Satellite in Support of Verticals

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SES

Leveraging Satellite's Strengths to Accelerate Deployment

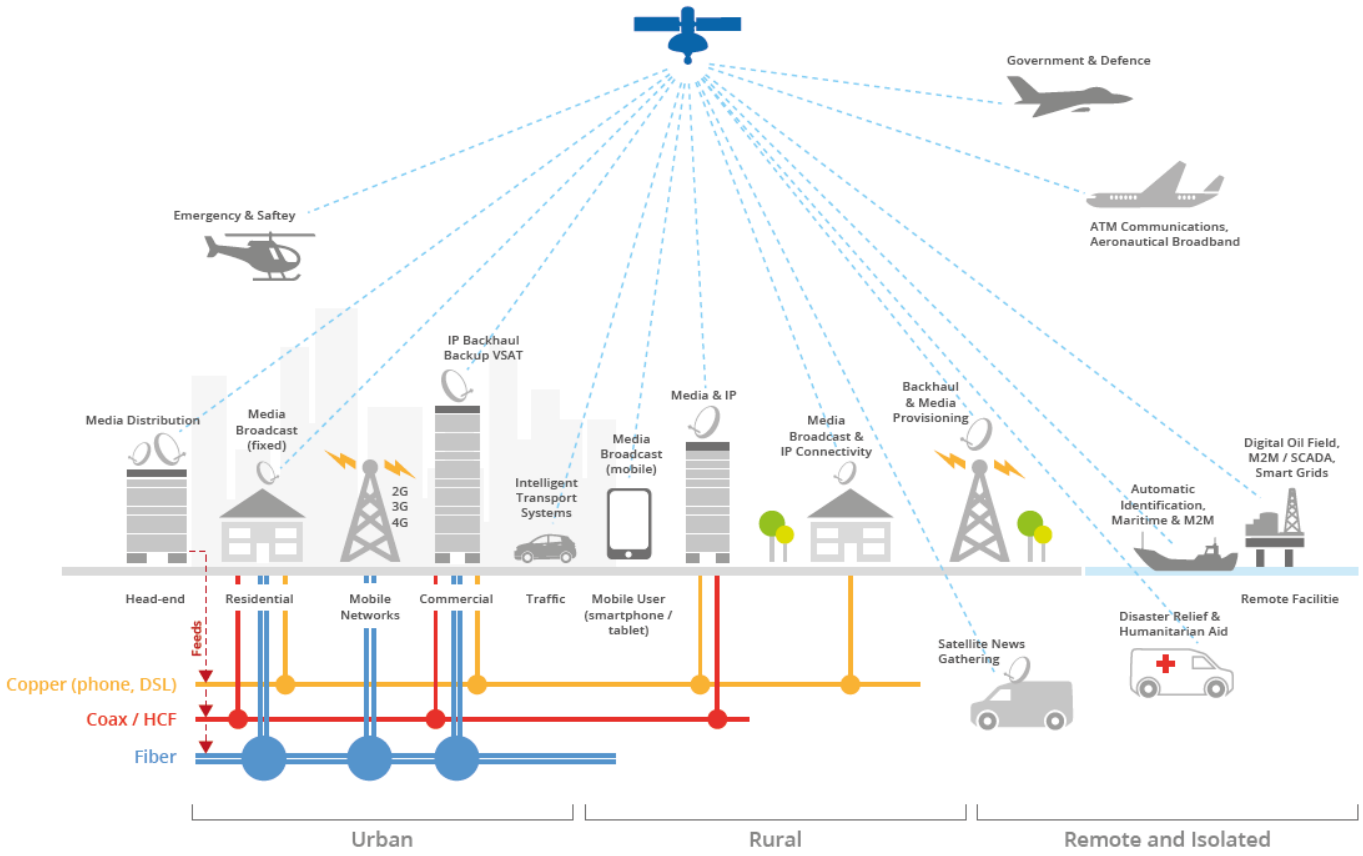
KEY SATELLITE FEATURES

Ubiquity

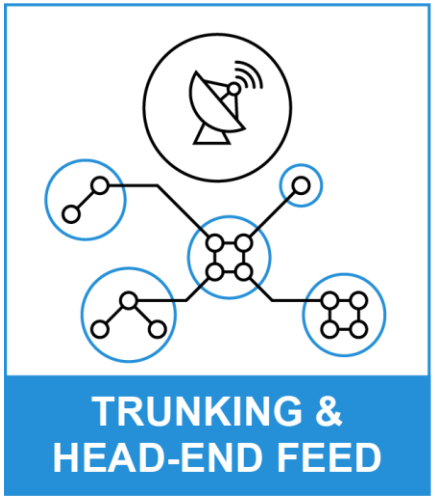
Mobility

Broadcast

Resilience

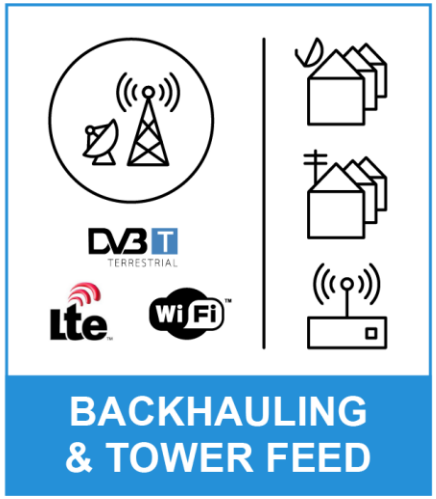


Role of the Satellite in the 5G Ecosystem



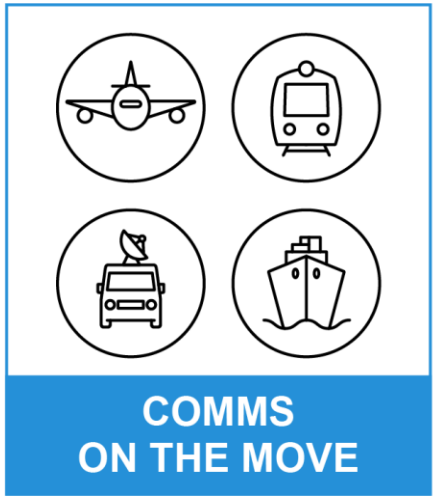
TRUNKING & HEAD-END FEED

Satellites provide a very high speed direct connectivity option to remote / hard-to-reach locations



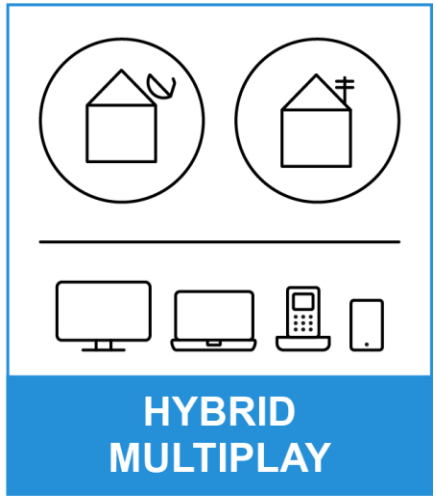
BACKHAULING & TOWER FEED

Satellites provide a high speed connectivity (incl. multicast content) to wireless towers, access points and the cloud



COMMS ON THE MOVE

Satellites provide a direct and/or complementary connection for users on the move (e.g. on planes, trains, automobiles and ships)

