



Role of 5GPPP Architecture WG toward B5G/6G System

Dr. Ömer Bulakci

oemer.bulakci@nokia-bell-labs.com

5GPPP Arch WG Vice-chairman, Nokia Bell Labs



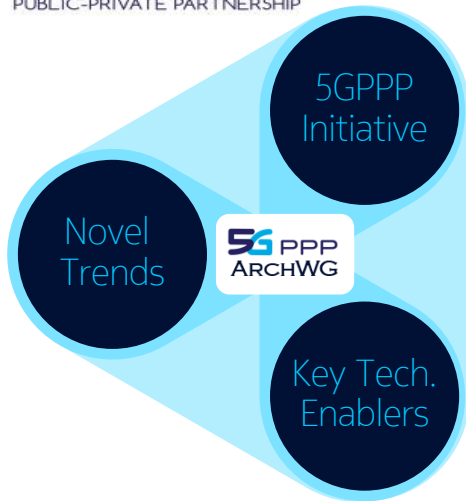
- Architecture WG is one of the Working Groups as part of the 5GPPP Initiative
- Brings 5GPPP projects together to attain the European View on the Overall Architecture & the Network Domains
- Provides a consolidated view on the technical directions for the architecture design

- 5GPPP Architecture White Paper issued in June 2016 (V1.0) and updated in January 2018 (v2.0) based on Phase I projects results
- New release (v3.0) issued during the EuCNC 2019 based on Phase II and III project results

5GPPP Architecture White Paper Releases

<https://5g-ppp.eu/white-papers/>



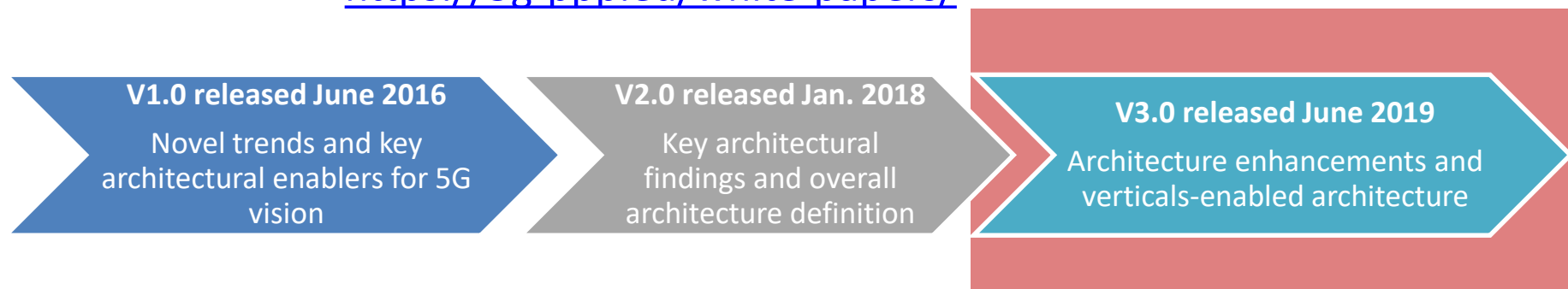


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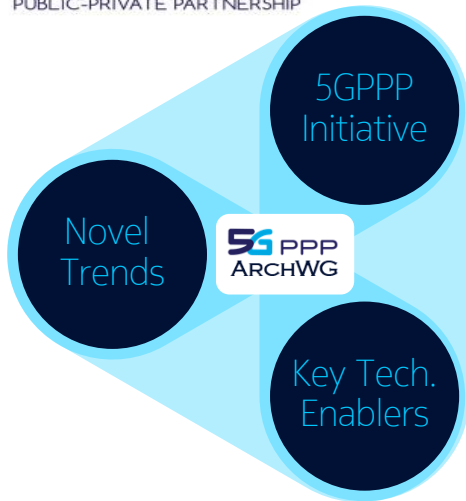
5GPPP Phase II and III Projects: Contributors

The image displays a grid of logos for various 5G PPP projects, categorized into Phase II and Phase III. The logos are arranged as follows:

