



5G experimentation environment for 3rd
party media services



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Impacto del sector media
en el 5G y más allá



This project has received funding from the European Union's Horizon 2020 research
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Iquadrat R&D offers **innovative and customizable platforms** that integrate **cutting-edge telecommunications and networking technologies** for a wide portfolio of emerging applications

R&D Technological Targets



5G communications platform

- for novel vertical application testing
- intelligent protocols

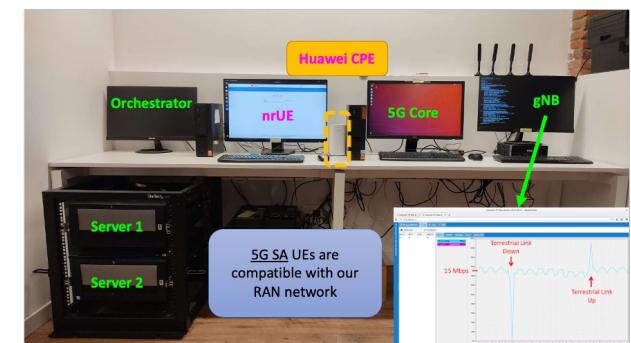


IoT platform

- Multi-sensor support
- Industrial IoT applications
- Energy management in buildings

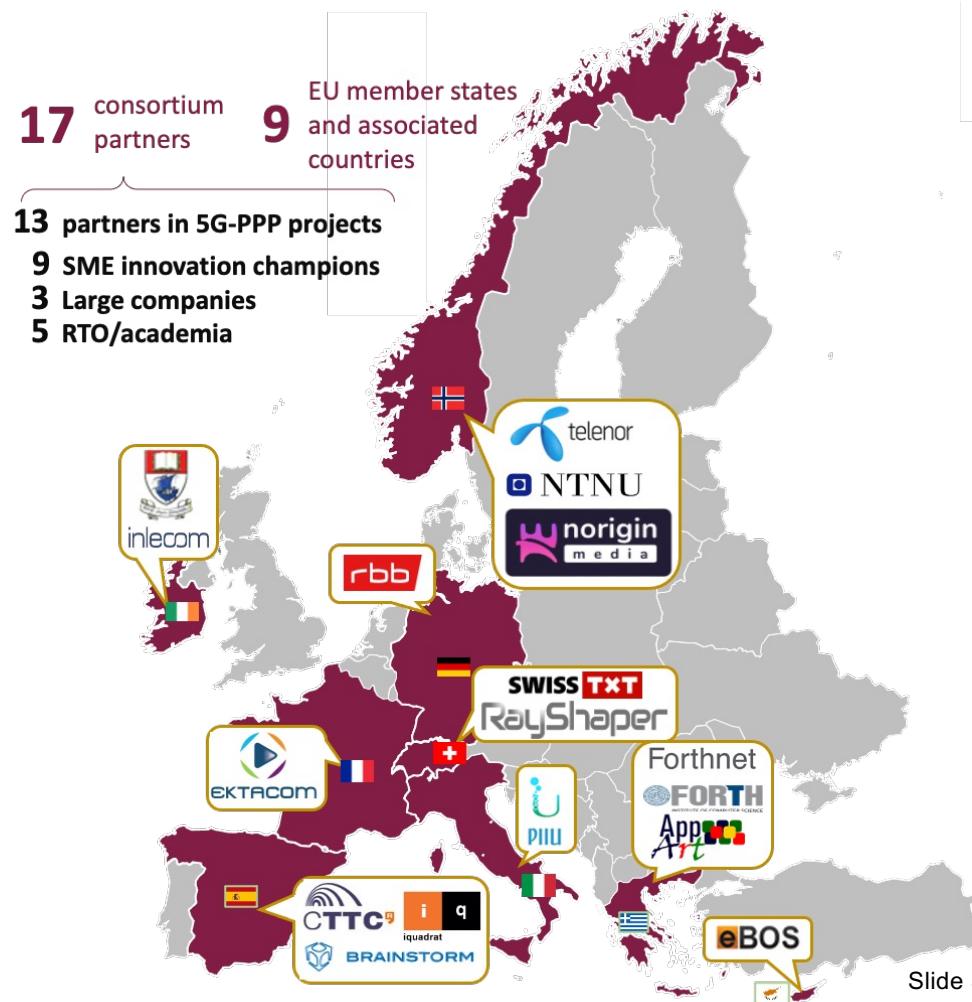
Potential Use Cases

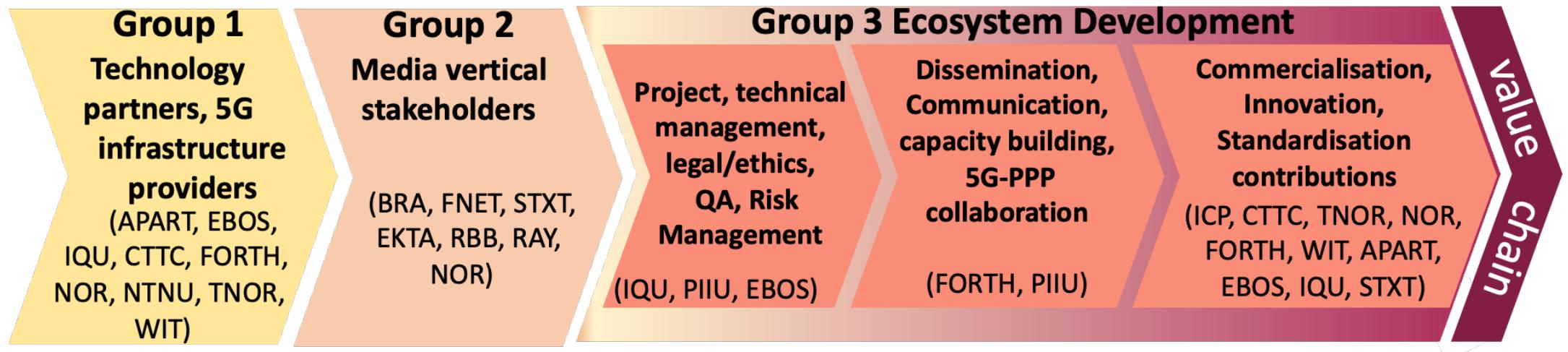
- ✓ Smart City & Buildings
- ✓ Smart Grid & Water Management
- ✓ Smart Mobility
- ✓ Industry 4.0
- ✓ Media and entertainment
- ✓ mHealth



