



Satellite and Terrestrial  
Network for 5G

## Project Overview

Georgia Poziopoulou, Avanti Communications

EuCNC 2017

Oulu – 15/06/2017



# Project Objectives



## ❑ Overall objectives

- Contributing to the 5GPPP use case “**Broadband access everywhere**”, SaT5G will foster the implementation of solutions enabling the “plug and play” integration of satcom components into 5G networks.
- To this aim, SaT5G will **research and validate the key technology enablers through validation and demonstration in live 5G testbeds.**
- SaT5G impact is for the satellite industry to join the European initiative in the deployment of a competitive and ubiquitous 5G network globally.

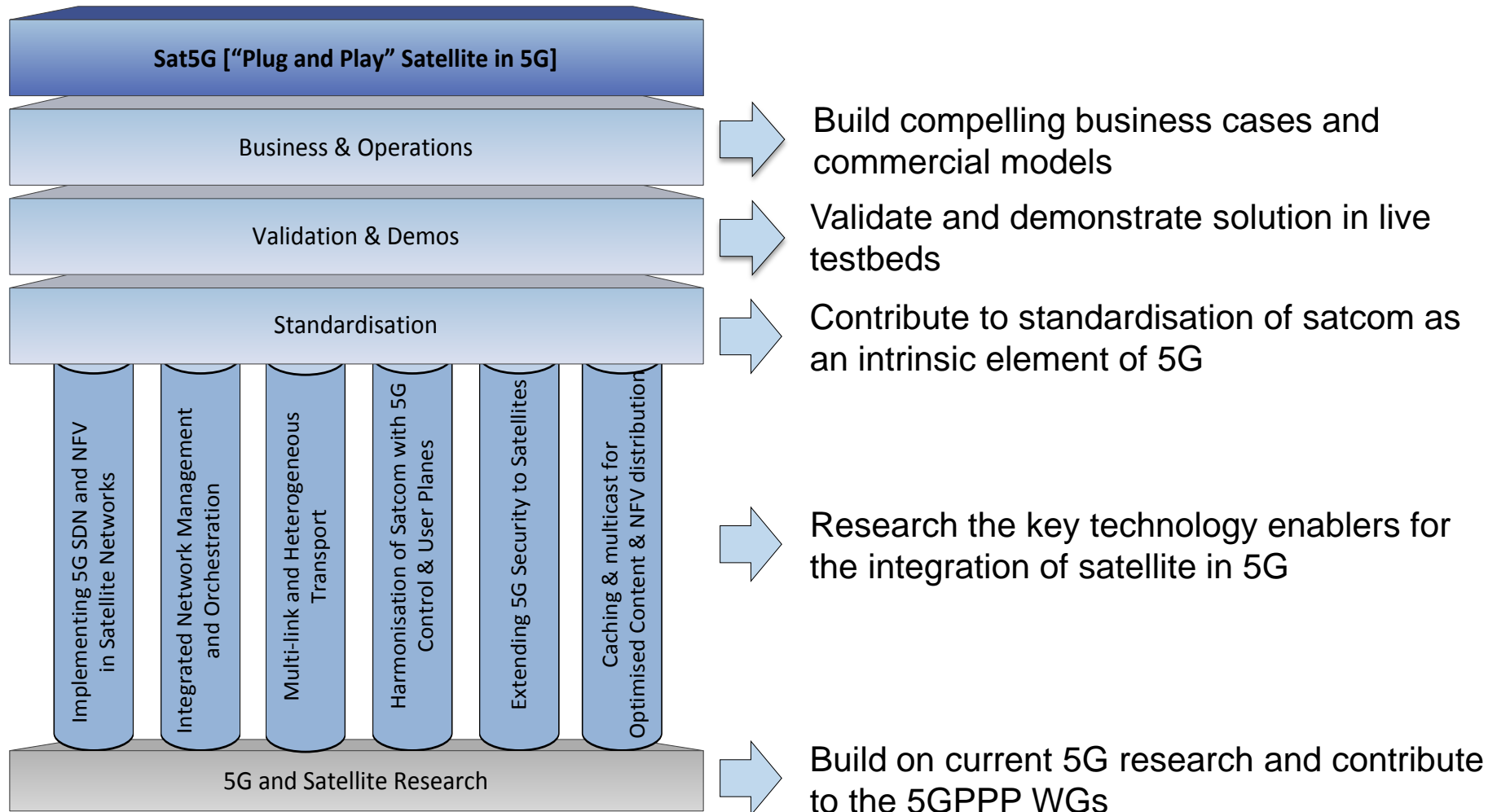
## ❑ Schedule

- 30 months duration

## ❑ Consortium

- AVA project coordination, TAS technical coordination
- 16 partners (satellite/terrestrial operators, vendors, universities and research centres)

