

From 5G to 6G

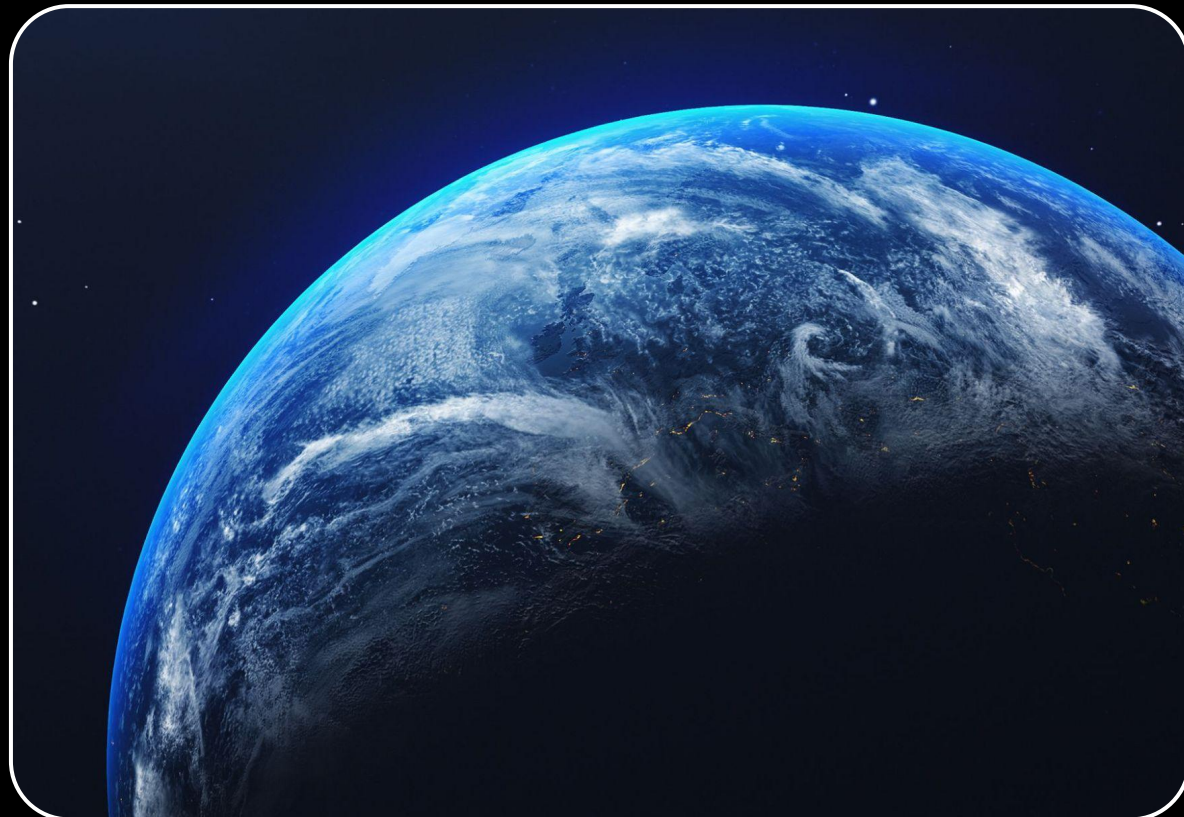
The full integration of NTN as a native component.

www.sateliot.com

SATELIOT

The 80% problem.

≈ 80% of Earth's surface has no reliable terrestrial cellular coverage.



THE SHIFT

For decades, this gap was the natural limit of what a mobile network could do.

In the last three years, the industry has decided it isn't, and the work to close that gap is happening inside the 3GPP standard.

5G is now a space-terrestrial standard

The three releases.

2022

2024

2026

Release 17

NTN enters the standard.

Satellite links specified as part of 5G for the first time. LEO / GEO support. NB-IoT NTN and eMTC NTN over transparent payloads. The starting line.

Release 18 · 5G-Advanced

NTN becomes first-class.

Coverage enhancements for handheld UEs, IoT-NTN refinements, improved mobility between terrestrial and satellite cells. No longer a side-track.

Release 19

The base station moves to orbit.

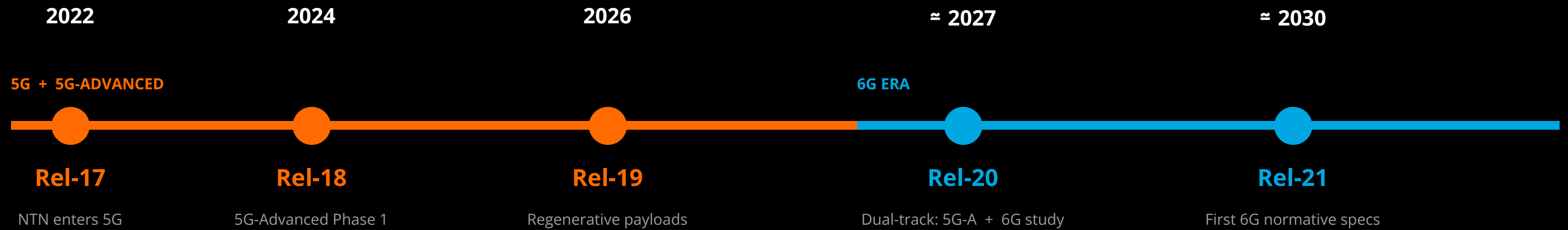
Regenerative payloads specified — a full gNB now runs on the satellite itself. Plus store-and-forward and RedCap over NTN. The satellite is part of the RAN.

