

The Connected Digital Fabric

A new Joint Undertaking to secure the foundational layer of Europe's digital stack

Europe leads the world in connectivity research and standards and yet captures only a single-digit share of global digital value. **Connectivity, in its evolved form, is not a single technology domain among several: it is the foundational layer on which sovereign European AI, cloud, software, and devices must run.** No current EU instrument is mandated to integrate across this value chain. 6G-IA proposes one that is.

THE ASK

Establish a bipartite Union–Private Side Joint Undertaking under FP10 and the European Competitiveness Fund (ECF), anchored on the Connected Digital Fabric, with a public-funding envelope at least 3–4× the current connectivity instrument (SNS JU's €900M EU contribution) and empowered Member-State engagement through a strengthened States Representatives Group.

The challenge — research without value capture



The value-capture gap is structural, not cyclical. European venture and growth capital is roughly one-tenth of the US level; the digital single market remains fragmented across 27 countries and 24 languages; and European IT demand has historically been met by non-European providers, so the investment flywheel exports value rather than recycling it. Regulation alone, however favourable, cannot close this gap. Europe must engineer what the US lets emerge: pooled public investment at scale, cross-border coordination, and a governed bridge from research to deployment.

Why connectivity is the foundational layer

No part of the digital stack (i.e., AI inference, cloud services, applications, or trusted devices) **can be genuinely European in terms of sovereignty** if the **Connected Digital Fabric** beneath it is not. It determines who controls data flows, latency, security and the terms of access to every service above it. It brings together the five digital domains of the Draghi report (i.e., networks, AI, microelectronics, cloud and quantum) under one connectivity and service platform. The June 2026 European Technological Sovereignty Package (Chips Act 2.0, CADA, the EU Open Source Strategy) strengthens those layers but leaves the integrating backbone uncovered.

The window is now

The first generation of national 6G programmes is concluding — Finland's 6G Flagship and 6G Bridge end in 2026, the Netherlands' FNS Phase 1 closes in June 2026, Germany is transitioning to Open6GHub+, Spain is completing the UNICO I+D 6G programme, and France's PEPR 6G and Italy's RESTART run through 2026–2027. This coincides with the critical phase of 6G standardisation (3GPP Release 21, 2025–2028). Without a European instrument to succeed and connect these efforts, ecosystems, testbeds and skills built over 4–8 years risk dispersing at exactly the moment they are needed most. The next MFF is the only instrument that can provide continuity at European scale.

What we propose — one instrument, three layers

The instrument operates across three mutually reinforcing layers, running in parallel to match the software-driven innovation cycles European industry now requires. Connectivity is the focal pillar throughout, evolved into a Connected Digital Fabric that integrates compute, intelligence and trustworthiness. Capabilities mature in Layer II-A and graduate to II-B in place; bridging supply and demand within one governance structure is what turns research excellence into deployed European capability.

Layer	What it does	Funding · TRL
I — Long-Term Research	System-level, cross-disciplinary research on core connectivity and the six converged domains; open competitive calls with SME & academic tracks.	FP10 · up to TRL 5
II-A — Innovation Facilities (Research-led)	Higher-TRL demonstration of Layer I results and national testbeds; links to EURO-3C, EuroHPC AI Factories and Chips JU pilot lines.	FP10 + private · TRL 6
II-B — Innovation Facilities (Industry-led)	Same facilities taken toward pre-deployment readiness — system maturity, supply-chain resilience, scale with national programmes.	ECF + private + national · TRL 7
III — Pre-deployment	First-of-a-kind pilots in real operational environments; sovereign AI-over-connectivity and cross-border critical comms; TRL graduation gate.	ECF (CEF-D / InvestEU fallback) · TRL 8

Governance — bipartite, with empowered Member States

Network technologies operate within a globally set standards cadence (3GPP, ETSI, ITU-R) that demands fast, decisive technical strategy at board level. **A bipartite Union–Private Side JU preserves that agility**, while **Member States are empowered through a strengthened States Representatives Group**, dedicated consultation on call priorities, budget allocation and pilot siting, and **a standing Strategic Infrastructure & Coordination Board**. National initiatives are amplified, not duplicated with cohesion-policy access targets and at least one Layer III pilot hosted in a cohesion Member State.

What it will deliver

- **Scale:** a public envelope at least 3–4× the SNS JU’s €900M EU contribution (comparable EU contributions: Chips JU €4.175bn, EuroHPC €4.12bn, each at least matched by participating states).
- **Open access:** ≥30% of Facility capacity and call budgets reserved for SMEs, start-ups and RTOs — enforceable and reported to the European Parliament.
- **Targets by 2032/2035:** ≥10 pre-deployment pilots across ≥5 Member States; ≥€5bn cumulative beneficiary revenue; ≥8 sovereign software platforms in production; 50% energy-efficiency gains; ≥3 unicorn-trajectory companies.
- **European cloud & edge supply:** by 2032/2035, ≥70% of the cloud and edge infrastructure operating Layer II Facilities and Layer III pilots supplied by European providers — undertakings headquartered and incorporated in the EU/EEA, under effective European ownership and control, and not subject to extra-EU jurisdiction able to compel data access or override EU law.
- **Private commitment:** ≥1:1 co-investment, facility co-governance, sustained pre-standardisation feeding 3GPP/ETSI/ITU, binding sustainability and ≥5% skills budget.

ONE INSTRUMENT, ONE MOMENT

The next MFF (2028–2034) is the best opportunity to anchor Europe’s 6G architecture in a coherent European capability before national ecosystems disperse. We ask the European Parliament and the European Commission to support a dedicated bipartite Union–Private Side Joint Undertaking for the Connected Digital Fabric

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