- Phase II (Yellow background):**
 - 5G ESSENCE
 - 5G City
 - 5G MEDIA
 - 5G-MONARCH
 - 5G phos
 - 5G-PICTURE
 - 5GtangO
 - 5G TRANSFORMER
 - 5G XCAST
 - blue SPACE
 - IoRL (Internet of Radio Light)
 - Metro X Haul
 - MATILDA NGpaas
 - NRG5
 - SAT 5G
 - Global 5G
 - SLICENET
- Phase III (Light Green background):**
 - 5G EVE
 - 5G-VINNI
 - 5Genesis

Phase II

Phase III



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Top Downloads from www.5g-ppp.eu [To-Euro-5G D3.2 July 2019]

Event Label ?	Total Events ? ↓	Unique Events ?
	<p>20,329</p> <p>% of Total: 33.41%</p> <p>(60,842)</p>	<p>18,772</p> <p>% of Total: 33.58%</p> <p>(55,895)</p>
<p>1. https://5g-ppp.eu/wp-content/uploads/2018/01/5g-ppp-5g-architecture-white-paper-jan-2018-v2.0.pdf</p>	<p>1,675 (8.24%)</p>	<p>1,541 (8.21%)</p>

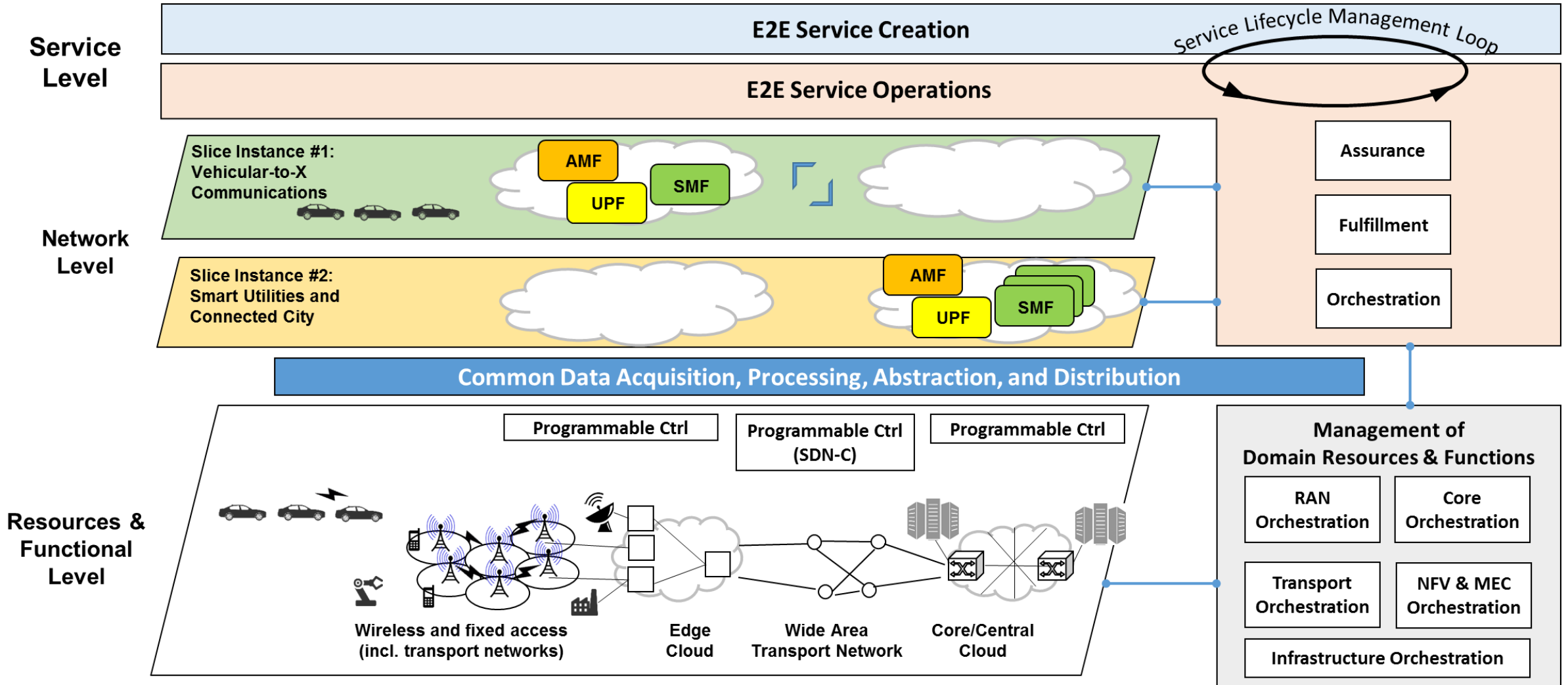
CHAPTERs
Chapter 2 - Overall Architecture
Chapter 3 - Radio & Edge Architecture
Chapter 4 - Core & Transport Architecture
Chapter 5 - Management & Orchestration Architecture
Chapter 6 - Deployment & Analyses
Chapter 7 - Standardization Impact → Pre-STD WG



