

Next Generation Mobile Networks Alliance [NGMN]

Title: LS to 3GPP from NGMN: 'NGMN REAFFIRMING 6G KEY MESSAGES FOR 3GPP'

Source: NGMN Alliance

To: 3GPP SA, 3GPP RAN, 3GPP CT, 3GPP PCG and 3GPP TSG

Date: 04 Dec 2025

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NGMN REAFFIRMING 6G KEY MESSAGES FOR 3GPP

As 6G standardisation progresses at 3GPP, the NGMN Alliance (NGMN) presents the consolidated view of mobile network operators (MNOs) on a strategic vision for future network generations, to serve as a guidance to ongoing 3GPP 6G studies.

6G Position Statement - An Operator View:

The "6G Position Statement" covers an operator position on key requirements and design considerations as follows:

- Overarching Statement: 6G is the graceful evolution of communication networks building on and extending beyond the existing 5G ecosystem
- Innovations and new services based on IMT-2030 features should, facilitate seam-less integration and inter-operability with fixed and satellite networks and inherently support network related APIs
- **Operational Priorities:** Network simplification, **absolute energy reduction**, value driven automation of operations, trustworthy infrastructure and resistant to quantum threats
- Existing IMT spectrum remains essential
- Guiding Principles
 - Global 6G standards
 - No intrinsic need for hardware refresh
 - Software upgrade to 6G
 - No degraded performance for 5G customers



- No compromise to existing services
- Integration across mobile, fixed and NTN steered by MNOs
- o Backwards compatibility with 5G
- Robust resilience

Radio Performance Assessment Framework (RPAF)

When considering novel candidates for a new 6G Radio Access Technology (RAT), these must be compared against a reasonable baseline, for significant performance benefits to be demonstrated. This baseline needs to satisfy the following requirements:

- It must reflect the true state-of-the-art that 5G Stand-Alone (SA) can deliver with the most sophisticated Rel-18 features that correspond to 5G-Advanced
- The most advanced capabilities of 5G relating to the latest iteration of IMT-2020 specifications must be acknowledged in the benchmark recognising that simply improving peak data rates/throughput would be insufficient to justify an expensive hardware refresh
- New 6G RAT candidates must prove value in energy efficiency, sustainability and network simplification, where all these metrics are considered holistically, since improvements in data rates/latency alone would be insufficient to justify investment

6G KEY MESSAGES - An Operator View

NGMN has reiterated several core messages guiding 6G development:

- Simplicity as a foundational design principle: 6G shall avoid repeating the architectural complexity experienced in early 5G deployments (e.g., SA vs. NSA fragmentation introducing various connectivity options).
- Al-native capabilities are essential, but they must be introduced with proper governance, transparency, and measurable assurance.
- o **Energy efficiency and sustainability** must be treated as first-order requirements.
- Harmonisation and global alignment across standards bodies is crucial to avoid divergence and maintain industry scale.
- 6G should enhance not reset the operator investment cycle through evolutionary migration pathways and maximal reuse of assets.
- Operator-driven value creation, including trustworthiness, performance predictability, and
 TCO efficiency, should guide priorities throughout the 6G design process.



Key Take-Away Points for 3GPP:

- 1. 6G must remain value-driven, with features introduced only where they address verified operator and societal needs.
- 2. Simplicity and global harmonisation must guide architectural choices to avoid repeating the fragmentation seen in 5G's early stages.
- 3. Radio performance evaluations should be based on realistic, end-to-end, operator-relevant metrics rather than theoretical peak values.
- 4. Openness, cloud nativeness, native Al support and disaggregation should be the core principles for 6G
- 5. Al-native functionality is important, but requires robust governance, transparency, assurance metrics, and interoperability.
- 6. Energy efficiency, sustainability, and TCO reduction must be embedded as core design objectives across all 6G work items.
- 7. Evolutionary migration from advanced 5G should be a priority, enabling reuse of existing infrastructure and minimising disruption.
- 8. Close coordination between NGMN and 3GPP is essential to ensure that operator-led priorities remain at the centre of 6G standardisation.

Intention of the LS and required actions

NGMN requests 3GPP to take these above recommendations into account within their ongoing 6G studies. Please ensure this submission is included in the upcoming 3GPP meeting in USA, Dec 2025.

We look forward to continuing to work closely with 3GPP in the future.