

Wireless World Research Forum HUDDLE 2026 - Istanbul

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Eutelsat's innovation in satellite communications

The road to 6G

- From telephony to TV broadcast, to connectivity, to broadband
- From fixed services to mobility
- From raw capacity to managed services
- From regional to global service offers
- From GEO to LEO
- From satcom standards (DVB) to 3GPP
- ... and more.

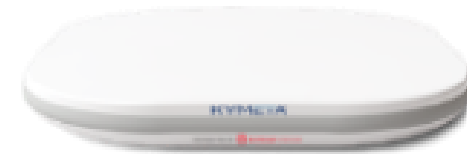
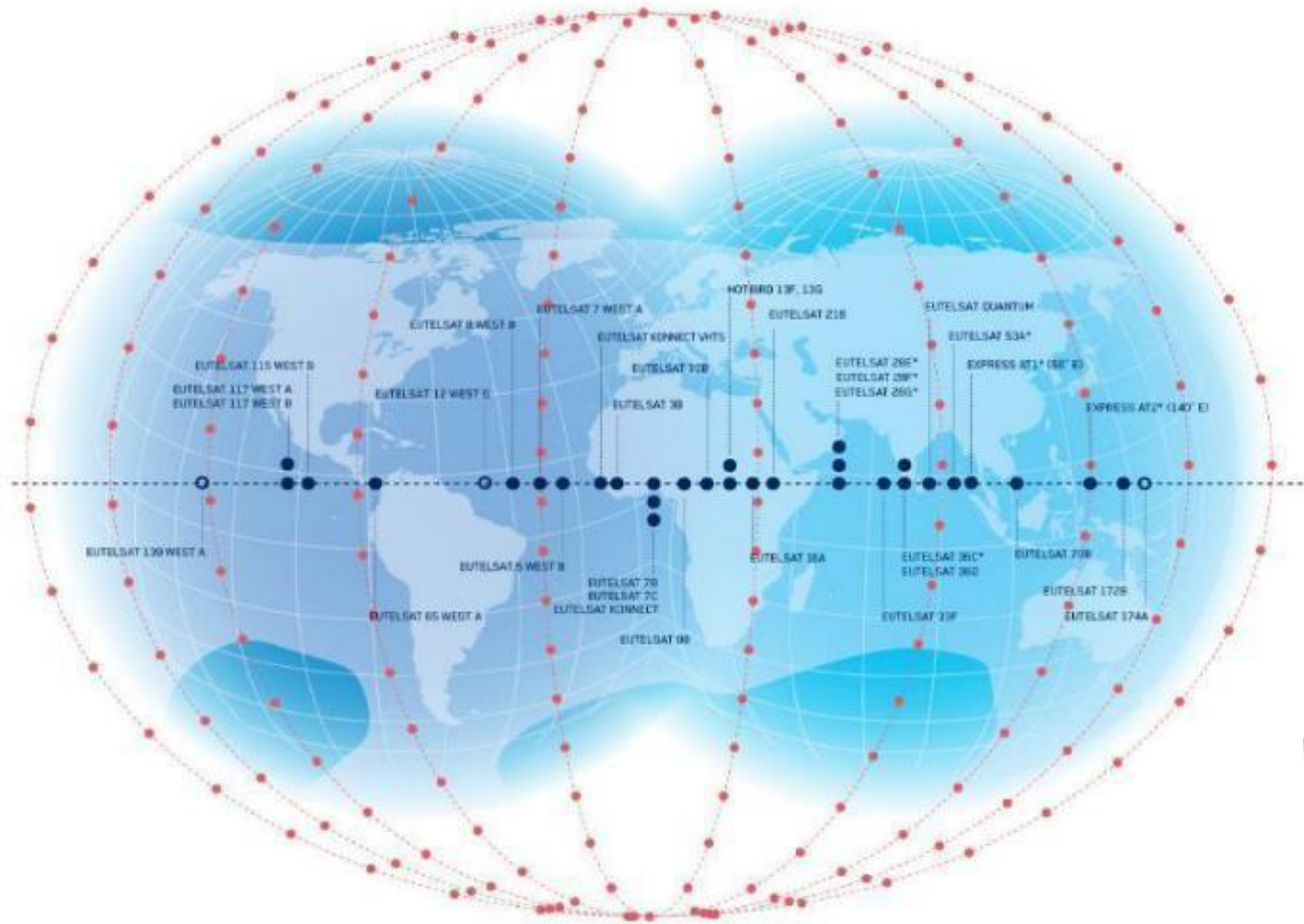


