

oneM2M Industry Day Kanazawa  
Session 3, IoT in Japan  
December 5, 2018  
Ishikawa High-Tech Exchange Center, Ishikawa Science Park

# **Consideration on the collaboration between oneM2M and 3GPP**

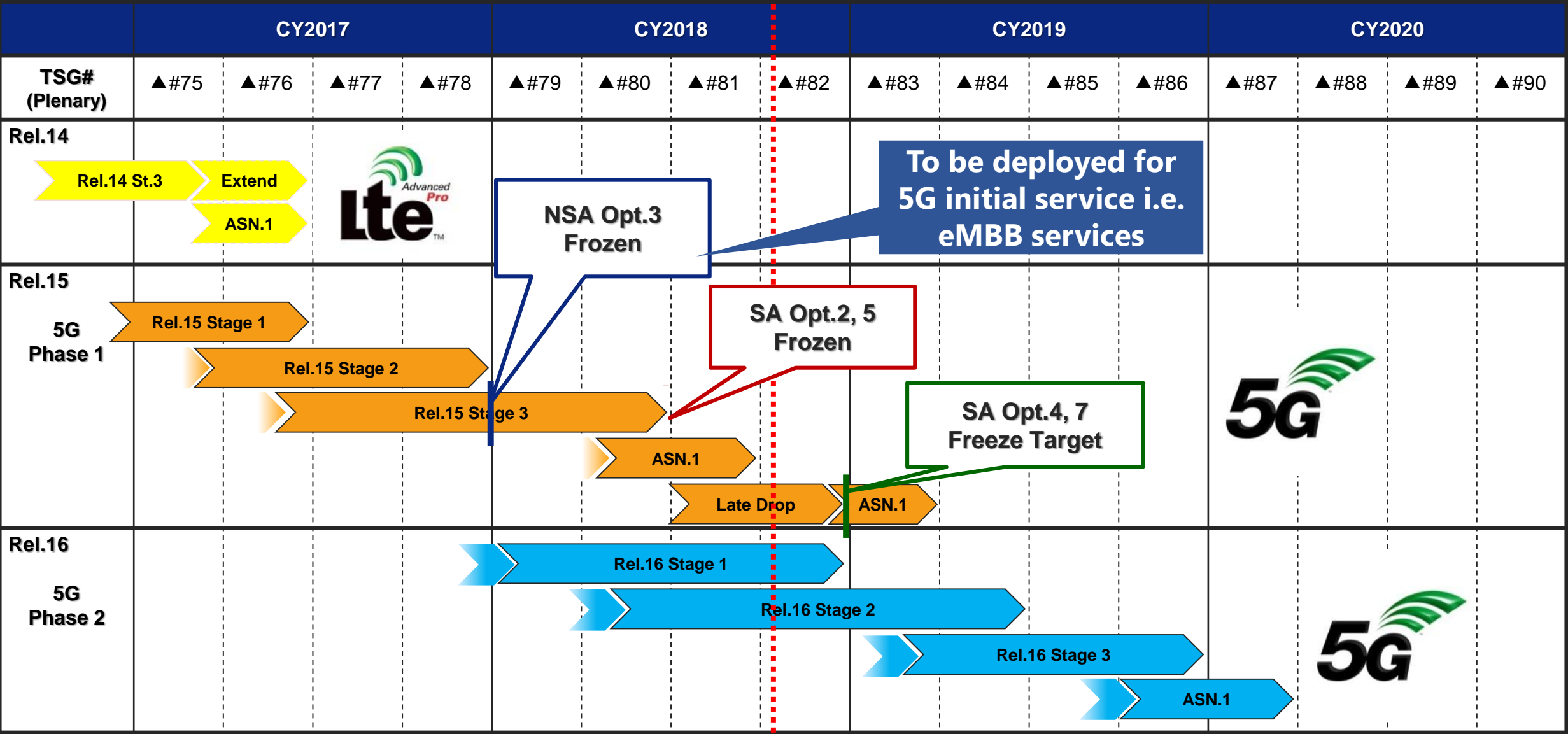
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3GPP TSG-SA Vice-chairman

# Agenda

- 1. Introduction – 5G overview**
- 2. Key Enablers of 5G for Cross-Industry Collaboration**
- 3. Expectation of oneM2M in 5G era**