Status: Approved, work in progress

The satellite is no longer a relay. It is part of the mobile network.

The roadmap to 6G

Is a defined timeline.



What 6G actually is

Four clear ideas.

01

AI-native.

Networks learn and orchestrate themselves: where 5G uses AI as an external optimization tool, 6G builds it in — AI agents interpret intent and compose services dynamically rather than following static rules.

02

Ubiquitously covered.

Terrestrial, satellite, and high-altitude platforms stitched into one connectivity fabric: where 5G adds satellite as a parallel layer, 6G makes coverage a property of the standard rather than a premium add-on.

03

Integrated sensing.

The radio network doesn't just carry data, it perceives the physical world: where 5G's radio only communicates, 6G fuses communication and sensing into a single function, turning every cell into a passive sensor of motion, presence, and environment.

04

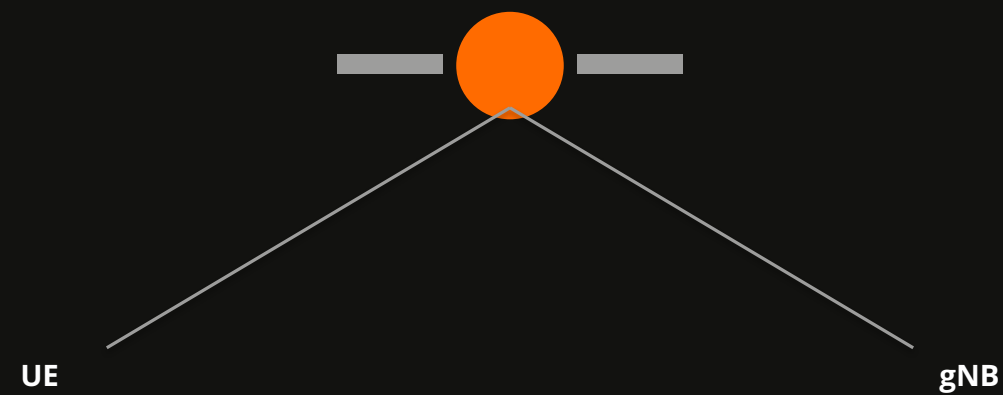
Sustainable by design.

An order-of-magnitude improvement in energy per bit versus early 5G: where 5G pursued efficiency incrementally, 6G makes sustainability a first-order design constraint rather than an aftermarket concern.

NTN: from “added” to “native”

The architectural arc.

RELEASE 17 · 2022

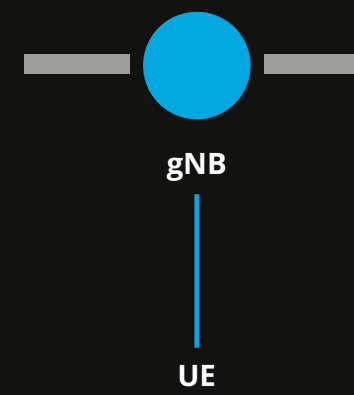


Transparent.

The satellite is a mirror.

Satellite acts as a bent pipe, relaying signals between user devices and a gNB on the ground.

RELEASE 19 · 2026

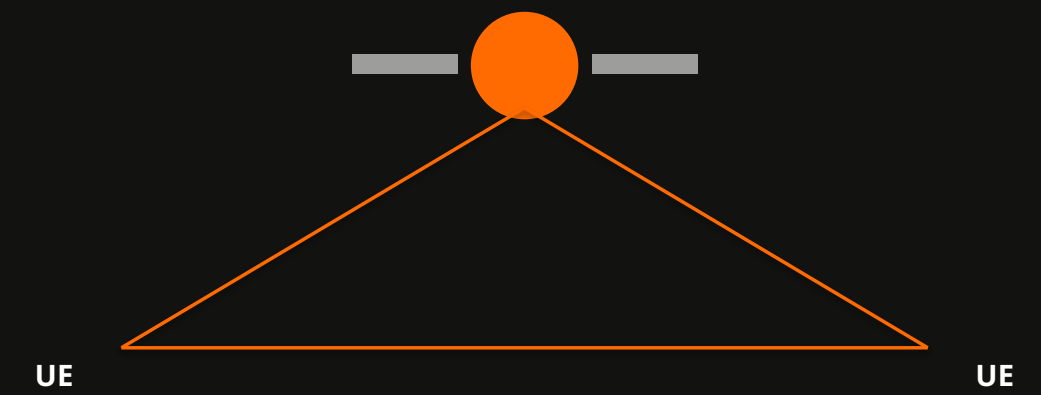


Regenerative.