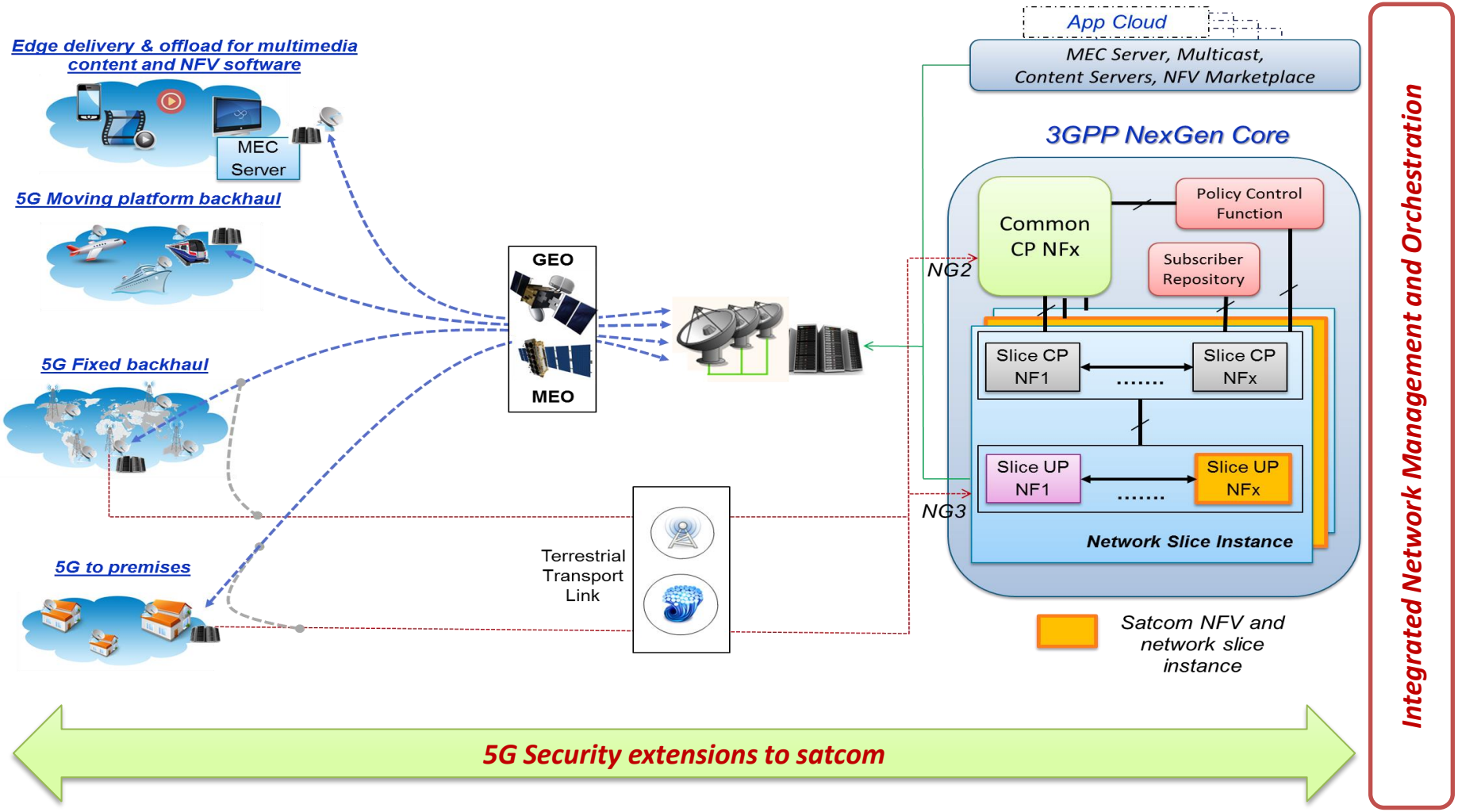


HYBRID MULTIPLAY

Satellites deliver content complementing terrestrial broadband (as well as direct broadband connectivity in some cases)

