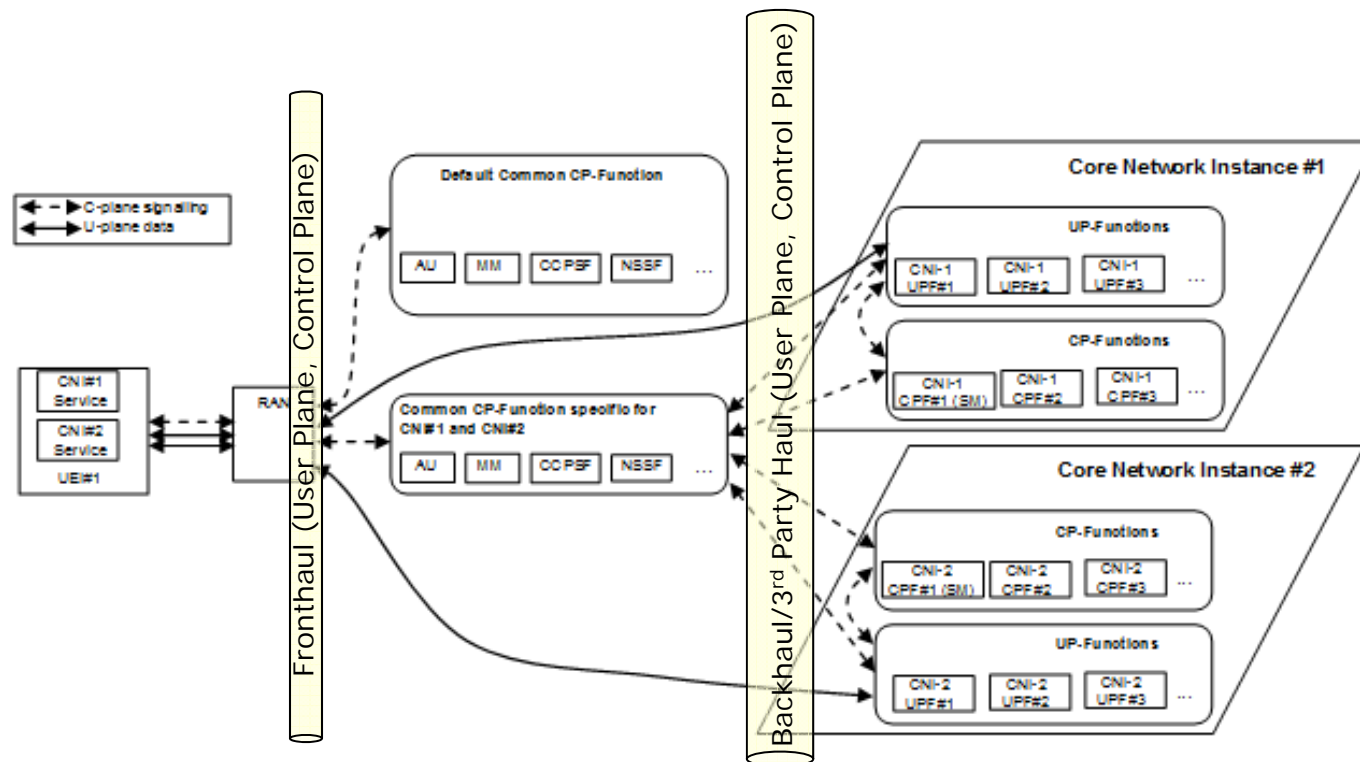
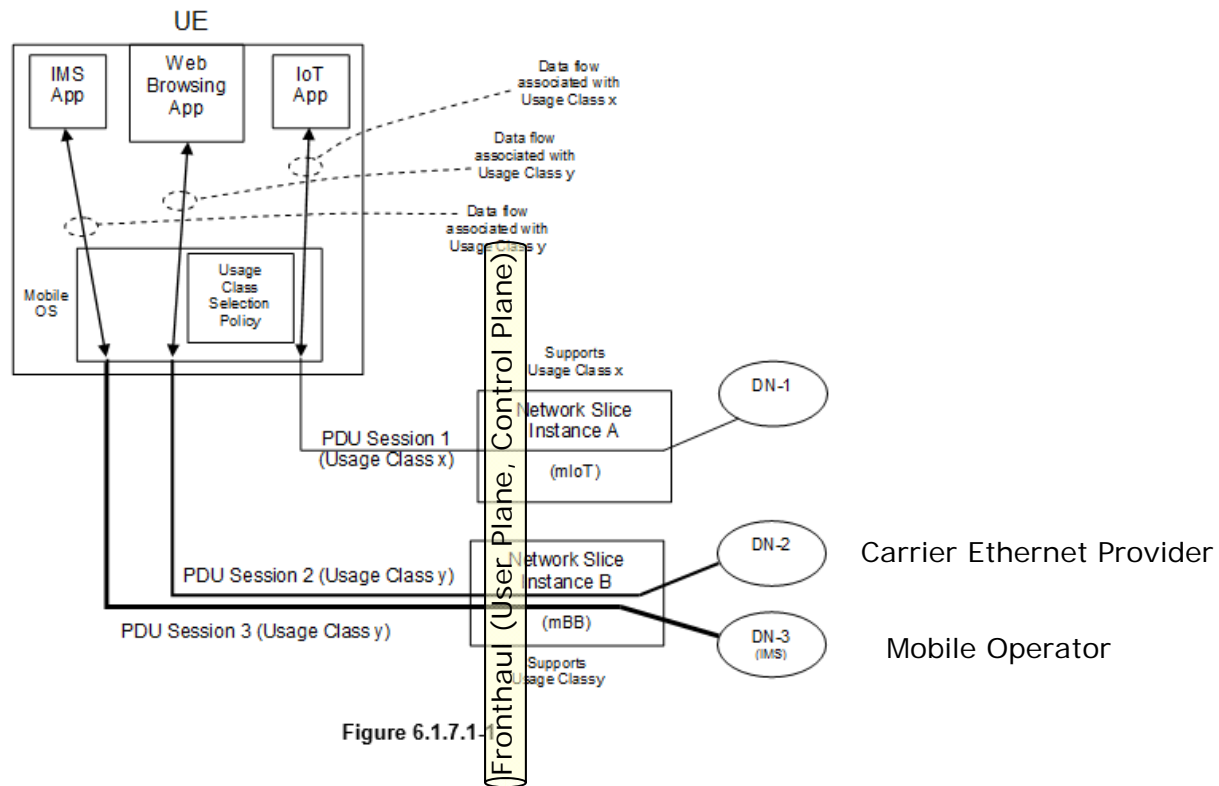