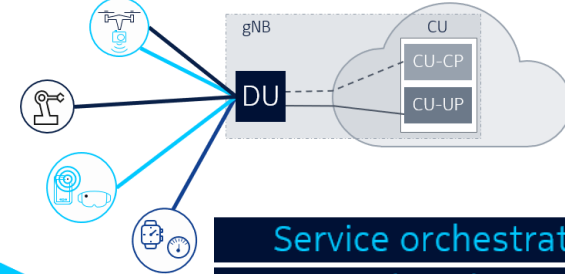
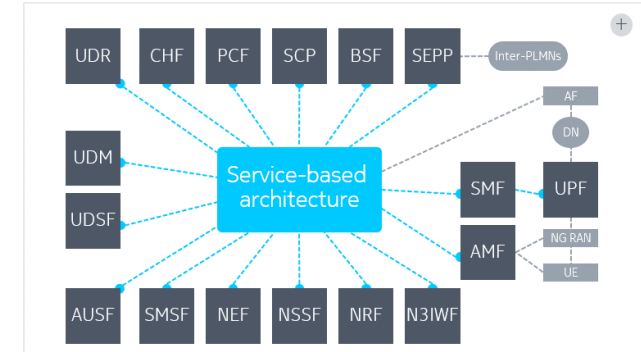
5GArch 2019*: International Workshop on 5G Architecture

*) <https://www.eucnc.eu/workshops/workshop-8/>

#1 in Top Downloads
www.5g-ppp.eu [Full5G D5.2 Sept 2020]



Example: Architectural Enablers for Vertical Support



Service orchestration
Network orchestration



- ## Enablers
- 1 Network Slicing
 - 2 Multi-access Edge Comp. (MEC)
 - 3 Service-based Architecture
 - 4 Functional RAN Split
 - 5 Smart Net. Management
 - 6 Security Intelligence
 - 7 Location Services & Context M.

- Tailored E2E Logical Networks
- SLA Assurance

- VNFs at Edge Clouds
- Latency-critical Services



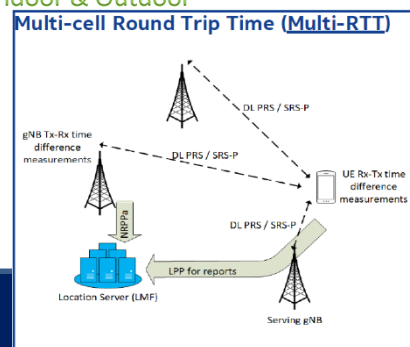
- Core Net & Management Plane
- Flexible Function Addition & Extension

- Virtualization of Higher Layers in RAN
- Easy Scaling

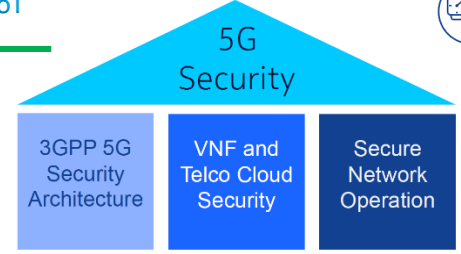
- Automation & Dynamic Adaptation
- Analytics Functions

- E2E Security Solutions
- Tailored solutions, e.g., IIoT

- High-accuracy Low-latency Positioning
- Indoor & Outdoor



- Network Virtualization
- Numerous Lower-Layer Enablers
- Flexible QoS Enforcement
- Satellite Integration



Evolution

Realizing the full promise of 5G through 3GPP evolution
 “Rome wasn’t built in a day” – 5G evolves from a strong Rel-15 base



Mobile Network Operators ► Converged Communication Service Provider ► Digital Service Provider

