

# NEXT GENERATION PLATFORM AS A SERVICE

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- 5G must become the ubiquitous fabric blending universal connectivity (to humans, robots, sensors...) with cloud versatility and scalability.



- Another model than IaaS must be adopted, a model derived from the cloud service providers themselves, a model made by developers for the developers, the Platform-As-A-Service (PaaS).



- One size PaaS does not fit all 5G business cases and verticals markets (public/private clouds, specific requirements on latency...), since

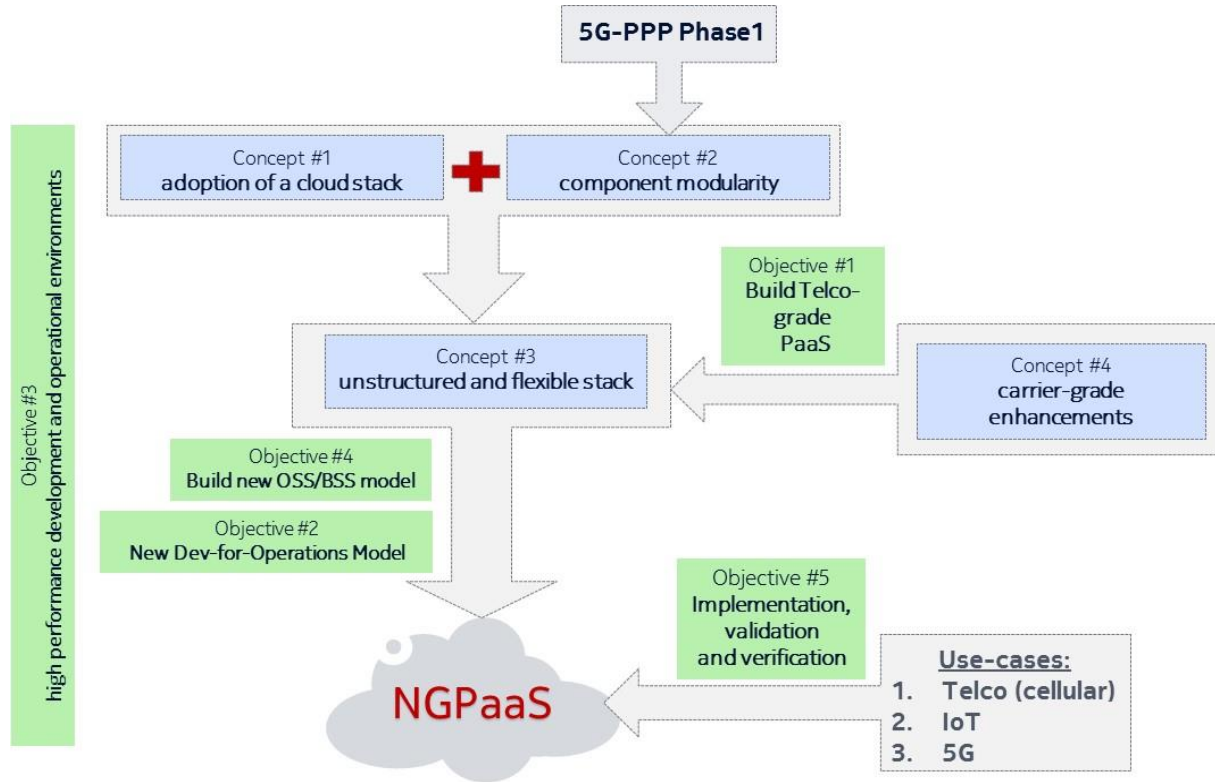
- **Complexity**: many  $\mu$ -services with different SLA distributed over various cloud types
- **Real-time**: stringent latency and throughput requirements requiring offloading/pinning to processing units
- **Heterogeneity**: hybrid technologies (e.g. various virtualization, control and orchestration), multiple sources of components including 3<sup>rd</sup> parties, security including multi-tenancy



Need to support “microservice/components assemblies”