Figure 6.1.3.1-1 Sharing a set of common C-plane functions among multiples Core Network Instances

- ❑ UE, RAN, CORE and *Transport* Network Slice Creation/Composition, Modification, Deletion and Selection

# 5G E-2-E Network Slicing

## MOBILE Ethernet Session



- ❑ Mobile Ethernet Session across UE, RAN, CORE and *Transport* Network Slice
- ❑ Connection Oriented Session and Connectionless Session

3GPP TR 23.799

# 5G E-2-E Network Slicing

## Mobile Ethernet KPIs

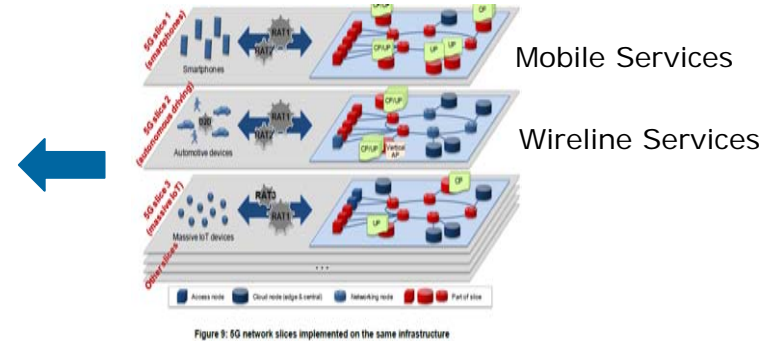
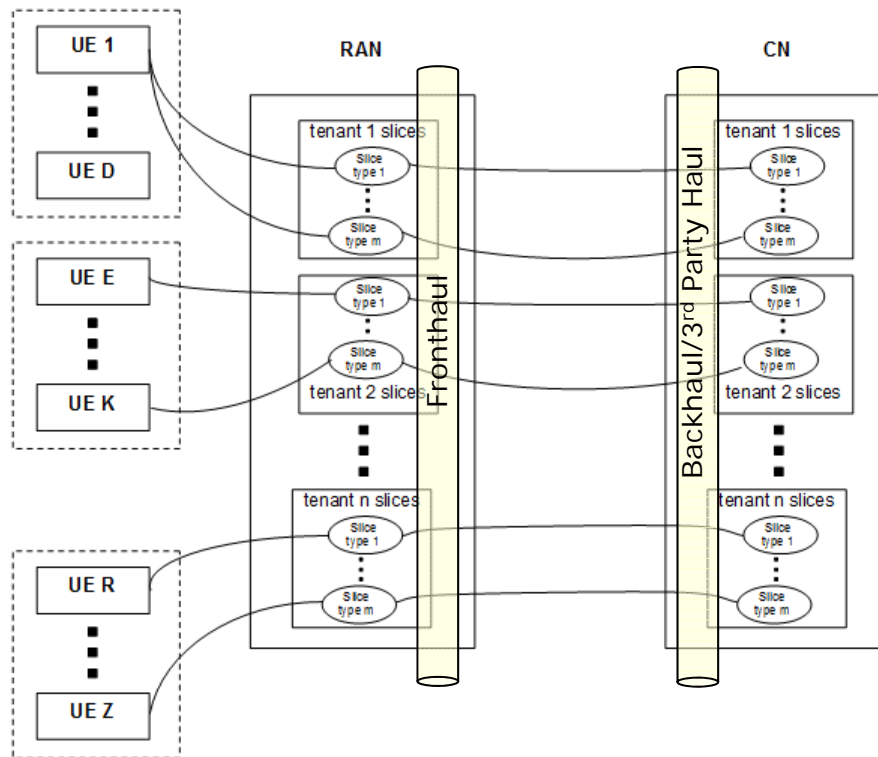


Figure 9: 5G network slices implemented on the same infrastructure

Figure 6.1.2.1.1-1: Network with n Tenants and m possible Slice Types (with UEs which can only access a single tenant slices)

- ❑ Mobile Ethernet KPIs across UE, RAN, Core, and Transport Slice
- ❑ E-2-E KPI budget allocation across UE, RAN, Core, and Transport Slice
- ❑ Currently not addressed by any SDOs
- ❑ 3GPP SA5 group proposing to work with outside groups for the Transport Network

3GPP TR 23.799