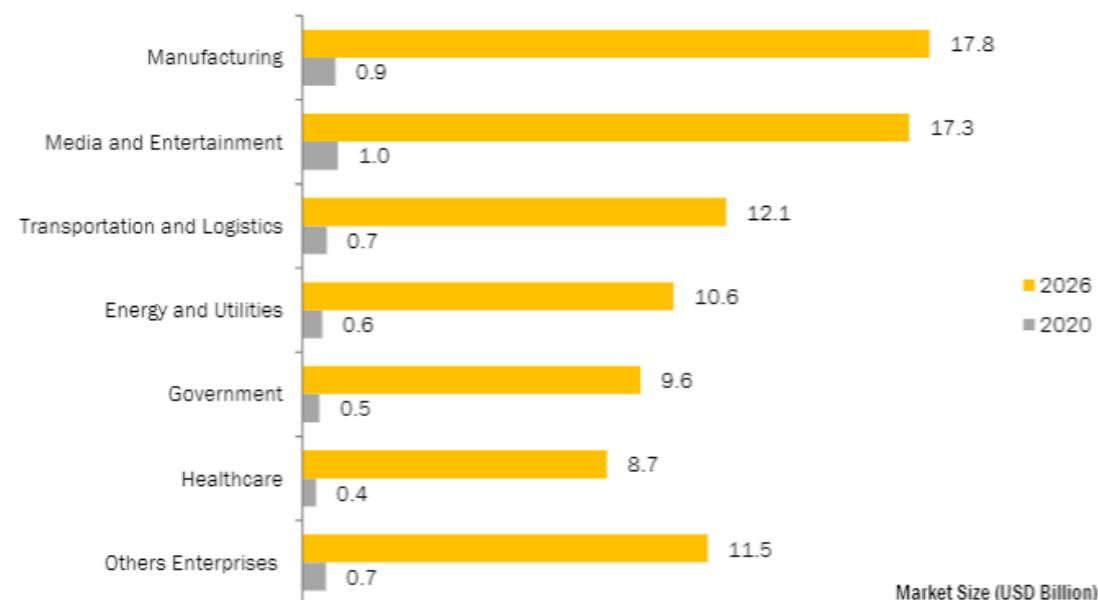
Vertical industries applications

- ✓ **Grant Agreement:** 101016714
- ✓ **Starting date:** 01/01/2021
- ✓ **Total budget:** € 7,494,838.75
- ✓ **EC funding:** €6,037,942.38
- ✓ **Total PMs:** 766
- ✓ **Project Coordinators:** Dr. K. Ramantas and Prof. Ch. Verikoukis
Iquadrat Informatica S.L.
- ✓ **URL:** www.5gmediahub.eu





The overall impact of 5G technology on the M&E vertical is expected to be one of the top ranked contributors to the 5G Enterprise Services Market.

