



5G SLICING ASSOCIATION

TO EMPOWER THE DIGITIZED INDUSTRY

April, 2018

Agenda

BASICS ON NETWORK SLICING

Concept – Service Orchestration – Business Models

USE CASES / VALUE PROPOSITION

Overview – Smart Factory Case

5G NETWORK SLICING ASSOCIATION

Role - Vision – Mission – Activities – Members



Why Network Slicing is important



**125 BILLION CONNECTED
DEVICES IN 2030¹**



**WIRELESS MISSION-
CRITICAL PROCESSES**



**INCREASING NUMBER OF
REAL-TIME APPLICATIONS**

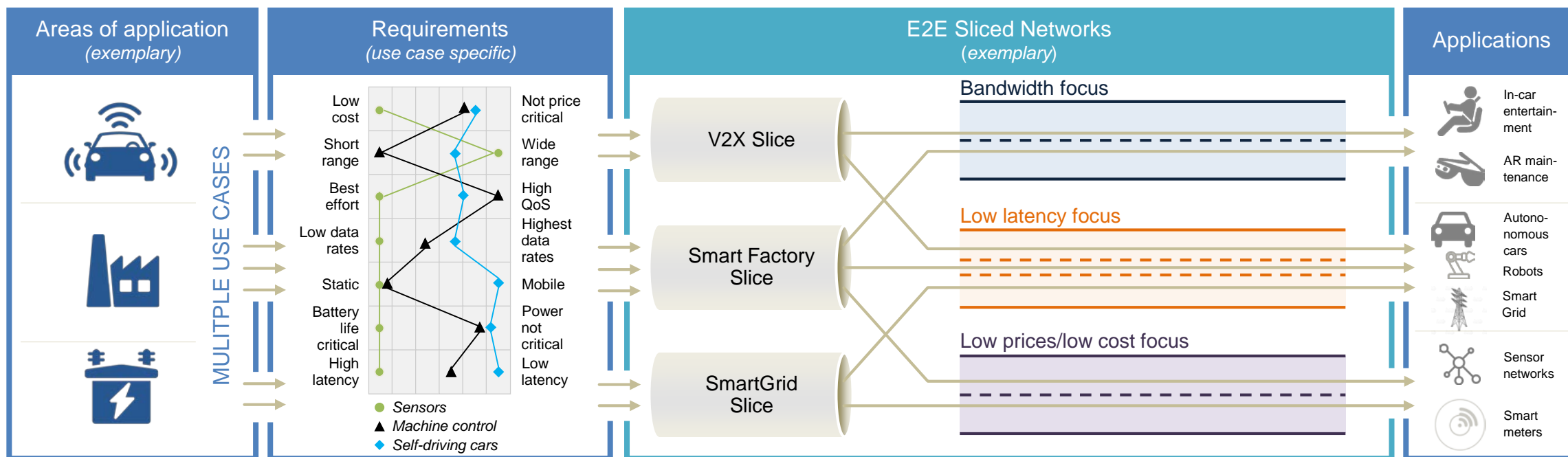


**ULTRA-HIGH BANDWIDTH
APPLICATIONS**

Digitization and automation of various industries define completely new and substantially different requirements



The basic concept of Network Slicing coming with 5G



Fulfilling diverse connectivity requirements in multiple logical networks created on top of a common shared physical infrastructure

Network Slicing is key enabler for different products on the same infrastructure

Situation:

Diversity of use cases call for flexibility

SENSOR
NETWORKS



AUTONOMOUS
DRIVING



E-HEALTH
SERVICES



PERVASIVE
VIDEO



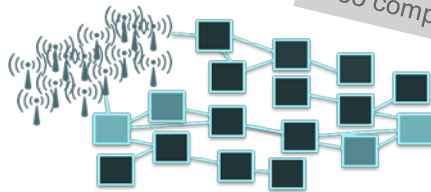
5G Networks need to support flexible levels of:

Mobility, Latency, Bandwidth,
Coverage, Functionality , ...

