5G Network Slicing Seminar 28 June 2018, Shanghai, China



# Network Slicing Task Force(NEST) – Summary of activity

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Source: CEO 5G survey, October 2016

### **The Importance of Network Slicing**



#### The B2B opportunity

- In the CEO 5G Survey (2016), operators clearly indicated the enterprise segment as the opportunity to expand the business
- Network slicing is earmarked as the enabler for unlocking this opportunity



### **NEST objectives**

NEST's objectives are to work on the following questions:

- What are the requirements on network slicing?
- What is network slicing?
- What is required to enable network slicing?
- How to make money with network slicing?



### **GSMA** set out to help making network slicing a success





### Influencing standards

Current and future collaboration

- Established liaison relationship with many SDOs including
  - 3GPP
  - BBF
  - NGMN
  - TM Forum
  - ZSM
  - ...
- Also monitoring open source initiatives
- Plan to continue cooperating with SDOs for simplifying the introduction of network slicing through profiling.







### **Defining Business models**

#### Value chain considerations

- Worked on three possible business models that could be applied to network slicing
- Started to involve GSMA WSOLU in defining key components of the models

 Will continue to elaborate the models as features offered get clearer





### Enable roaming and interoperability

#### **Developing roaming solutions**

- Possible solutions for enabling roaming have been documented
- GSMA WAS WSOLU asked to consider impacts on roaming agreement templates

• Further work on more models needed









### Engage verticals and associations

#### Working with associations

- Whenever possible establish links with sectorial associations to understand use cases
- Avoid duplication of efforts and foster cooperation

- Links to more associations in progress (e.g. 5GSA, EBU...)
- Co-host events











# **5GACIA**

5G Alliance for Connected Industries and Automation



### Advocacy and messaging

#### Evangelisation

- Produced two full papers and two booklets
- 3 seminars held during Mobile World Congress events
- Presented at several international conferences

Participation to more conferences planned





### **Guiding policy makers**

#### Working with associations

- Studying the potential impacts on network slicing of
  - Net neutrality
  - Data sovereignty
  - Transfer of liability
- Frequent interaction with policy makers (e.g. Capacity Building material)
- Continue working on potential impacts of regulations (e.g. shared spectrum)











# **Current focus**





### **Collected Industry segments' use cases**



#### E **Telematics** D AR/VR Fleet Management CCTV surveillance . **P**h 盫 **Public Safety** Agriculture drones Smart Grid Mobile banking \$ **•** Health monitor

#### **Finding commonalities**

- Extracted a multitude of use cases from the analysis of industry verticals
- Used relations with sectorial associations, interviews and desk research
- Work on collection of use case is ongoing (and help much appreciated!)



### Developing deeper understanding of a network slice



#### **Generic Slice Template**

- Working on a universal description of a network slice based on:
  - Performance attributes
  - Operational attributes
  - Functional attributes
- This description is intended for operators, vendors and verticals to communicate efficiently.
- First version will be finished in September 2018



### Example of configuration of a slice: telemetry





### Distilling a small number of "default slices"



#### **Standardised slices**

- There is an expectation that several different use cases will share the same (or very similar) performance, operational and functional requirements
- Possible to define a small set of network slices that suit a large percentage of the use cases: standardized slices
- Standardized slices may be used
  - to "seed" the market (simplify introduction)
  - as safety net in simplified roaming agreements



# Potential work of GSMA NG





### **Documentation of standardized network slices**



#### Based on NEST's work

- NG should document the "basic" network slices that can address the majority of the use cases
- Work with 3GPP in case functionality needed in a use case are not covered by standards
- Guide other working groups (WAS, TSG) to ensure all the business tools are in place to launch network slicing





## **Thanks!**

NG 5G workshop