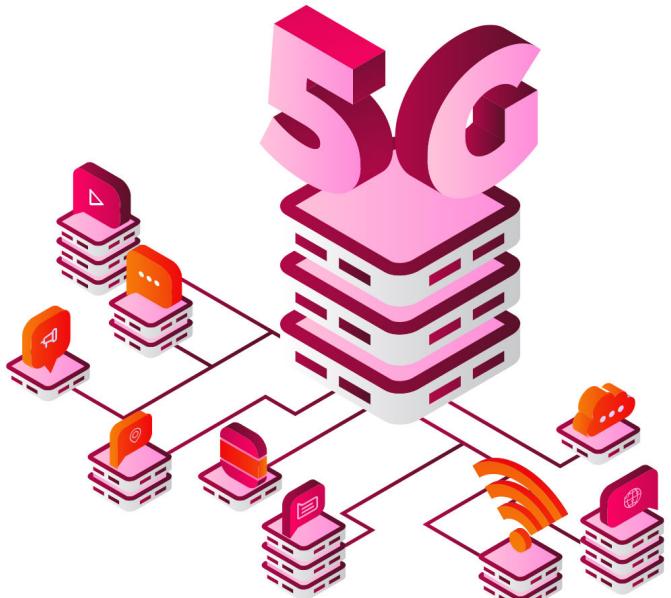


*Other Enterprises include retail, real estate, education, and sports

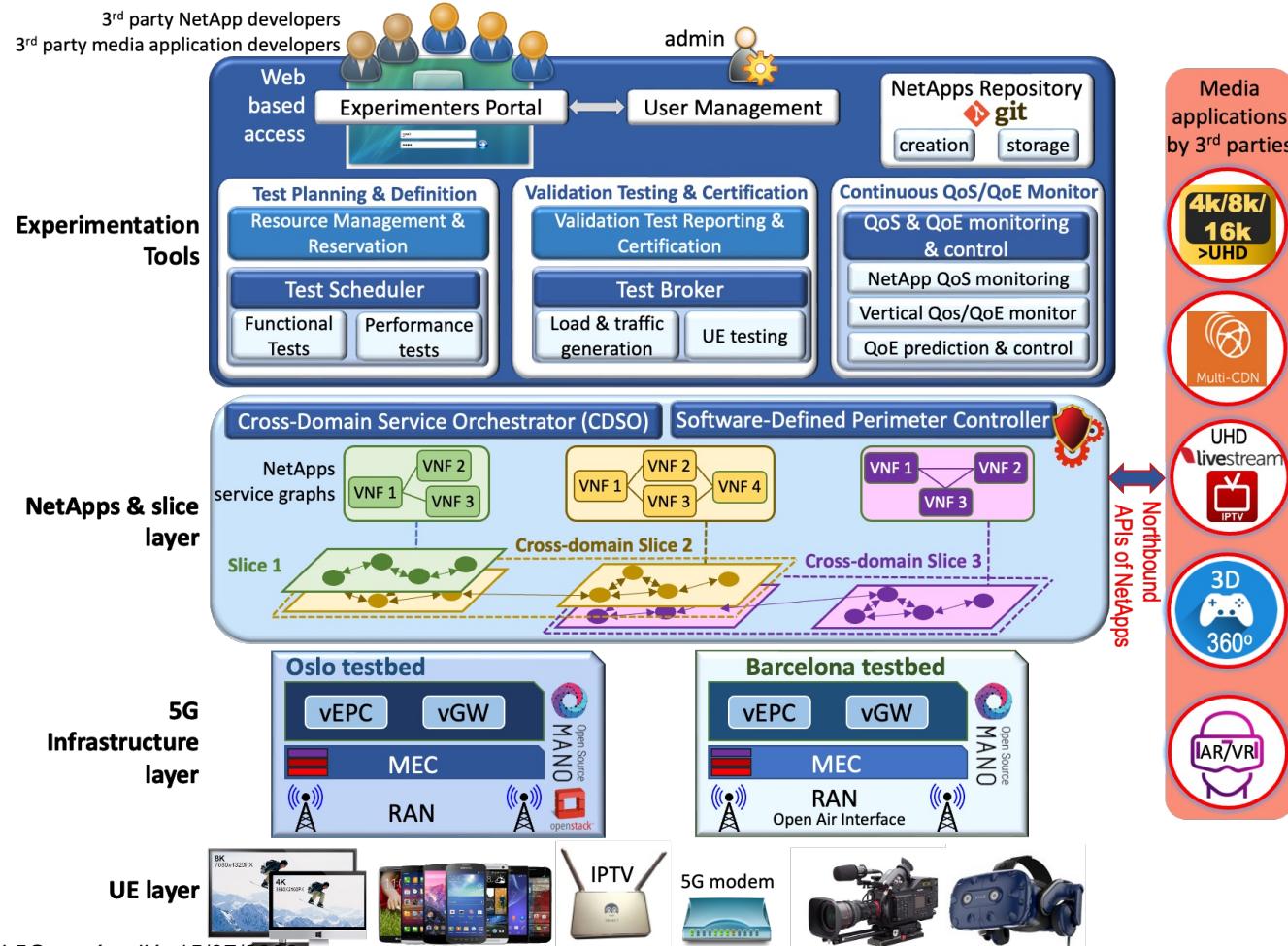
Source: Markets and Markets, 2021, 5G Services Market - Forecast To 2026



High-level abstraction layer between media applications and the 5G infrastructure. Allow experimenters to have a simplified but sufficient abstracted visibility of the infrastructure state for network-wide control and resource management.



- ✓ Make experimental 5G infrastructures accessible to SMEs in the Media & Entertainment domain
- ✓ Offer a set of NetApps implementing a PaaS layer
- ✓ Offer DevOps tools to setup and manage experiments via automated testing pipelines.
- ✓ Offer a web-based Portal which simplifies the process of service creation, validation and verification
- ✓ Perform 2 test cycles, in two federated testbeds