EUTELSAT – GEO/LEO global coverage for broadband connectivity in Ku/Ka bands

GEO fleet and LEO constellation in 2025

34 * GEO

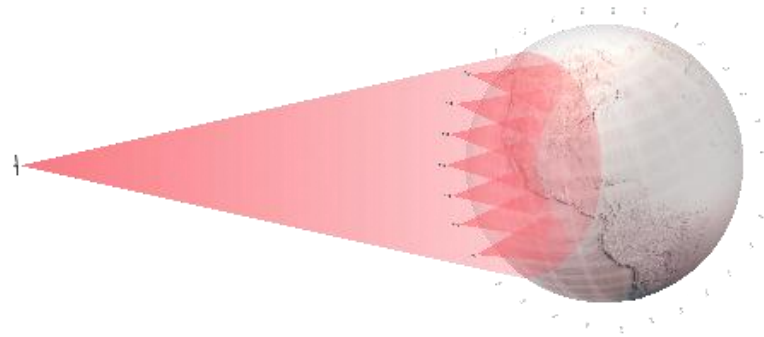
—●— More than 600 * LEO



A unique GEO & LEO combination to maximise network reach and performance



GEO satellites



GEO orbit (35,000 km)
> 600-700ms latency

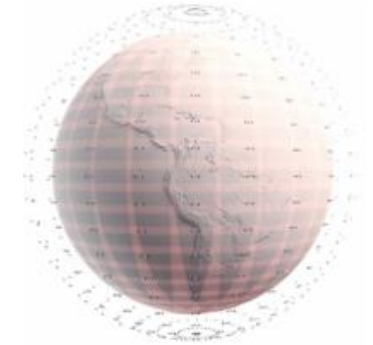
High throughput
where needed

Network density

GEO-led applications:

Video broadcasting, satellite newsgathering, broadband services data connectivity, connecting airplanes and ships, enabling mission-critical government and NGO communications etc.

LEO constellation



LEO orbit (< 2000 km)
~100ms latency

Ubiquitous connectivity

High speed

LEO-led applications:

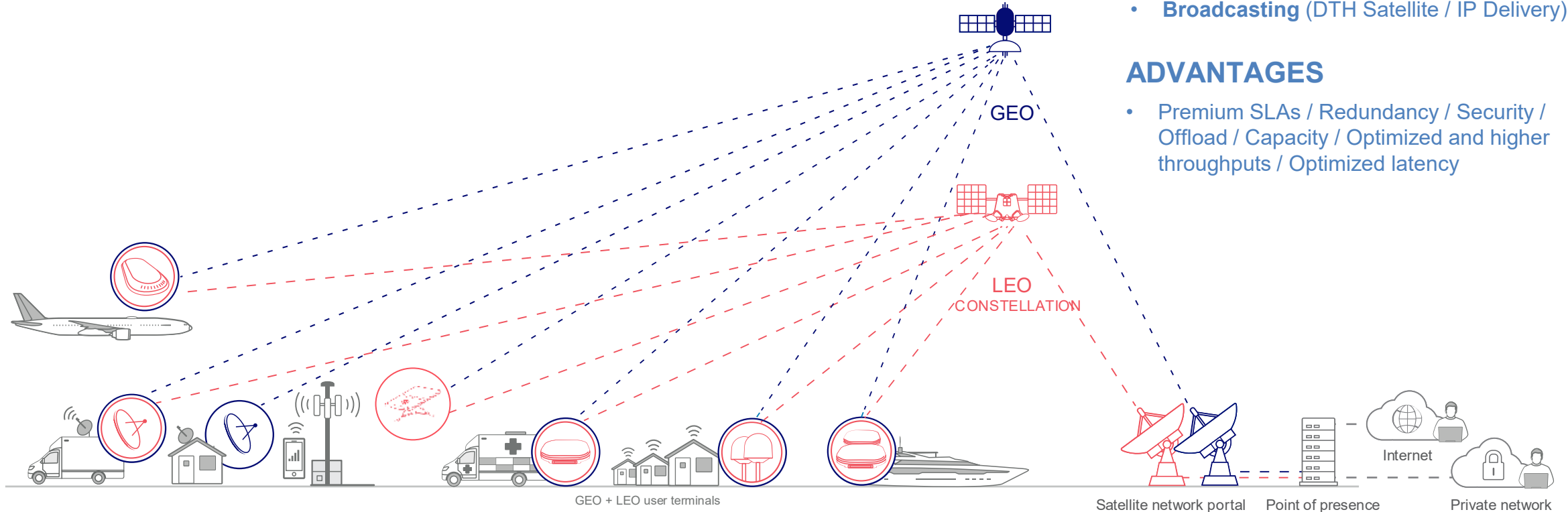
Low latency global internet access, maritime and aviation connectivity, IoT, Smart agriculture and farming, vehicle and rail connectivity