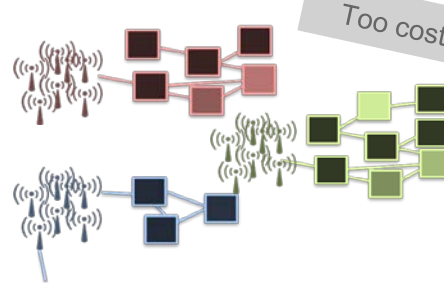
Complication:

Limitation of classic solutions

„All in One“ Network



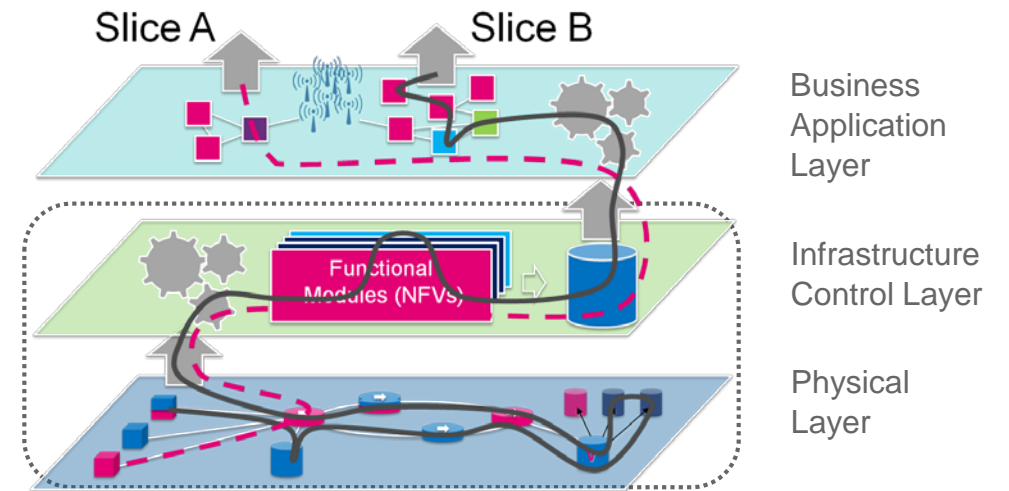
Multiple Networks



Solution:

Multiple logical network build on one physical infrastructure

Strong capabilities for tailored solutions, guaranteed resources and fast provisioning



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Overview - potential areas of application for Network Slicing



Aviation



Smart Factory



Autonomous Transport



Drones



AR / VR



Automotive



Power Grid



Healthcare



Public Safety



Broadcasting



Logistics



Wireless Office

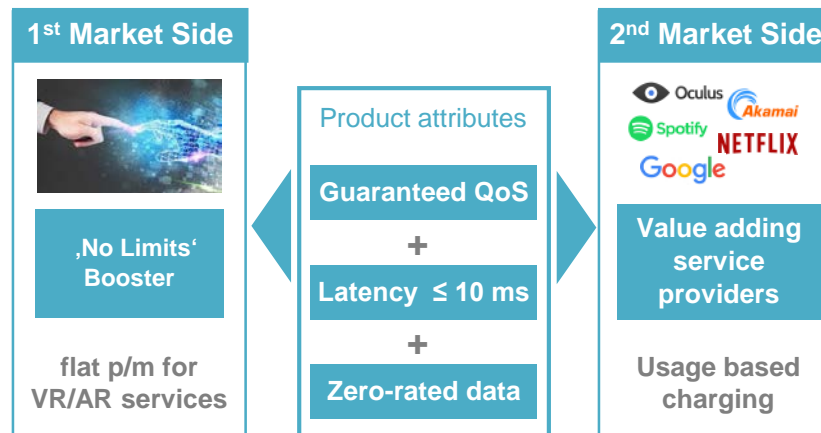


New specialized services to be commercialized in a different way

1

B2C – Mass Market Services

- Service offering model enables premium service experience
- Providing new partner / cooperation models for premium service/connectivity experience
- Premium service offering for both sides of the market (end users) 1st market side and 2nd market side (value adding service providers)



