

Positioning a European device initiative under SNS CSA-02



Building Europe's Open 6G Device Ecosystem:
A Reference Architecture and Industrial Roadmap

WHY EUROPE MUST RECLAIM THE DEVICE LAYER?

Motivation



A Device World That No Longer Serves Its Citizens

- *A handful of global tech giants control the device wallet layer — the gateway to identity, payments, credentials, and data*
- *“Consent” is no longer a choice; users must accept whatever terms platforms dictate to participate in digital life*
- *Minors and vulnerable groups remain exposed, with no real protective architecture built into devices themselves*
- *Governments lack levers of enforcement — resorting to blunt tools like app bans, blocking entire services to mitigate risks*
- *Conflicting global privacy, cybersecurity, and data rules fracture the ecosystem, leaving both citizens and institutions powerless.*
- *Europe must design 6G in this landscape — without having sovereignty over the very device layer 6G will depend on*

EU’s Sovereignty: Redesign the Device, Redefine the Power

- *6G needs openness, but today’s device ecosystem is closed, fragmented, and controlled from outside Europe*
- *No shared reference architecture exists for 6G devices, leaving industries without a common direction*
- *Europe faces unresolved questions: Who controls trust, identity, and critical device logic?*
- *Without sovereignty-by-design, 6G risks repeating past mistakes: dependency, opacity, and misaligned incentives*
- *Europe can’t achieve inclusion, privacy, or public value unless devices become public infrastructure — not private gateways*
- *The opportunity: Build a hardware-neutral, wallet-ready framework where authorization replaces forced consent and digital rules are transparent and verifiable*
- *If Europe leads now, 6G can deliver true digital sovereignty and public trust — not just faster connectivity*

REIMAGINING 6G DEVICES THROUGH KVI_S: INCLUSION, TRUST, SUSTAINABILITY

Open 6G Device Ecosystem Architecture Framework



**6G devices must optimise for public value
— inclusion, trust, sustainability —
not just performance.**

**How
can Europe build an open,
sovereign 6G device ecosystem**

**one that shifts power from proprietary
consent models to transparent,
citizen-authorized architectures**

**and in doing so create the public value and
KVI_S that 6G was meant to deliver**

?

OPEN 6G DEVICE ECOSYSTEM – THE POLICY

IEEE - IC25-009-01

Consortium partners gain a structured path into IEEE-aligned global standardisation.



Sebastian Frey
CHAIR

“
Our IEEE work
positions 6G devices as instruments of sovereignty
for both citizens and regions
”



Rob van Kranenburg
VICE-CHAIR

“
IEEE P7012
“**my terms**” is in motion —
driving user-centric, sovereign device standards
”

OPEN 6G DEVICE ECOSYSTEM

Call for consortium



CSA-02

provides a pragmatic European framework, guiding this vision into actionable industrial strategy and alignment with Chips JU and manufacturing

We

bring in a open device architecture foundation through IEEE IC25-009-01, accelerating the CSA-02 roadmap process

Seeking:

major telecom vendors, chipset makers, RTOs, security & identity providers, vertical champions, and public actors