... designed for Land, Sea and Air **leveraging** from local/global partners

CAPABILITIES

GEO - Network density and high throughput

LEO - Highest speed and low latency everywhere



APPLICATIONS – FIXED & MOBILITY

- **Telcos** (Backhaul / Community Wi-Fi / Private networks)
- **Enterprise** (WAN services)
- **Maritime** (Ops / Welfare / Entertainment)
- **Aviation** (Ops / Welfare / Entertainment)
- **Government** (Defence / Civil – First responders)
- **Broadcasting** (DTH Satellite / IP Delivery)

ADVANTAGES

- Premium SLAs / Redundancy / Security / Offload / Capacity / Optimized and higher throughputs / Optimized latency

Driving high network performance and connectivity supply



Connectivity

- GEO and LEO wholesale capacity provider
- B2B model - global & local partners
- Enterprise-grade SLAs with CIRs



Video

- Broadcast and distribution services
- More than 6,400 TV channels, 2200 HDTV channels and 1100 radio stations
- Market expertise in more than 100 countries



Ground operations

- 6 GEO Teleports
- 2 Operations centres: London, Virginia.
- 1 global Gateway network with 42+ sites.



Support

- World class global technology partners and expertises.
- Customer technical assistance centre 24/7
- Streamlined operational support tools and services

The most comprehensive range of UTs in our connectivity markets



Telecoms



Enterprise



Utilities



Maritime



Government



Aviation

From manufacturers like Intellian, Kymeta, Hughes, Inster, GoGo, Stellar Blu (and more)

EUTELSAT activities on NTN



European Protected Waveform



NTN-OneWeb trials



Airbus UpNext SpaceRAN demonstrator
5G connectivity beyond limits.



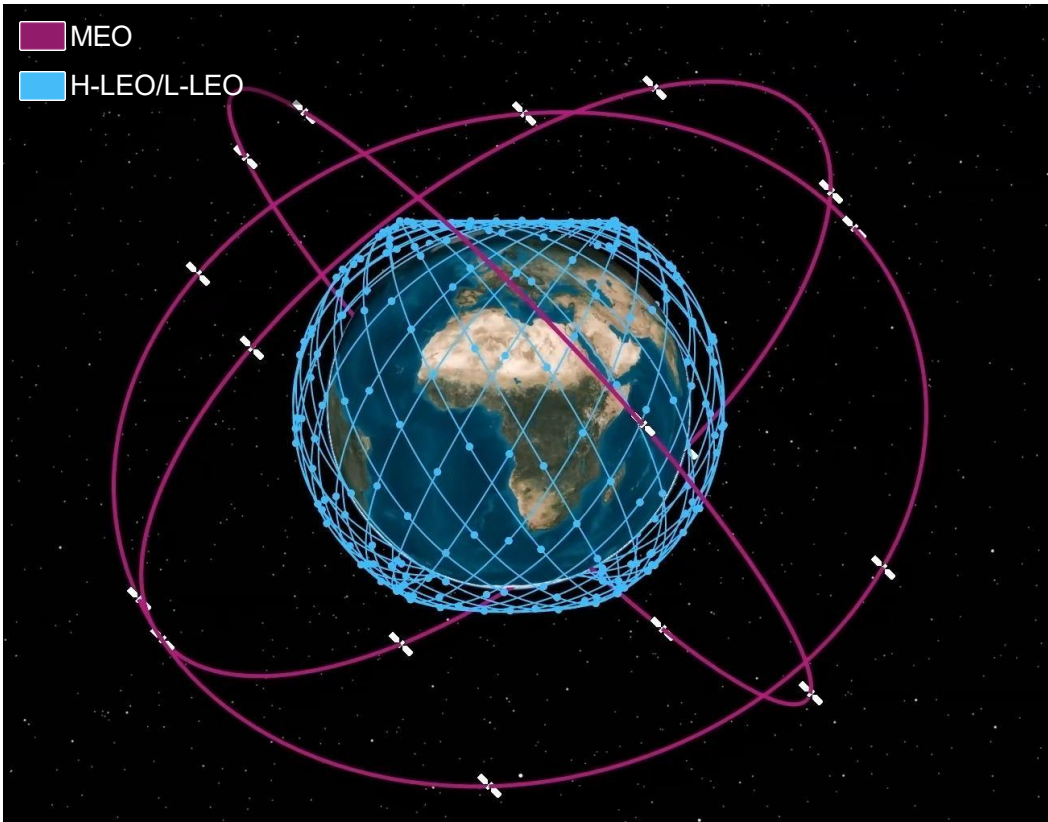
IRIS² - a 5G-based European sovereign constellation