Connected Mobility ► Connected vehicles ► Connected & flying objects

Operational Technologies Other Industries

Railway, broadcast, satellite

5G Vertical User Webinar Series

Monday 30 November 2020 - 15:00 CET

3GPP Release 18: Opportunities for Industry Verticals

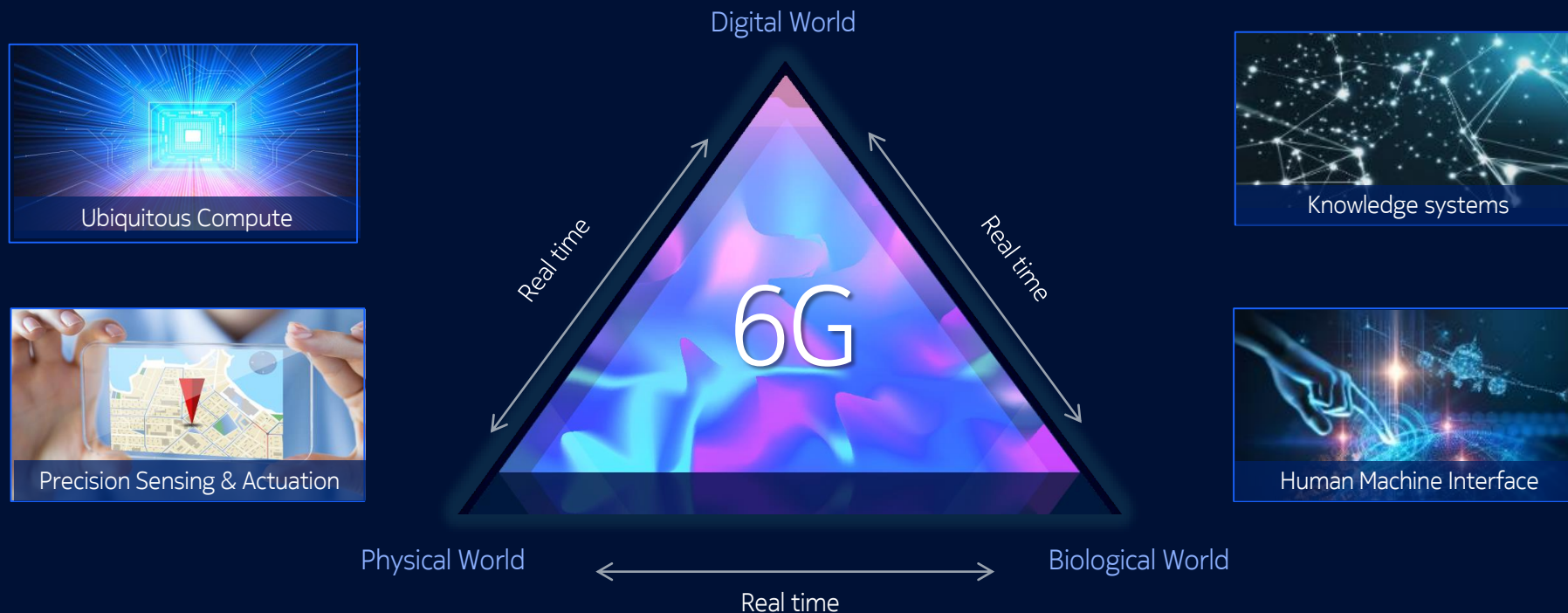
PANELLISTS

Georg Mayer, 3GPP TSG SA Chairman
Balazs Bertenyi, 3GPP TSG RAN Chairman
Julian Stafford, EUTC
Erick Guttman, Samsung and 3GPP
Maxime Flament, 5GAA CTO
Michael Bahr, Siemens and 5G-ACIA