# **1. Introduction – 5G overview**

# 3GPP Work plan



# Potential of 5G

## ✓ Start with eMBB

- **Creating new experience value for consumers**
- **Proper evolution of 4G**

## ✓ Enterprise services

- **Varieties of collaboration with cross-industry partners transform business**
- **Essential value of 5G**

# PoC to develop Use Scene with 5G

## Stadium Entertainment



**Simultaneous video streaming service**

## Construction by ICT



**Remote operation of heavy machinery with high-definition video**

## High-definition Video Transmission



**8K video transmission in mobile**

## Advanced Security System



**Data relay by wearable devices**

## **2. Key Enablers of 5G for Cross-Industry Collaboration**

# **Key Enablers of 5G for Cross-Industry Collaboration**

- ✓ Exposure Function in 5GS**
- ✓ End to End Network Slicing**
- ✓ Enhancement for Edge Computing**



# Key Enablers of 5G for Cross-Industry Collaboration

- ✓ **Exposure Function in 5GS**
- ✓ End to End Network Slicing
- ✓ Enhancement for Edge Computing

# Exposure Function in 5GS

✓ **Network Exposure Function (NEF) supports;**

- Expose NW capabilities, events and information provided by 3GPP NFs to AF
- Provide means for the AF to provide information to 3GPP NW

✓ **APIs specified in SCEF are supported (see the table)**

✓ **RESTful API and Open API**

✓ **Enhancement for Slicing and access to UDR (Unified Data Repository)**

**Monitoring**

**Device Triggering**

**Resource Mgmt of Background Data Transfer**

**CP Parameters Provisioning**

**Traffic Influence**

**Changing the Chargeable Party at session set up or during the session**

**Setting up an AF session w/ required QoS**

# Key Enablers of 5G for Cross-Industry Collaboration

- ✓ Exposure Function in 5GS
- ✓ **End to End Network Slicing**
- ✓ Enhancement for Edge Computing

# What is Network Slicing?

✓ The technology to provide optimized functions and quality according to a use-case through logically isolated network

✓ Requirements like;

- Communication with high throughput
- Collection of massive sensor information
- To use secure mobile VPN