 eutelsat

 ses

hispasat

SpaceRISE



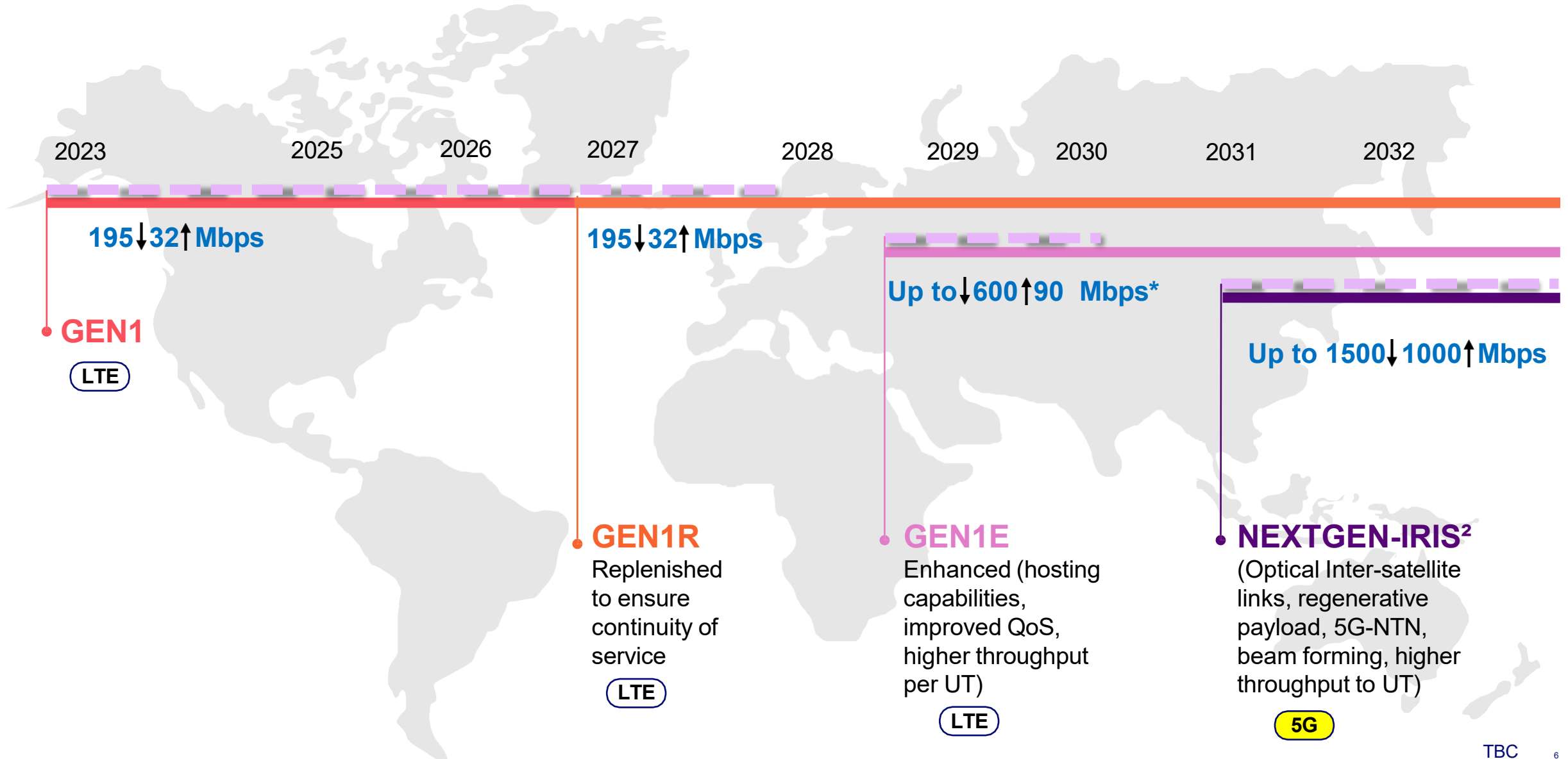
Space Segment

- **330** satellites in **High-LEO** (1200 km)
- **18** satellites in **MEO** (8000 km)
- **TBC** satellites in **Low-LEO** (≤ 750 km)