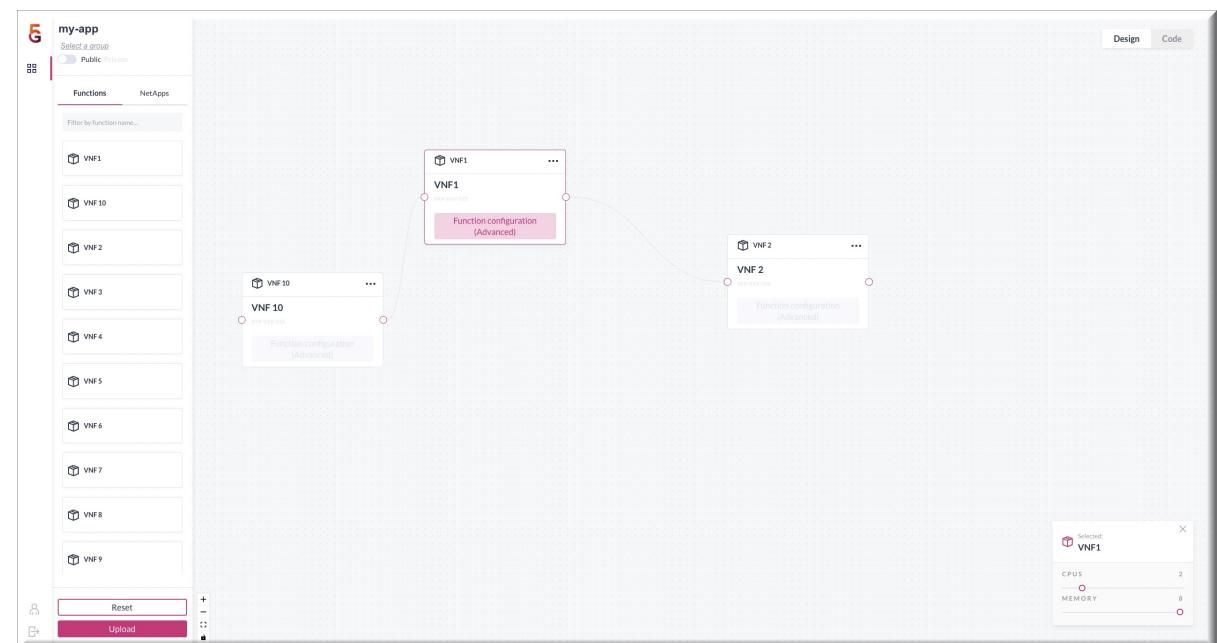
Service Catalogue

search

Service	Title	Bandwidth (Mbps)	Latency (ms)	
hackfest_basic-vnf-1.0.tar.gz	test-vnf	12	12	Update Delete Validate Onboard Instantiate Del. Inst. Del. NS Del. VNF
hackfest_basic-ns-1.0.tar.gz				
service1.nsd	service1	2	3	Update Delete Validate Onboard Instantiate Del. Inst. Del. NS Del. VNF
service2.nsd	service2	6	6	Update Delete Validate Onboard Instantiate Del. Inst. Del. NS Del. VNF
service3.nsd	service3	13	2	Update Delete Validate Onboard Instantiate Del. Inst. Del. NS Del. VNF