2

B2B/Verticals – Specialized Services

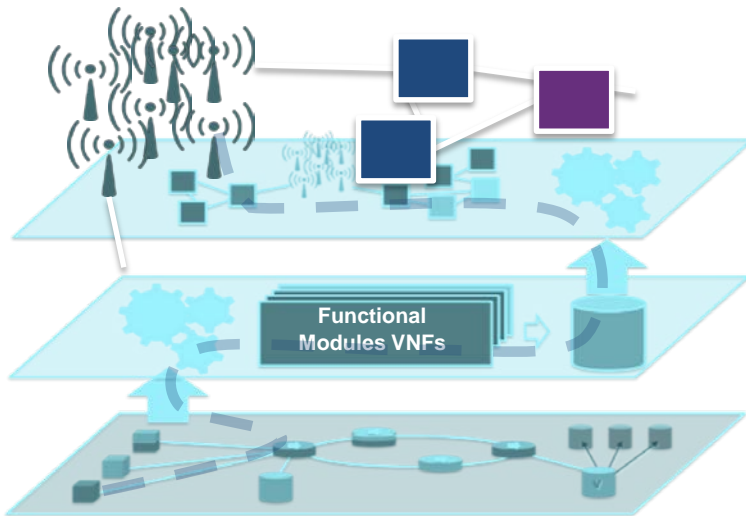
- Customer / Vertical tailored services, combining premium connectivity & capabilities
- Ignite new business around with 5G exclusive features as Edge computing / ultra low latency
- Roaming 2.0: Global reach in operator alliance to achieve world-wide service delivery consistency