Connectivity

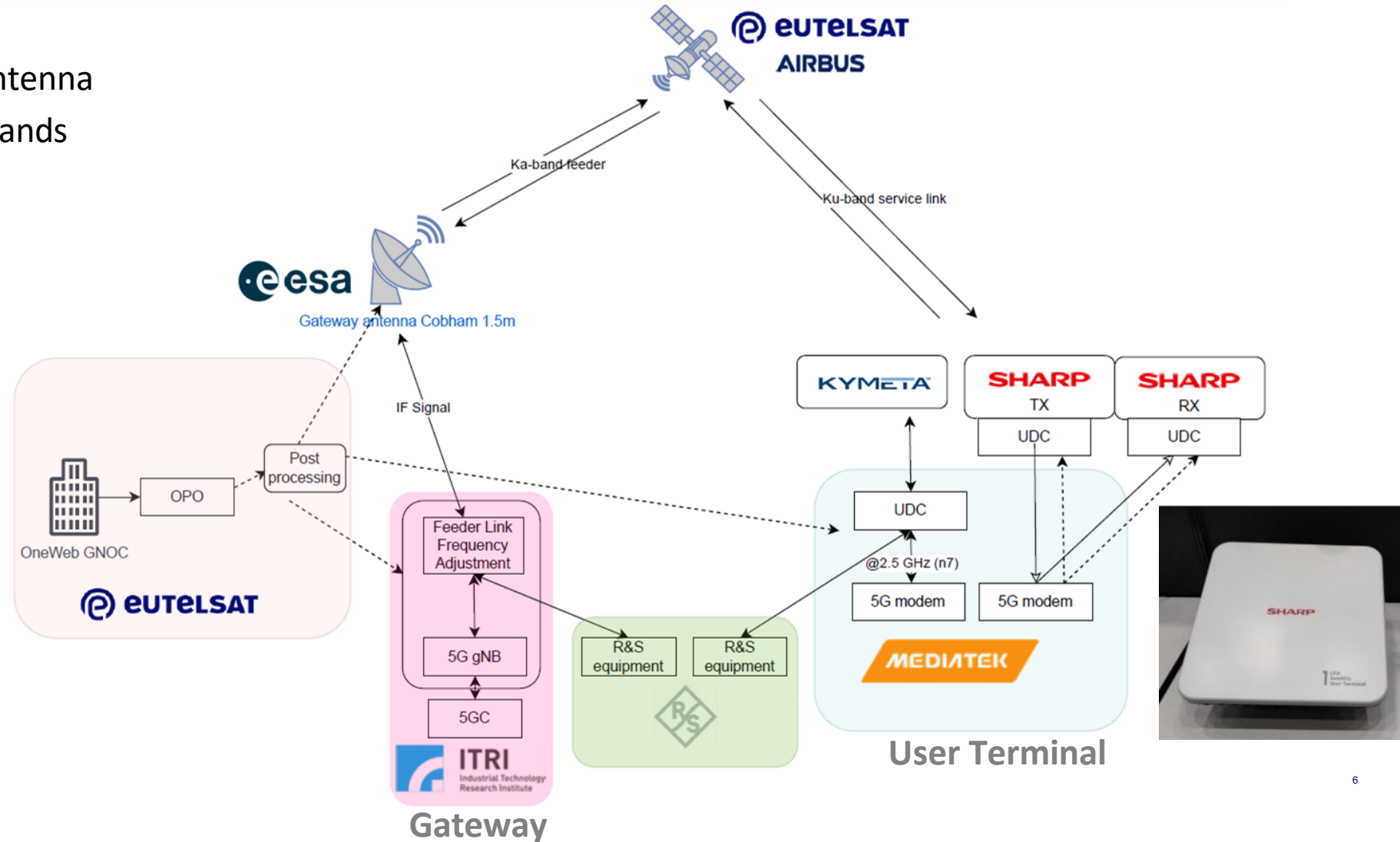
- **5G NR NTN air interface** and **5G Core Network**
- Use of **optical inter-satellite links**
- Support for **regenerative** and **transparent** modes

