

Satellite and 5GPPP Call 3

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5G PPP Phase 3 Stakeholders Infoday
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Avanti's Vision for Satellite in 5G

Disruptive Demands



Pervasive
UHD, VR, AR



Mission Critical
Services



Underserved
Populations



Communicating
Devices



On the Move

Satellite Value Propositions

Ubiquity

Mobility

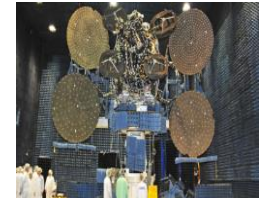
Resilience

Multicast

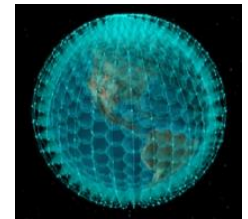
Converged Sat-Terrestrial 5G Services Open New Markets & Extends Existing Ones

for mission critical services demanding resilience, coverage and persistence
on mobile platforms including cars, trains, ships and planes
by ubiquitously connecting massive machine networks
by network offloading, resilience and content delivery to the edge
in rural, remote and developing world regions

Satellite Solutions



VHTS
Satellites



Global Coverage



Hybrid
Networks

What is Avanti doing relevant to 5G?

Innovation with MNOs – *Carrier Grade Backhaul for Reach & Resilience*



Innovative through Partnerships – *R&D for technology & standards building blocks*



FP7 Project Co-Ordinator



H2020 Project Partner



ESA Project Prime



H2020 Project Partner



Satellite and Terrestrial Network for 5G

H2020 Phase 2 5G Project Co-Ordinator



Active Contributor
NT Items RAN & SA



Satcom Experts WG



ESA 5G Satellite Initiative Task Force



5G in the Space Growth Partnership

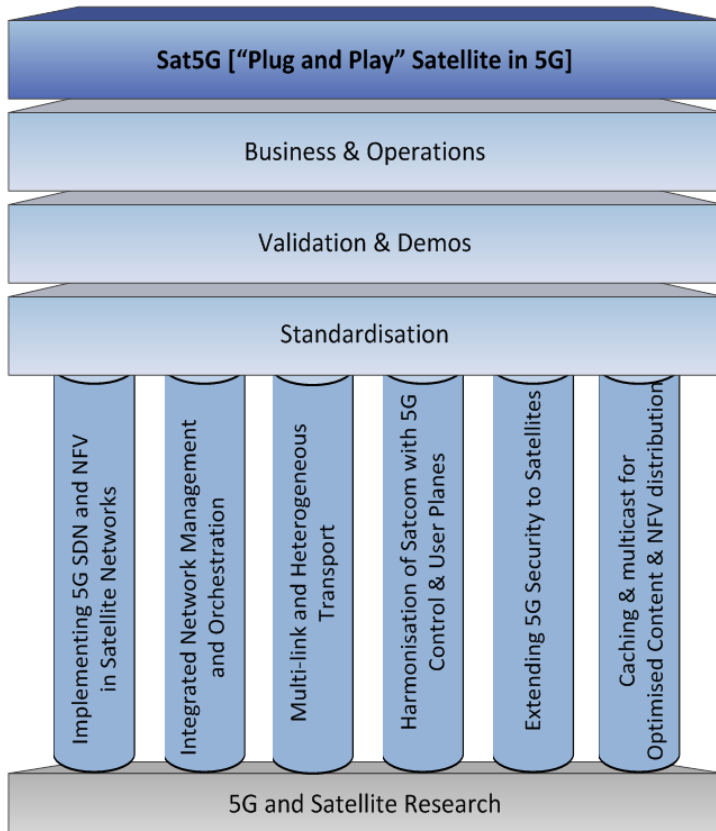


Trials & Vision WGs,
Technical Board

*active in
other SDOs
such as ETSI,
ITU and CEPT

Building “Plug’n’Play” Satellite in 5G

Avanti led H2020 Phase 2 (ICT 2017) Project to foster implementation of solutions enabling the “plug and play” integration of satcom into 5G networks



- Caching & multicast for Optimised Content & NFV distribution
 - Implementing 5G SDN and NFV in satellite networks
 - Multi-link and heterogeneous transport
 - Integrated Network Management and Orchestration
 - Harmonisation of Satcom with 5G Control & User Planes
 - Extending 5G security to satellites
-
- 3 testbeds across Europe
 - 5GIC in University of Surrey
 - Zodiac Inflight Innovations in Munich
 - University of Oulu in Finland

Satellite and 5GPPP Call 3

- Avanti wishes to see EU 5G platforms and trials with integral satellite elements
- Avanti would particularly like to engage with consortia addressing
 - ICT-17-2018: 5G End-to-End Facility
 - ICT-18-2018: 5G for Cooperative, Connected and Automated Mobility
 - ICT-19-2019: Advanced 5G validation trials across multiple vertical industries
- Avanti will seek to
 - utilise its pan-European satellite coverage and network service platform
 - leverage innovation realised through collaborative research, including on SaT5G
 - involve other satellite industry participants and initiatives
 - support in engaging with SaT5G partners including those offering plug and play satellite components
- Please come and discuss!
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