Join us for new requirements from industry verticals

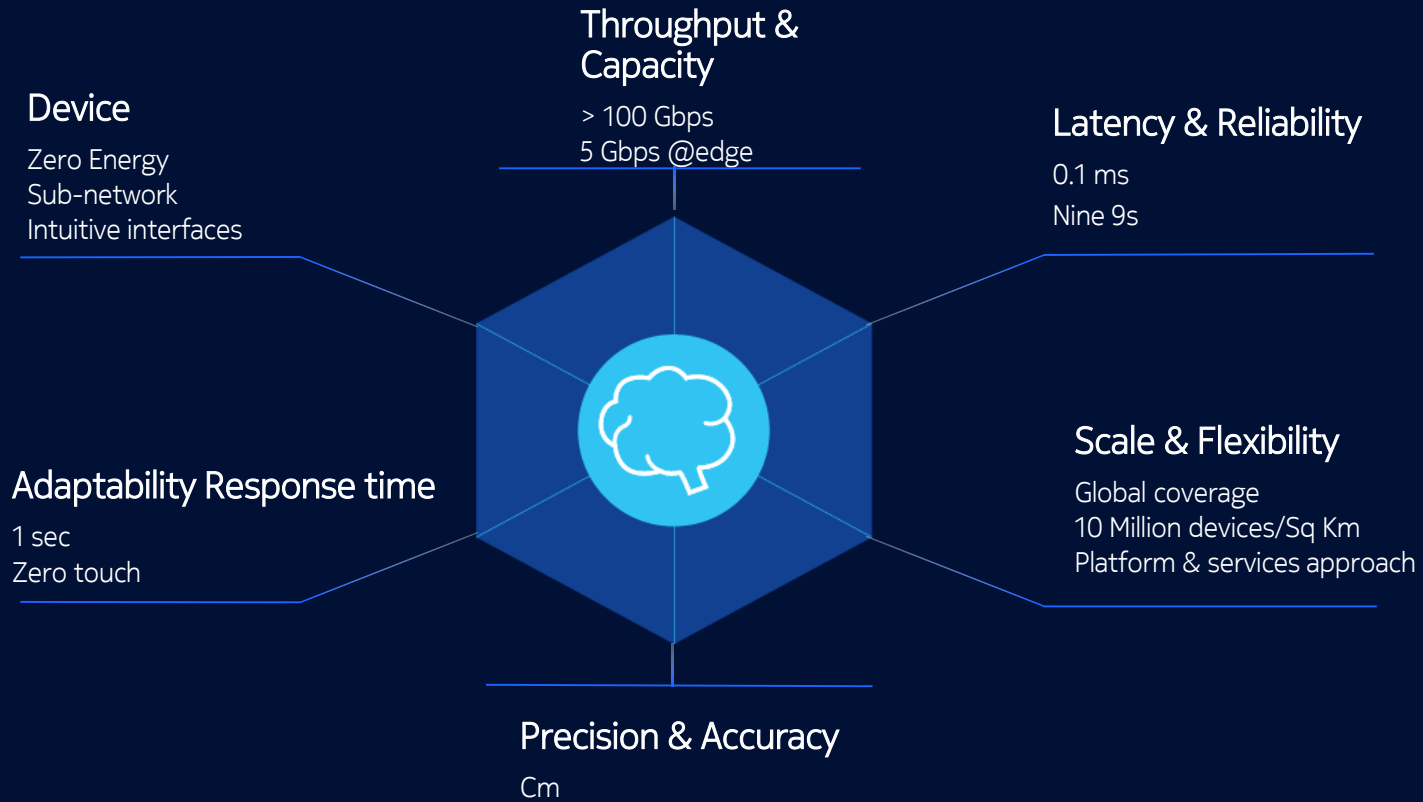
https://us02web.zoom.us/webinar/register/WN_XlHt4s23TdS5mDkI0ONGaw