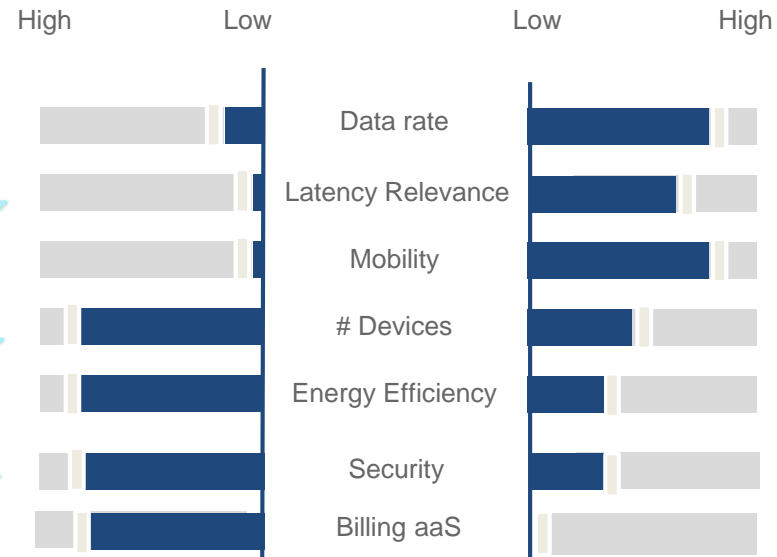
Two 5G Network Slicing Examples

Cellular IoT slice

e.g. Smart Grids / Smart Parking

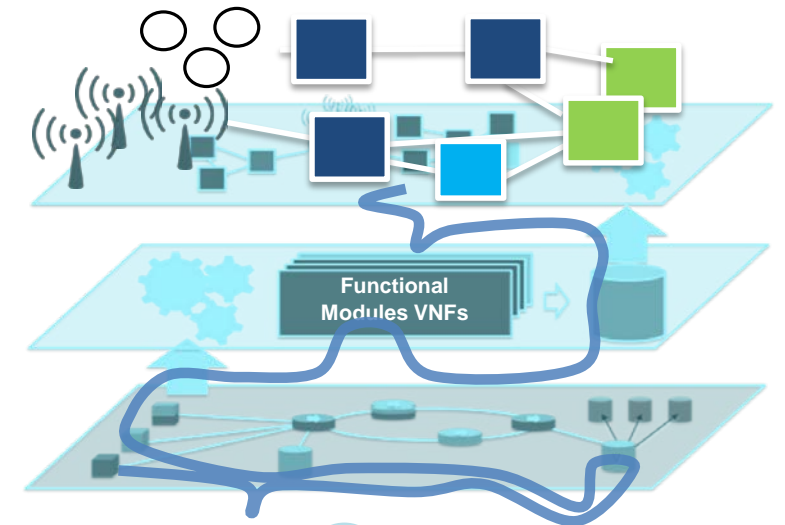


Target Optimization Factors (Relevance)



5G Advanced Broadband slice

e.g. Mass Market – differentiate bandwidth for customer segments, services, etc.



BENEFITS OF NETWORK SLICING

1

TAILORED FUNCTIONS

= Only run what you need

2

TAILORED TRADE OFFS

e.g. Availability vs. costs

3

ISOLATION BETWEEN SLICES

e.g. guaranteed resources

4

FAST SLICE PROVISIONING

e.g. Instantiation of slices

The Network Slicing Value Proposition at a glance

Network Slicing supported network services fuel the industry digitization through:

- **cost-effectiveness**
- **customization**
- **guaranteed performance**



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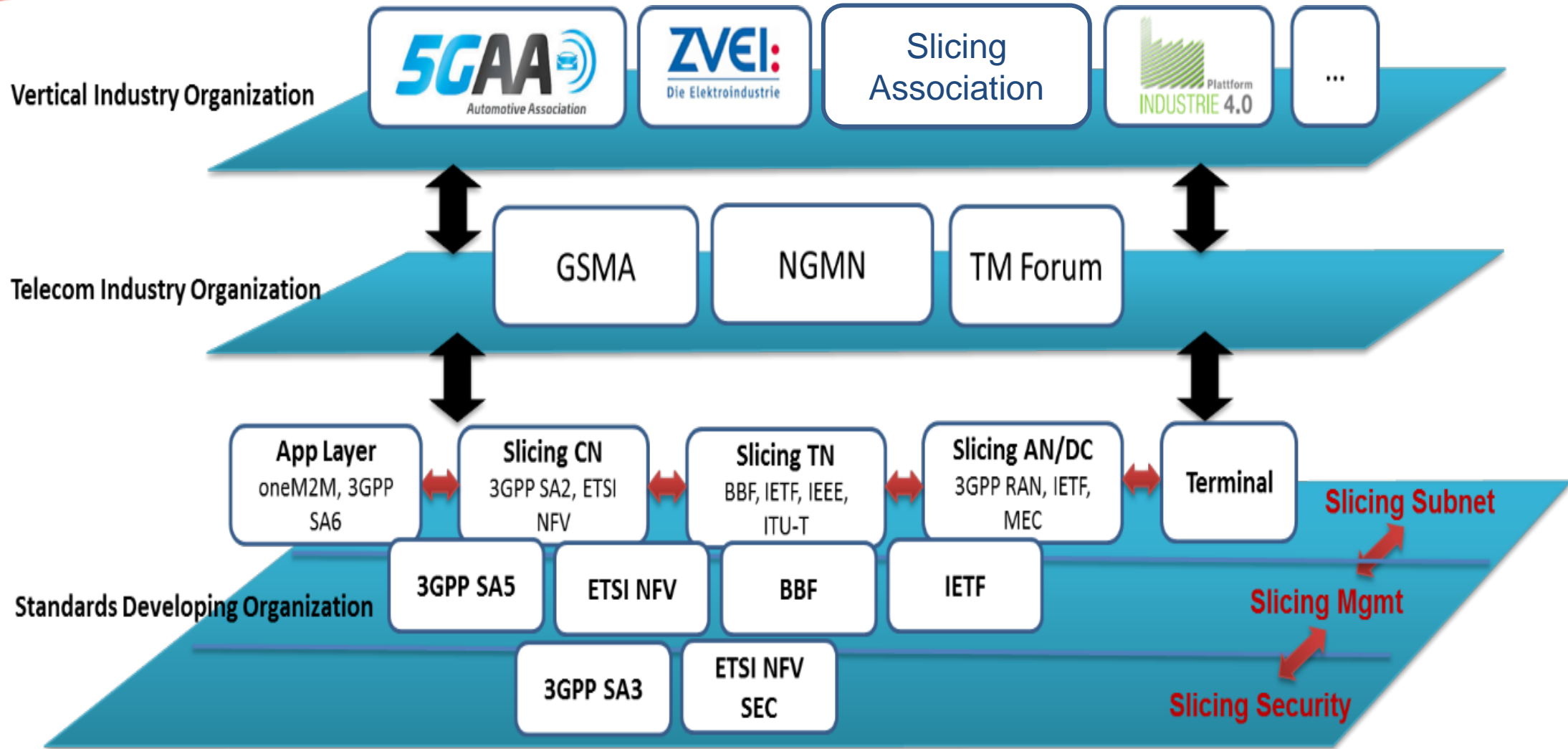
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Network Slicing Relevant Industry Groups and SDOs Landscape