Eutelsat LEO roadmap: evolution of QoS, aiming at 5G



5G NR-NTN OTA Demonstration over ONEWEB satellites

- Prototype Chipset Rel19
- Commercial gNB and User Antenna
- OneWeb satellites in Ka/Ku bands



**AIRBUS**

ITRI
Industrial Technology
Research Institute



SHARP



Unterstützen Sie U

Alle Bereiche

COMMUNITY

24.02.2025

TARIFE & HANDYS

RATGEBER

MELDUNGEN



über All

HOME » MELDUNGEN » INTERNET » 5G » "ÜBERALL"
über All

Nutzung mit Smartphones: Eutelsat testet 5G über Satellit

Eutelsat, MediaTek und Airbus haben sich zusammengetan, um 5G über LEO-Satelliten zu testen.

von Weidner

Von Markus Weidner

 Version en ligne



5G depuis l'espace, Eutelsat vient concurrencer Starlink

ink

World ▾ Business ▾ Markets ▾ Sustainability ▾ Legal ▾

Eutelsat succeeds in world's first 5G network trial from space with Airbus, MediaTek

and CMT+1 · Updated a day ago

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Eutelsat hails pioneering 5G test over LEO



Newsticker

Security

IT & Tech

Developer

KI

Entertainment

heise online > Raumfahrt > Satellit > Eutelsat testet erfolgreich 5G via Satellit mit Smartphones

Eutelsat testet erfolgreich 5G via Satellit mit Smartphones

Eutelsat hat nach eigenen Angaben den weltweit ersten gelungenen Probelauf einer 5G-Mobilfunk-Verbindung per Satellit durchgeführt und Musks Starlink überholt.

Etelsat, MediaTek and A
announce world's first
terrestrial network co
leveraging OneWeb I






- Eutelsat becomes the first satellite air interface working on a C/
- Paving the way for deployment between terrestrial and
- Placing Eutelsat at the heart of the future IRIS²



25 février 2025 à 20:54

Eutelsat ongoing and future initiatives towards 5G/6G

Timeframe	Activity	Key Focus
2022+	3GPP Standardization	5G/6G-NTN architectures, features, interoperability
2025–2030	Next-Gen/IRIS ² Constellation Design & Development	5G-NTN integration, regenerative payloads, resource optimization
2025–2027	OneWeb Gen1 5G-NTN Trials	Protocol validation with MediaTek, ITRI, Sharp, Airbus, ESA – in Europe and Japan
2027–2028	5G-NTN Trials on Regenerative Satellite	<i>Airbus UpNext SpaceRAN</i> project
2026–2029	Beyond-5G / 6G Research	Long-term innovations, 6G-NTN ² European project