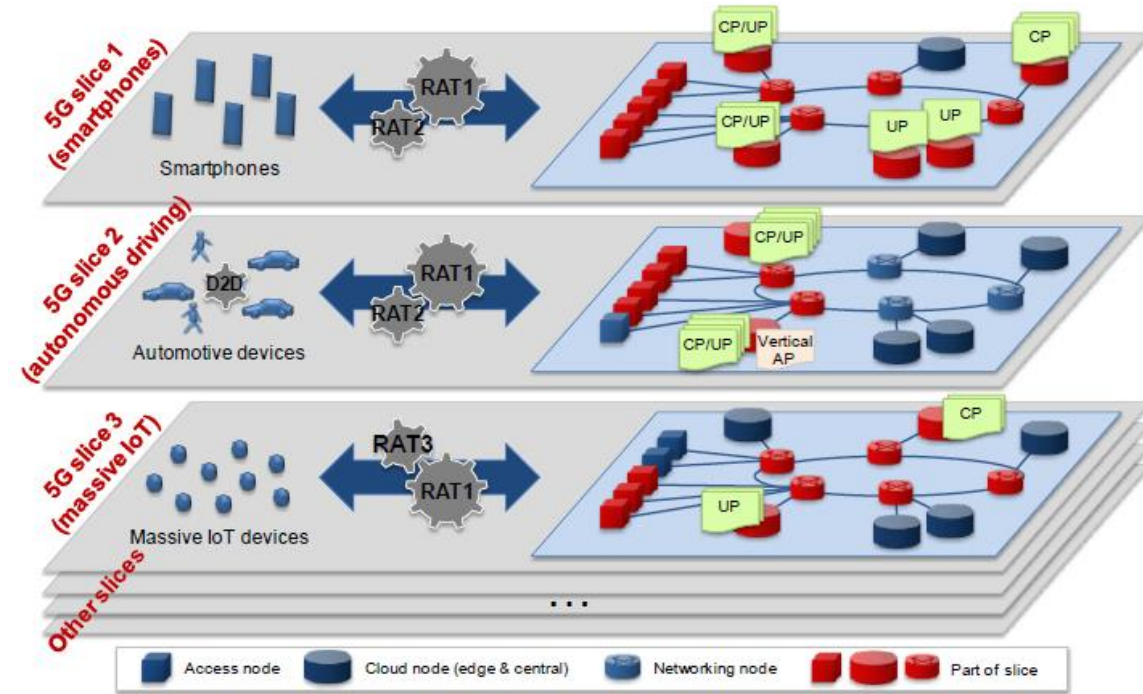


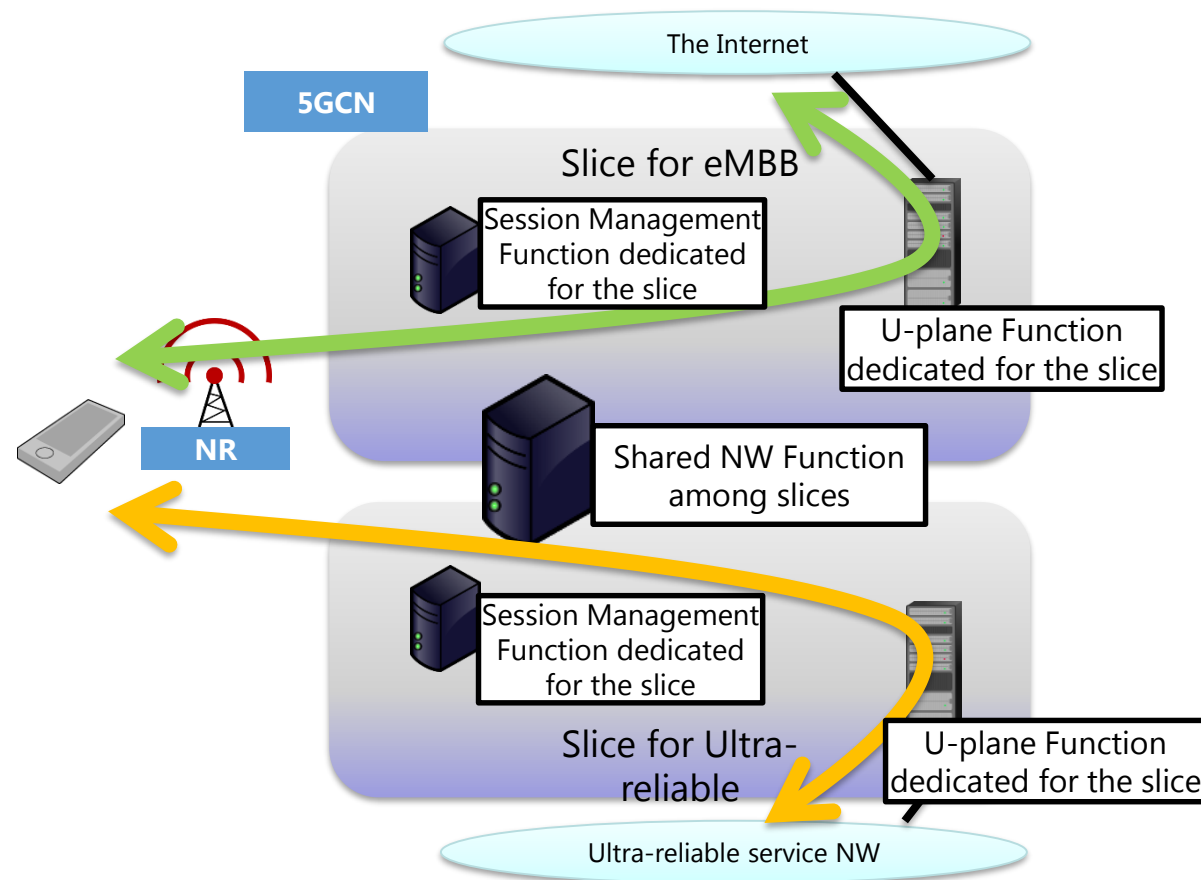
Figure 9: 5G network slices implemented on the same infrastructure