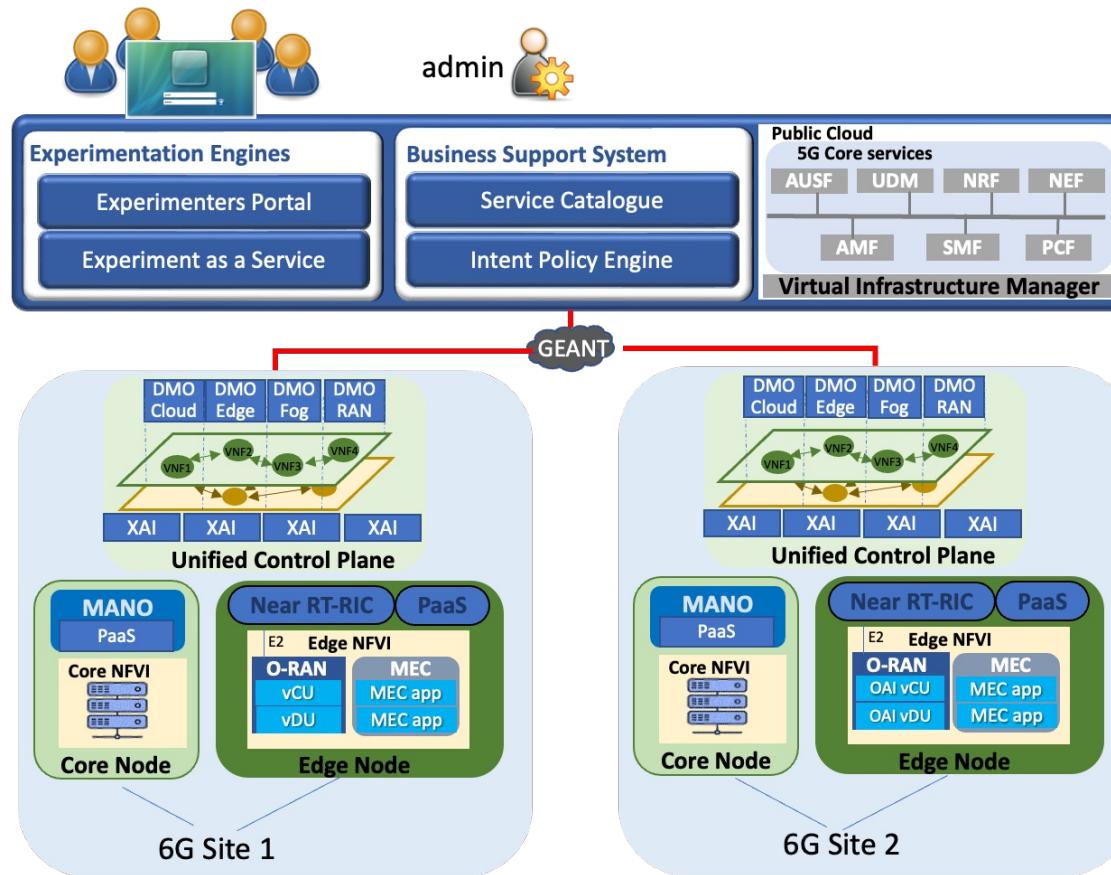
Showing page 1 of 2

Add new service



- **Use case 1** – Immersive AR, VR and XR applications
 - Scenario 1.1 – Immersive 360° VR media experiences
 - Scenario 1.2 – Interactive consumption of 8k and VR media content
- **Use case 2** – Smart media production
 - Scenario 2.1 – High quality UGC production services
 - Scenario 2.2 – Professional live production
- **Use case 3** – Smart media content distribution
 - Scenario 3.1 – Dynamic multi-CDN selection for 8k IPTV
 - Scenario 3.2 – Smart city co-creation







Thank you for your attention!