NGPaaS



Are to build

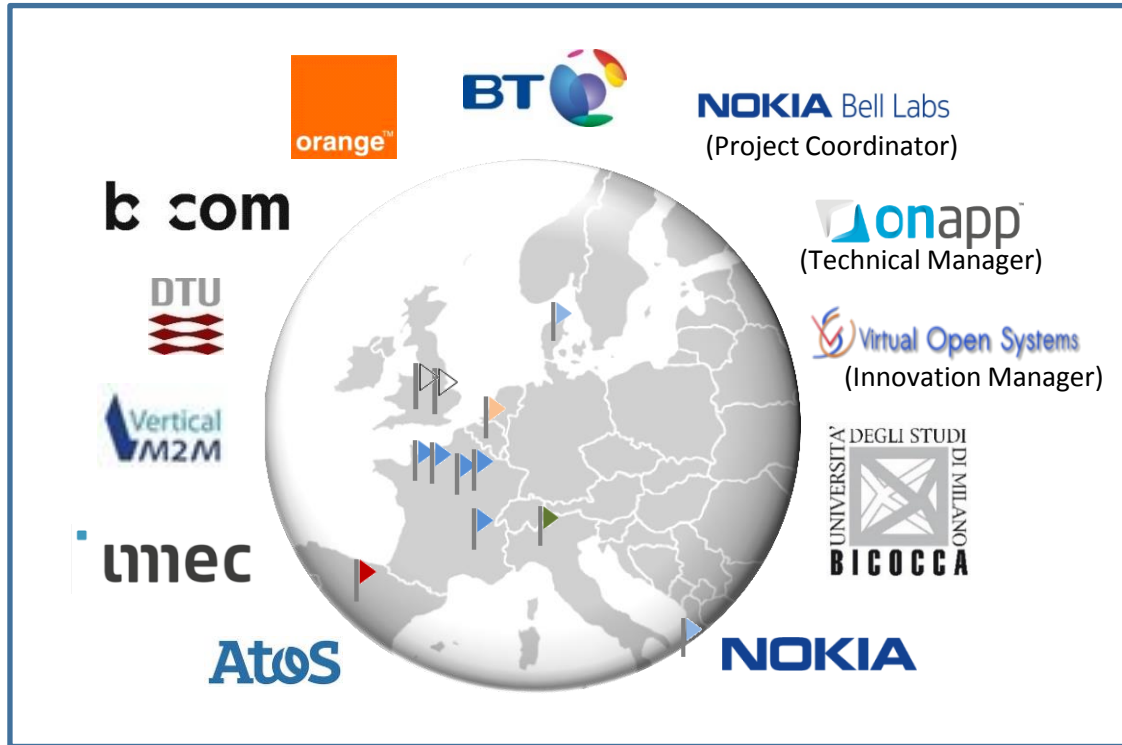
- **Telco-grade PaaS:**
  - Introduce carrier-grade “patches” to control, orchestration, virtualisation and operation frameworks to support different configurations and a large set of deployment options such as FPGA, ARM, x86, private/public cloud in a scalable and unifying manner.
- **New Dev-for-Operations model:**
  - to remove silos not only between different teams of the same organisation, organisations of the same industry but also between different industries (vendor, IoT/Vertical, operator).
- **High quality and high performance development and operational tools:**
  - based on same ones used in telecom environment for ensuring same quality and SLA.
- **New OSS/BSS model:**
  - for interfacing with the cloud resources supporting the Telco-grade PaaS optimised for cost and performance in a highly dynamic environment.

NGPaaS «BUILD-TO-ORDER» principles demonstrated through:

- Telco Use Case: « X-as-a-Service »,  $X \in \{\text{RAN, EPC}\}$ , over CORD
- IoT Use Case:
  - Energy Monitoring
  - Intelligent Agriculture
- Mix of Telco and IoT Components
  - Local Analytics

Heterogeneous IaaS will be considered

Working Group	
Pre-Standardisation WG	Low
Spectrum WG	N.A.
5G Architecture WG	HIGH
SDN/NFV WG	HIGH
NetMgmt & QoS WG	Medium
Vision and Societal Challenges WG	Low
Security WG	Medium
SME WG	T.B.D.
Trials WG	T.B.D.



## NGPaaS in a nutshell

EU funded R&D project (Horizon 2020) and part of 5G-PPP Initiative, aiming on building next Generation Platform as a Service: be customizable, support acceleration and flexibility, enable transformation across the industry (operator, IoT/verticals and vendors).

Duration: June'17 – May'19 (24 months)

Project Mgmt: Bessem Sayadi, Nokia Bell-Labs

Technical Mgmt: John Thomson, OnAPP

Innov Mgmt: Michele Paolino, VOSYS

Connect to NGPaaS

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**Thank you.**