Source: NGMN 5G WHITE PAPER V1.0

# End to End Network Slicing

## ✓ 5G Network Slicing

- Resource isolation from other service  
-> No service impact caused by other slices failure
- Customized NW functions and/or capacities to ensure SLA

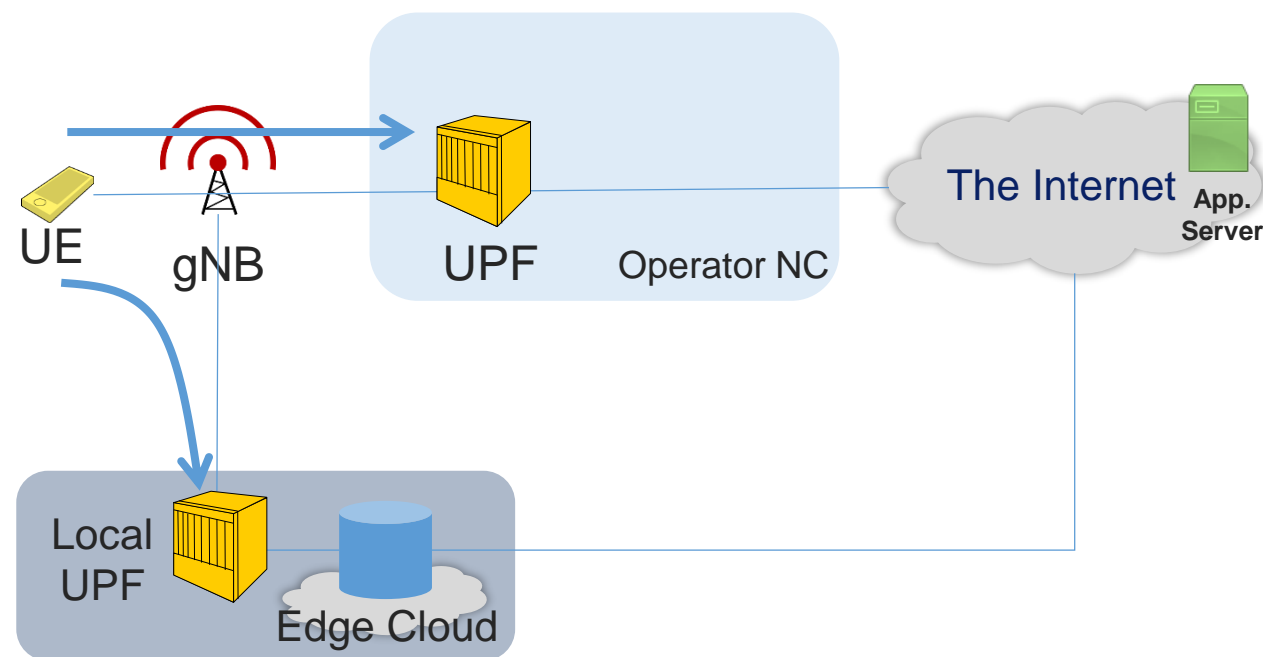


# Key Enablers of 5G for Cross-Industry Collaboration

- ✓ Exposure Function in 5GS
- ✓ End to End Network Slicing
- ✓ **Enhancement for Edge Computing**