The enabling foundation

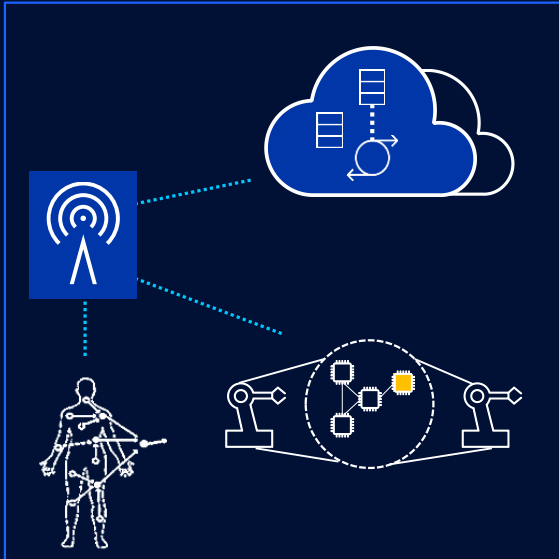


6G to unify the experience across physical, digital and biological worlds

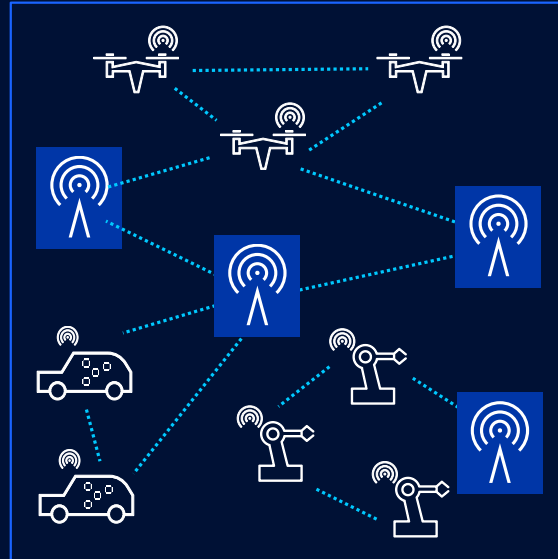
The new requirements



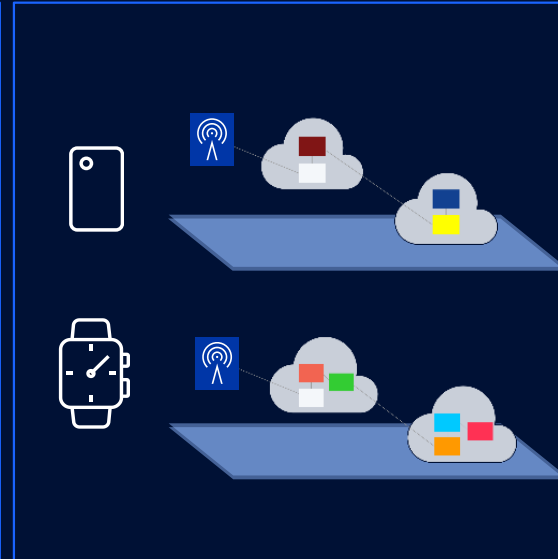
6G Architecture Themes



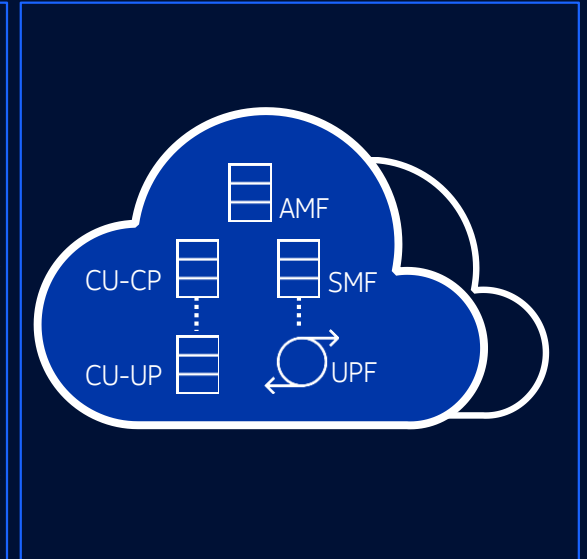
End point is a network



Cell free/Mesh



Hyper specialized slicing



RAN-Core Convergence

- 5GPPP Architecture WG re-started the work in Oct 2020 with the inclusion of 5GPPP Projects (currently: ICT 17, ICT 18, ICT 19 [e.g., **5Growth**], & ICT 20 Projects)
- White Paper ~ Fall 2021**

5G PPP Phase 3,
Part 4:
5G Long Term
Evolution

- 5G-PPP ICT-20-2019 call
- Longer Term Vision
- Realization of pervasive mobile virtual services



Coming Soon:
ICT-52-2020

- Smart Connectivity beyond 5G
- Foundation of B5G/6G System
- System Flagship Project & Complementary smaller and more focused projects

Projects to Start in Jan 2021

Further Info: https://5g-ppp.eu/wp-content/uploads/2019/09/190712_5GInfraPPP_PSM-Phase3.II_V2.0_Final.pdf

Thank you for your attention

For more information about 5G PPP activities please visit <https://5g-ppp.eu>

The white paper is available at <https://5g-ppp.eu/white-papers/>