

Questions to be addressed



1. Technology: What fundamental changes in network architecture are required to ensure resilience in 6G compared to previous generations? What new redundancy mechanisms can 6G introduce to ensure seamless failover during network outages?

2. Interdependencies of critical infrastructures: Given that 6G will integrate deeply with energy grids, healthcare, and industrial automation, how can we ensure cross-sector resilience when a failure in one system could cascade across multiple domains? How can 6G networks remain operational during power grid failures or extreme weather events, especially in critical infrastructure applications?

3. Standards and regulation: Should resilience be mandated in 6G standardization efforts (e.g., within 3GPP, ITU, and ETSI), and how can regulatory bodies enforce such requirements? Should governments set the minimum resilience requirements for 6G networks, and if so, how should compliance be incentivized or enforced?

4. Softwarization: How can we secure 6G networks, particularly with the increasing adoption of Open RAN and software-defined networking, which introduce new vulnerabilities e.g. via new supply chains or cloud based architecture?

5. Business considerations: Is there a business case for resilience in 6G, or will it always be seen as an additional cost with limited short-term returns? Will resilience become a key differentiator for mobile operators in the 6G era, and how can they market it as a competitive advantage?

The cover of the 6G Resilience White Paper features a dramatic image of a lighthouse on a rocky island, with waves crashing against the base. The sky is a deep purple and blue. The title '6G RESILIENCE WHITE PAPER' is prominently displayed in white, bold, sans-serif capital letters. Below the title, a horizontal line separates it from the subtitle '6G Research Visions, No. 15' and the date 'November 2025'. In the bottom right corner, the '6G FLAGSHIP UNIVERSITY OF OULU' logo is visible, consisting of the text '6G' in a large font, 'FLAGSHIP' in a smaller font, and 'UNIVERSITY OF OULU' in the smallest font, all in white.

6G RESILIENCE WHITE PAPER

6G Research Visions, No. 15
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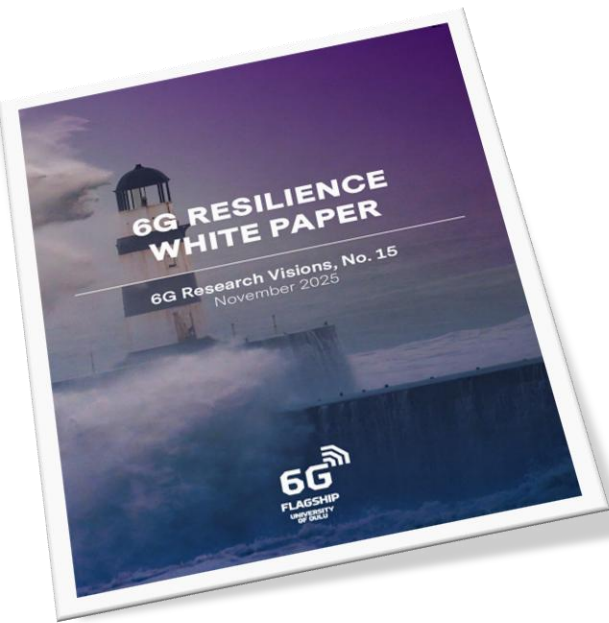
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*To be published at **6G Resilience Summit** in
Oulu, FI, November 2025.*

6G Resilience White Paper -
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1 Vision and motivation

- 1.1 A new paradigm for 6G
- 1.2 Responding to global challenges
- 1.3 The research frontier
- 1.4 From performance to resilience

2 Mobile technologies in critical infrastructures

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- 2.5 Interplay between mobile networks and other sectors
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3 Mobile network resilience definition

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4 Architectures for resilience

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- 4.4 Multi-access integration
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5 Technological enablers towards resilience

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