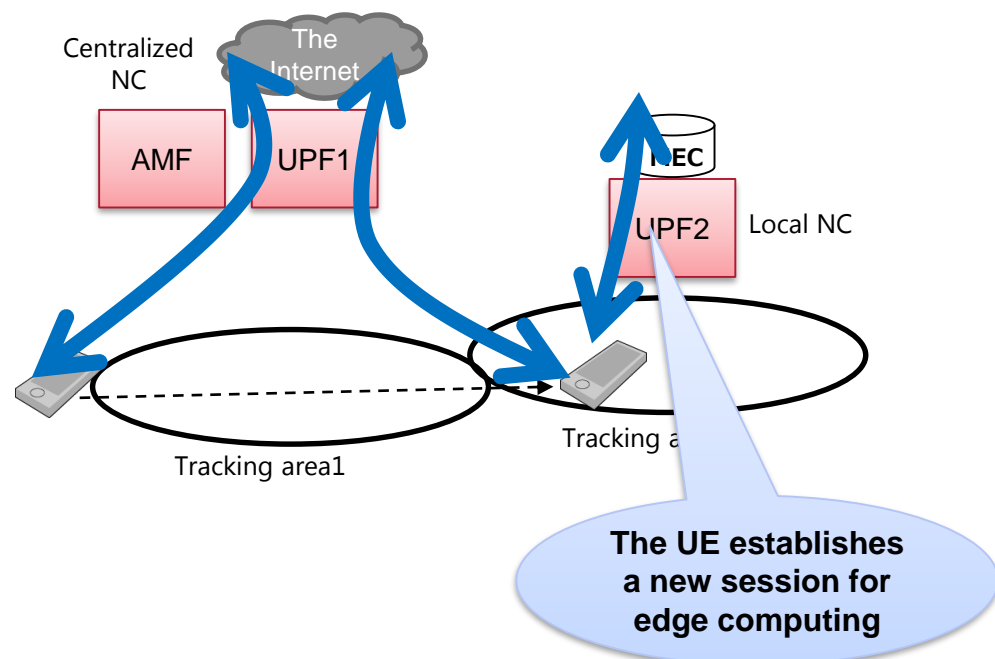
# Enhancement for Edge Computing

- ✓ Put UPF edge site and locally break out the data
- ✓ Edge cloud provides locally optimized services based on subscriber's profile

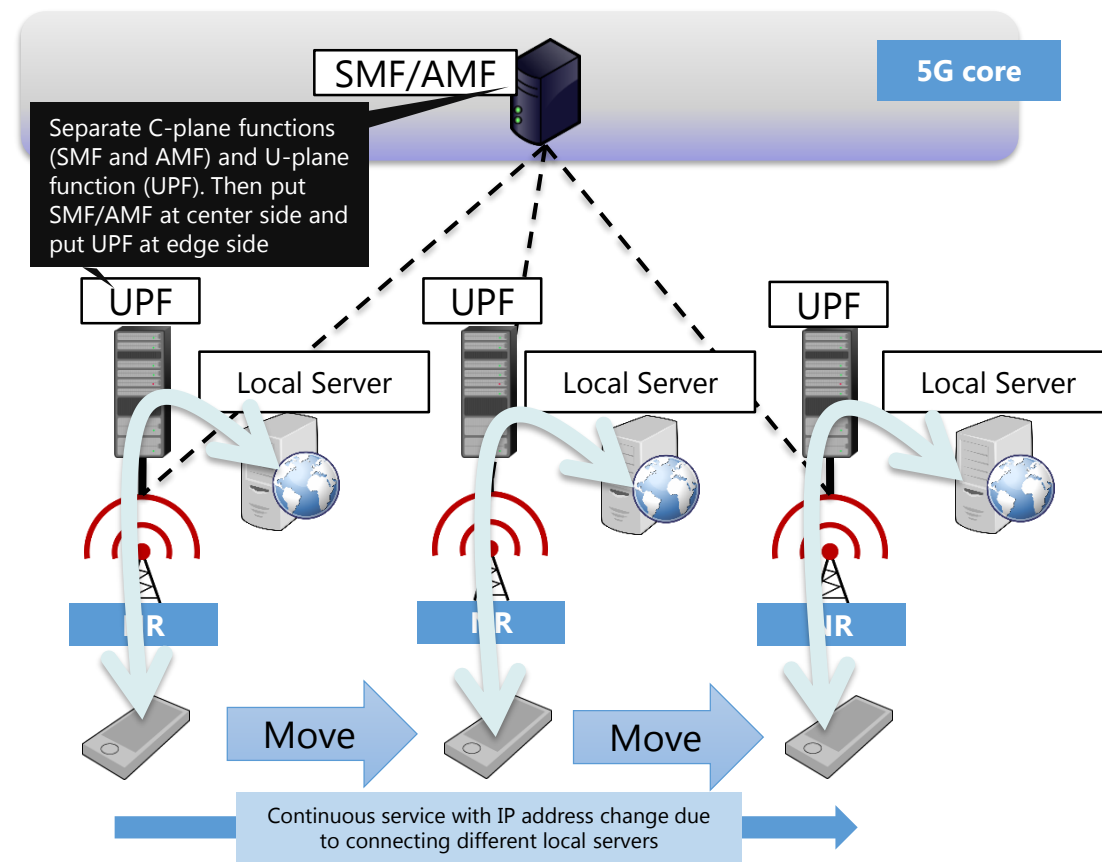


# Enhancement for Edge Computing

- ✓ Indication of the network to connect
- ✓ Session establishment based on UE location