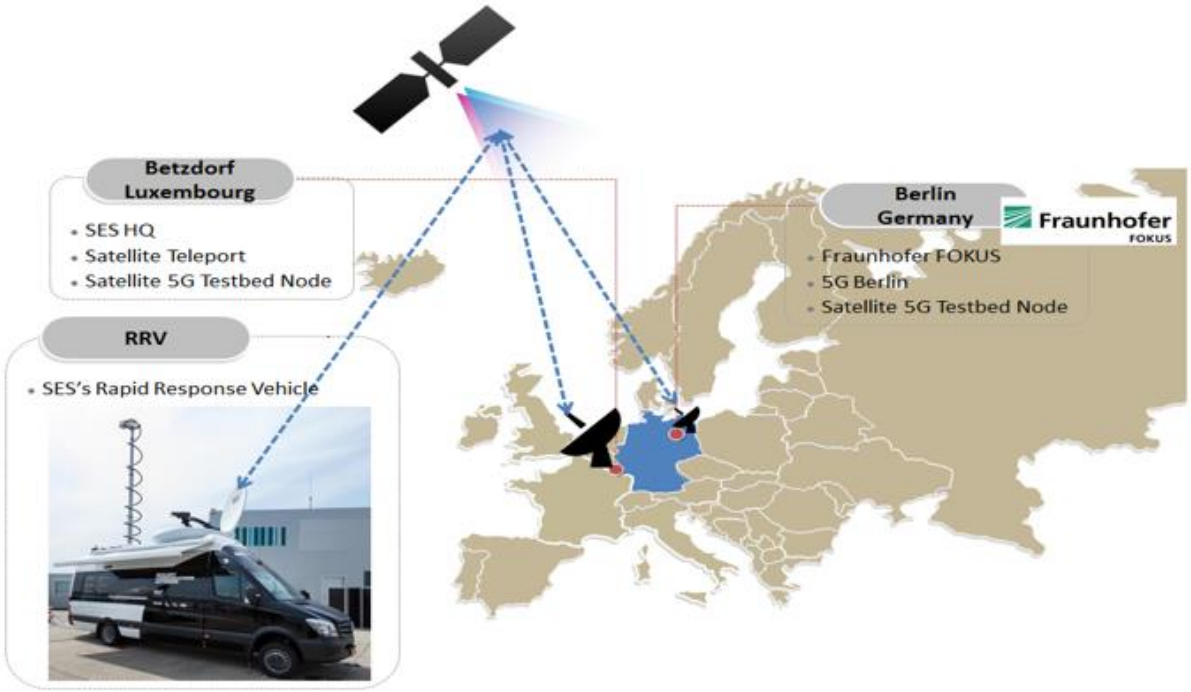
Satellite's ubiquitous availability helps accelerate global 5G deployment on the ground, at sea and in the air

SaT5G - Built and Validated the 5G Satcom Platform



5GVINNI - Satellite capacity in support of end-to-end facility

- Broad industrial EU consortium comprising 23 partners, incl. major MNOs, mobile industry vendors and satellite operators (Telenor, SES)
- Horizon 2020 5G-PPP Phase 3 funded project to build an open large scale 5G End-to-end facility that:
  - Can demonstrate that key 5G network KPIs can be met
  - Can be validated, accessed and used by vertical industries to test use cases and validate 5G KPIs.



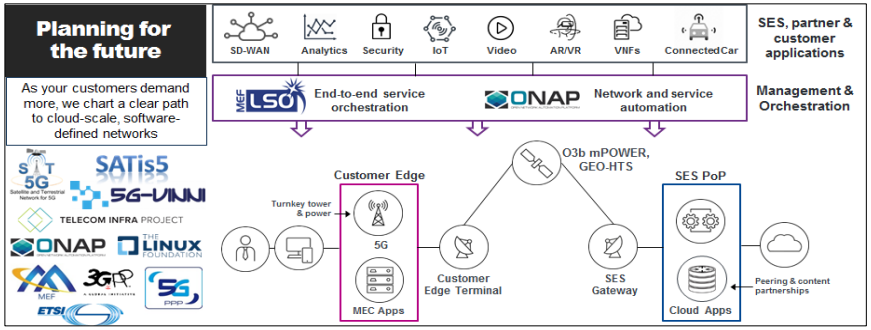
Building the Satellite Infrastructure to Support 5G Roll-out

70+

satellites **(incl. 20 MEO)** covering

99%

of the globe and world population



Coverage **+Capabilities** **+Capacity**

2019 2020 2021 2022+

Massive investments in satellite and ground infrastructure to support new capabilities and requirements

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/