



## 6G TEST CENTRE

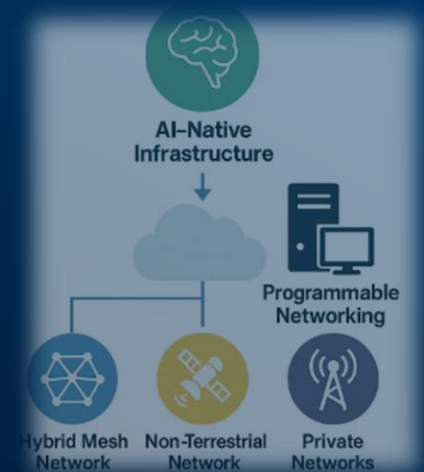
# Enabling the Future of Secure and Resilient Communications

# Why Resilience Must Be Designed Into 6G From Day One



6G TEST CENTRE

- 6G integrates with critical sectors: defense, energy, healthcare, logistics → failure cascades are real.
- Requires shift: from performance-centric to resilience-centric architecture.
- Key Enablers:
  - AI-native, distributed architectures (real-time anomaly detection, self-healing)
  - Hybrid, multi-layered networks (TN + NTN + mesh)
  - Programmable infrastructure (SDN, NFV, Open RAN for reconfigurability)
- 6G Test Centre supports validation of these principles under stress (Arctic, underground, space)

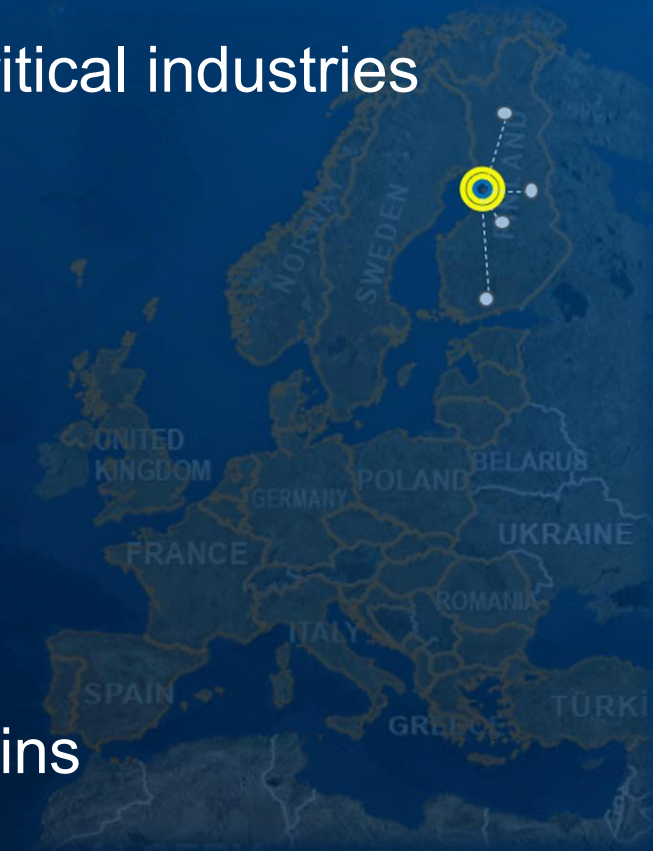


# 6GTC: Driving Dual-Use Innovation and Resilience Validation



6G TEST CENTRE

- Mission: Accelerate dual-use innovation for defense and critical industries
- Unique capabilities:
  - Extreme-condition testing (Arctic, space, underground)
  - Private secure 5G/6G networks, edge computing
  - Failover and autonomous recovery testing
- Strategic role:
  - Core DIANA infrastructure, linked to EU 6G research
  - Supports AI-enhanced TEVV for resilience across domains



# Making the Business Case for Resilience



6G TEST CENTRE

- Resilience as a value generator, not just a cost:
  - Enables premium services for critical infrastructure
  - Regulatory compliance = competitive advantage
  - Dual-use tech accelerates commercialization
- 6GTC's role:
  - Demonstrate ROI (e.g. Arctic logistics, emergency drones)
  - Bridge ecosystems (industry–defense–academia) Facilitate market entry via DIANA, real-world pilots.