- ✓ Session and Service Continuity by 3 types of SSC mode





### **3. Expectation of oneM2M in 5G era**

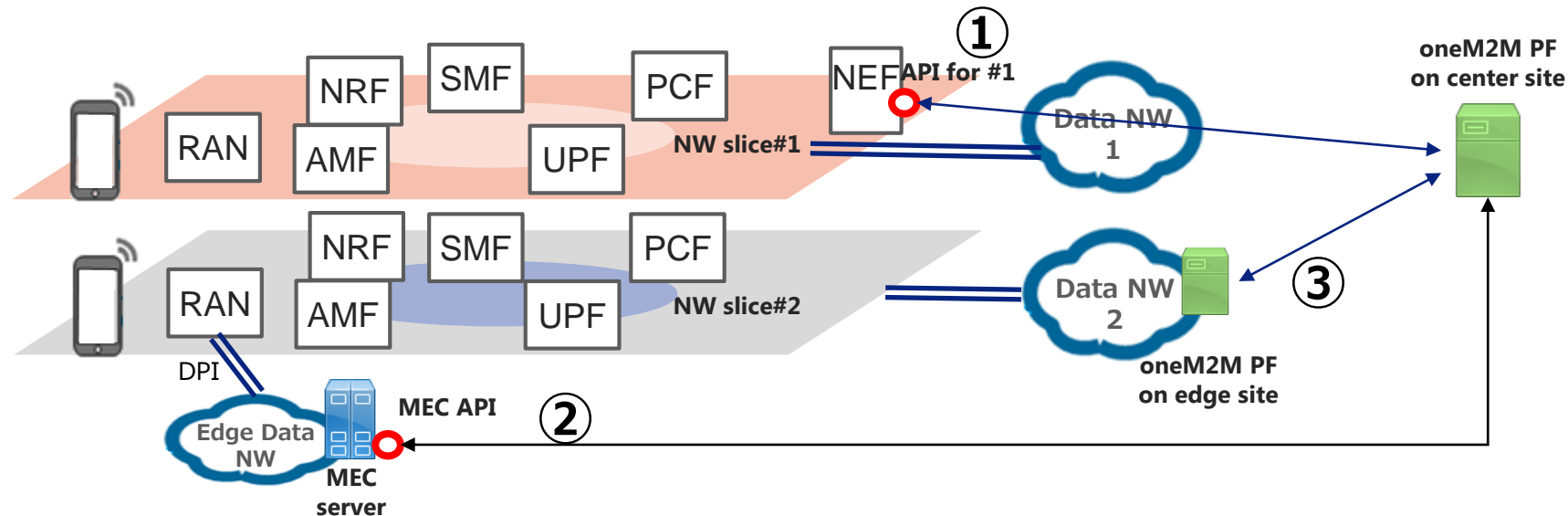
# **Expectation of oneM2M in 5G era**

- ✓ **Enabler of cross-industry Collaboration**
  - **Universal management of Massive information data**
  - **Gateway between Access NW e.g. 3GPP and Upper layer application systems**
- ✓ **Diversified Data/Information Management**
  - **Flexible location of oneM2M PF correspond to Edge Computing Environment**

# Expectation of oneM2M in 5G era

## ✓ Interworking with 3GPP system

- ① Interworking via API of 3GPP defined exposure feature, i.e. NEF and SCEF
- ② Interworking via MEC-API
- ③ Edge/Fog computing of oneM2M PF



# Conclusion

## ✓ **Potential of 5G**

- Application for Enterprise business

## ✓ **Key Enablers of 5G for Cross-Industry Collaboration**

- Exposure Function in 5GS
- End to End Network Slicing
- Enhancement for Edge Computing

## ✓ **Expectation of oneM2M in 5G era**

- 3GPP Interworking and Edge/Fog Computing

**From  
“Communication Carrier”  
to  
“Partner to co-create new value”**

**To be a Company that  
Consumers can feel closest to  
and  
Continues to Produce Excitement**