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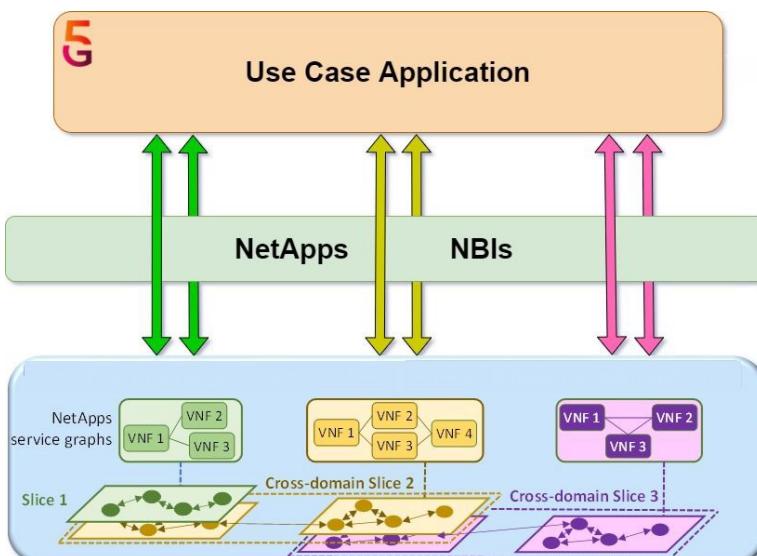
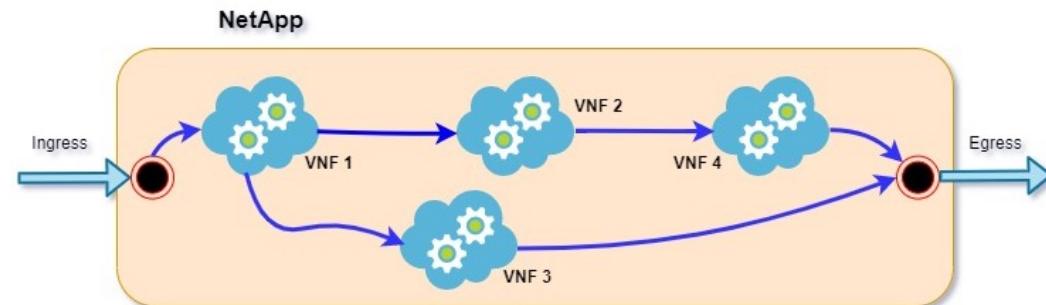
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- NetApps: Chains of VNFs, offering reusable functionality (e.g., video streaming, networking, security, resource management and load balancing functions)



- NetApps are instantiated within Network Slice Subnet Instances (in line with 3GPP 5G management standards)
- NBIs: connecting OTT Apps to NetApps via ingress / egress points to the VNF chain (e.g., video streaming APIs)