# SaT5G Concept



# Use Cases & Research Pillars



**Use Case 1:** Edge delivery & offload for multimedia content and NFV software



**RP VI: Caching and Multicast for Content/VNF distribution to the edge over satcom**

**Use Case 2:** 5G Mobile backhaul



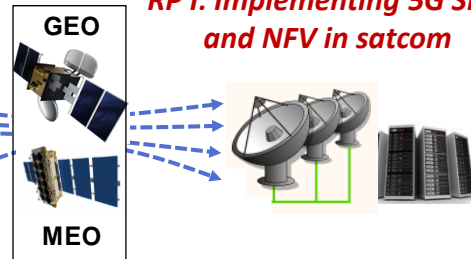
**Use Case 3:** 5G Fixed backhaul



**Use Case 4:** 5G Small cell backhaul



**RP III: Multi Link and Heterogeneous transport**



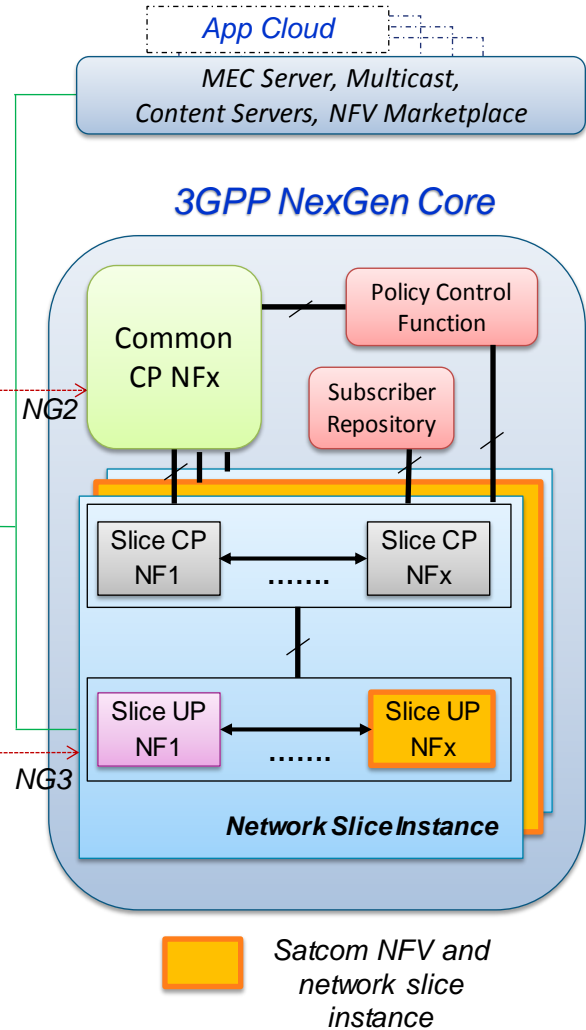
**RP I: Implementing 5G SDN and NFV in satcom**

**RP IV: Common 5G-satcom Control Plane/User Plane Functions**

Terrestrial Transport Link



**RP V: 5G Security extensions to satcom**



**RP II: Integrated SaT5G Network Management and Orchestration**



- ❑ Validation of every research pillar output in the lab
- ❑ Demonstration of the SaT5G use cases in 5G live testbeds integrating:
  - Virtualised satellite terminal functions;
  - Management and orchestration functionality;
  - Multilink functionality;
  - An integrated Mobile Edge Computing function with caching and multicast.
- ❑ White paper with the reference SaT5G architecture
- ❑ Targeted standardisation contributions of the key technology enablers in 3GPP and ETSI
- ❑ Develop the commercial value propositions for the SaT5G use cases



**Thank you for your attention**