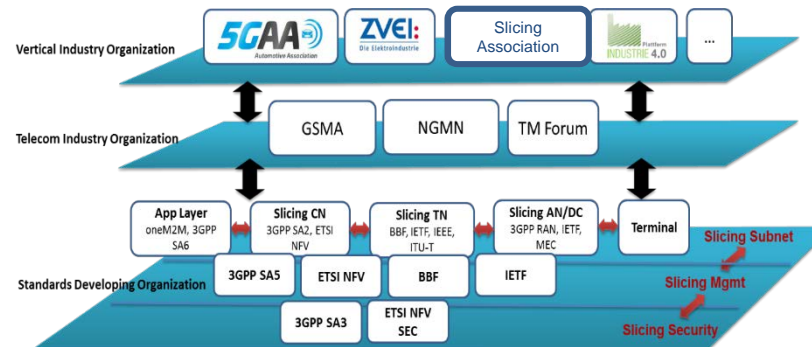
Network Slicing Relevant Industry Groups and SDOs Landscape

Network Slicing aims to support variant vertical industries in 5G

- Develop an end-to-end solution for future mobility and transportation services
- business aspects of Network Slicing in automotive industry

- **GSMA** initiated NEST to harmonize slicing definition and identify slicing types (PRD)

- **NGMN** is developing and communicating requirements to ensure the customer needs