Airbus UpNext SpaceRAN demonstrator



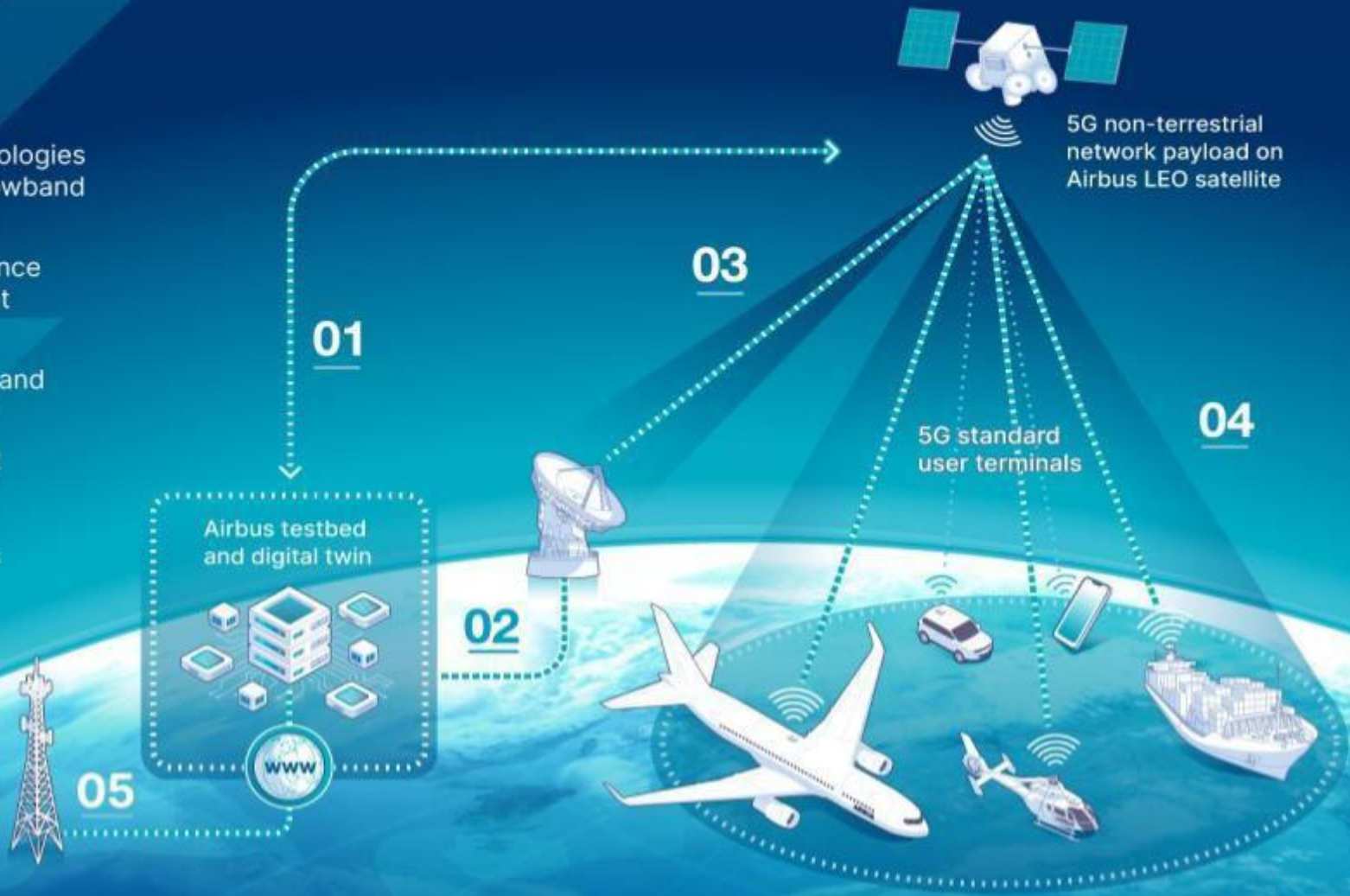
5G connectivity beyond limits.

Ambition

Explore

- > 5G non-terrestrial technologies for broadband and narrowband applications
- > seamless high performance connectivity to all market segments
- > integration of terrestrial and non-terrestrial networks

To foster the development of global, standard and interoperable solutions enabling sovereign access to connectivity.



- 01** Software defined payload configuration
- 02** Ground segment configuration
- 03** Feeder link connectivity
- 04** User Link connectivity
- 05** Terrestrial mobile and Internet connectivity

NTN: The road to 6G Recommendations

- NTN in 6G from day one
- Evolution, not revolution
- Interoperability TN-NTN and NTN-NTN
- Improved coverage (link budget)
- Resiliency (GNSS-free, jamming resistance)
- Better efficiency
- Sovereignty

Thanks!

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