The base station moves to orbit.

A full gNB runs on the satellite itself. The satellite processes, schedules, and routes — part of the RAN, not just the link.

RELEASE 21 · ~2030



Native.

The boundary dissolves.

Terrestrial cells and orbital cells become equivalent members of a single 6G radio access network. NTN is architectural, not additional.

Sateliot in the story

Not just a spectator, but a major contributor to the standard.

17

technical proposals to Rel-17
3GPP

More than any other space company.

6 + 5 + 16

satellites: today + 2026 +
2027

Scaling toward a full constellation.

1st

standards-based IoT
connection from LEO

With Nordic Semiconductor, Oct 2025.

€100M

Announced Series C round

April 2026

From NB-IoT today, to D2D, to 6G

Our product evolution is at the forefront of the market.

TODAY

5G NB-IoT NTN

Massive IoT. Ultra-low power. Commercial DEMOS live. Roaming model with MNOs — any 3GPP Rel-17 module becomes a Sateliot device.

Rel-17 · POCs since 2024

NEXT

5G NR-NTN in S-band

Direct-to-Device use cases. Automotive, civil security, defence. Regenerative payload architecture. Validated with Qualcomm at Lannion labs, Jan 2026.

Rel-19+ · in integration

READY FOR

6G-native architecture

Blockchain + AI / ML for hybrid space-terrestrial trust and anomaly detection. Winner, ESA × GSMA Foundry 6G Innovation Challenge, MWC 2026.

Rel-21+ · research & design

We are technological nonconformists

An active portfolio of EU-funded R&D projects pushing the frontier of satellite 5G, 6G, quantum security, and dual-use IoT.

QUANGO

Quantum-safe connectivity

Shared LEO CubeSat constellation for Quantum Key Distribution + 5G IoT — secure data exchange resilient to quantum threats.

ETHER

Unified 3D 6G network

AI-enabled terrestrial + aerial + space network with integrated RAN, flexible payloads, and edge orchestration for 6G.

QUDICE

Space-qualified QKD

Horizon Europe RIA maturing QKD + QRNG + PAT subsystems to TRL 5-6 — a building block for EuroQCI.

AGRARIAN

Space-Air-Ground agri-stack

AI/ML + 5G IoT + satellite decision support. Smart agriculture sustainability and competitiveness.

VITAS

BVLOS drone logistics

Autonomous UAS operations — intelligent drones + automated vertiports + NB-IoT NTN for beyond-visual-line-of-sight.

PLESGINT

Emergency-response HAPS

Coordinated HAPS with onboard AI + 5G NTN for incident detection (e.g. oil-spill) and rapid decision support.

FreeGNSS

GNSS-independent PNT

Positioning and timing for IoT over 5G/6G NTN — orbital broadcasts + differential Doppler, no traditional GNSS required.

ACES

Post-quantum 5G/6G

Post-Quantum Cryptography + lightweight encryption end-to-end — satellite-to-ground, roaming, and IoT monitoring.

BEAM5

Blockchain anomaly detection

Real-time RF, 5G protocol, and telemetry from Sateliot SDRs — AI/ML threat detection anchored on immutable blockchain.

DMIoT

Dual-mode TN-NTN IoT

LTE-M / NB-IoT fused with Rel-17 NTN — seamless terrestrial ↔ satellite IoT connectivity (TRL 3-4).

Use cases that matter

Four stories where standards-native satellite IoT changes the unit economics.

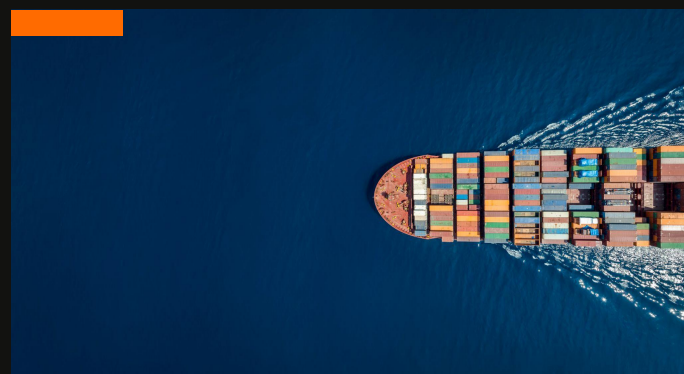


Smart agriculture.

30%

water & energy savings

Chile × LemSystem — climate, soil, and crop sensors connected in remote zones. +10% crop yield.



Maritime & logistics.

0

connectivity dead zones

Container tracking, vessel engine health, crew welfare across any ocean — the moment a ship leaves port.



Critical infrastructure.

24/7

remote monitoring

Pipelines, grids, mines, energy assets. Continuous cellular IoT coverage where terrestrial networks never reach.



Defence & civil security.

EU

sovereign infrastructure

Resilient, standards-based communications for European defence and civil-security use cases. S-band NR-NTN.

5G made satellite part of the standard,
6G will make it truly native,
and that is the network we are already building.

Thank you!

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