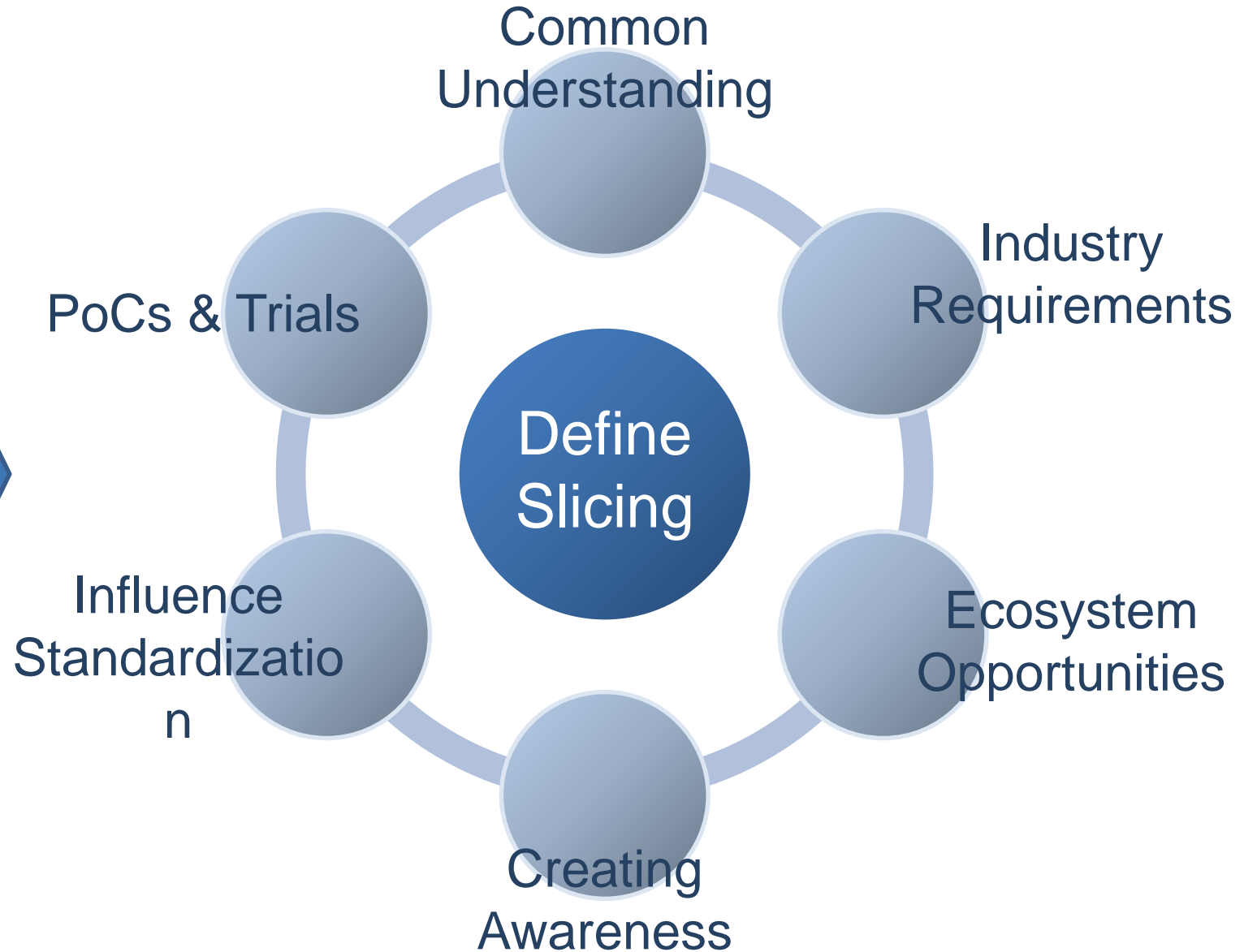
TM Forum analyses Network Slicing business models and business scenarios

- Technical specifications are defined in **SDOs**, namely, Radio Access Network (RAN) and Core Network (CN) by 3GPP, Transport Network (TN) by BBF and IETF

Slicing Association

Mission

Define network slices that can provide value to various industry and society

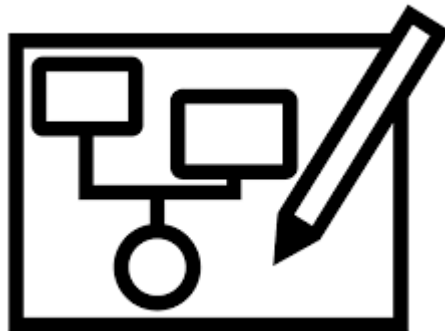


Status April 2018

MoU Slicing
Association



Terminology of
Slicing



Cross-Industry
Positionpaper



5G Slicing Association Members

