EU approach for converging digital communications

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Miguel Gonzalez Sancho
Head of Unit CNECT.E1 “Future Connectivity Systems”
EUROPEAN COMMISSION

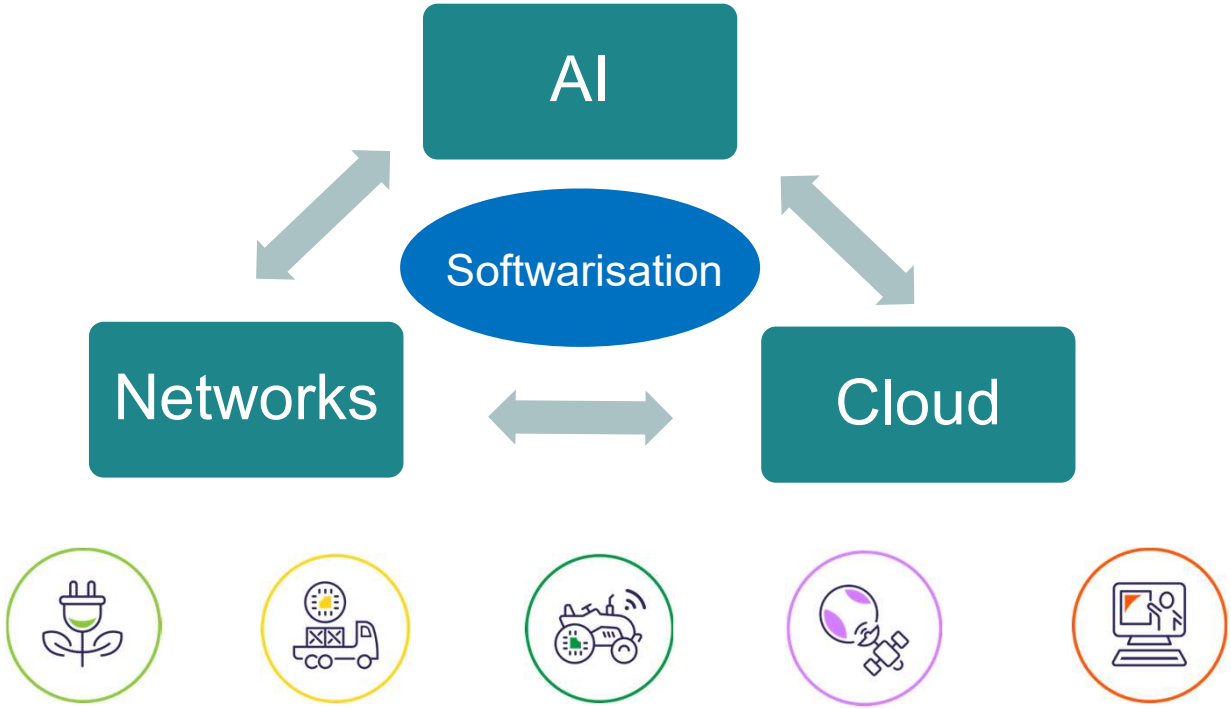
International political context

- Competitiveness compass priorities: competitiveness, decarbonisation, security
- (Inter)dependence vs rivalry: economic security, [open] autonomy
- Fast change vs longer term goals; openness vs collaboration: industrial policy, PPP

Technology & market context

- Data economy pervasive; digital technologies critical; e-infrastructures enabling
- Virtualisation/ softwarisation; telco-cloud-edge convergence/ continuum; AI revolution
- EU gaps [5G lessons]: dependencies, fragmentation, uptake; RoI, investment, deployment

Convergence of AI, cloud and networks



European Commission

Challenges & opportunities

- Networks vs other technologies: what will be the market centre of gravity/ power?
- Physical layer of connectivity [still...]: dependencies, sustainability/ resources, security
- Virtual layer: openness vs orchestration, resilience/ cyber, eID/ data protection

6G at the core of the digital economy

The foundation of the digital economy and society

A crucial infrastructure for security and sovereignty

Dual use, safe and resilient infrastructures

The backbone of digitisation of all EU businesses

A key domain for EU economy

6,7% of EU GDP, Eurostat 2021

Booming public investments from our main competitors

Booming investments for Member States

€ 2 Billion for 6G, e.g.

A high risk, R&D intensive domain

Risk sharing with public policies/partnership

A key technology for EU policies

- EUCCS, IRIS²,
- Sustainability;

An EU valorisation platform for key technologies

AI, Quantum, HPC, security, chipsets, computing;

The Draghi report : The telecommunication equipment and software sector are also key for the EU's cyber-resilience, security of strategic infrastructures, and protection of citizens' and business data

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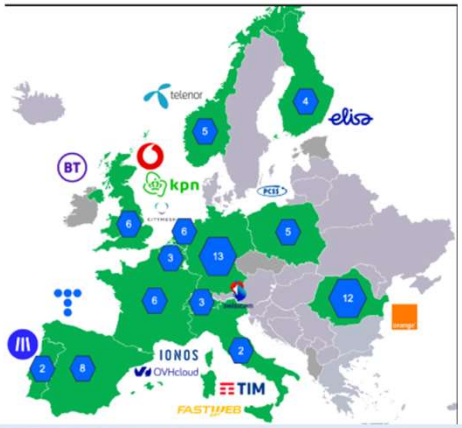
Global Momentum for 6G is growing

Connected, Collaborative, Computing (3C) Network

A secure 3C multi-provider and multi-technology communication and computing system that hosts network functions and workloads for and beyond connectivity e.g., 6G, AIaaS, Storage/Compute, Security, ISAC as a Service,…



Align relevant EU, national and private initiatives, such as Horizon Europe, SNS JU, IPCEIs, Member States strategies on 5/6G or cloud, and other initiatives under the current and future Multiannual Financial Framework.

- Link European and national policy priorities on digital communication infrastructure with other relevant policy priorities.
- Consider demand requirements and prospects for services and applications from the start of the technology development process, drawing lessons notably from the 5G experience.
- Prioritise security and sovereignty, so that future efforts towards the 3C vision, notably when EU or national public funding is involved, primarily benefit EU players and citizens.

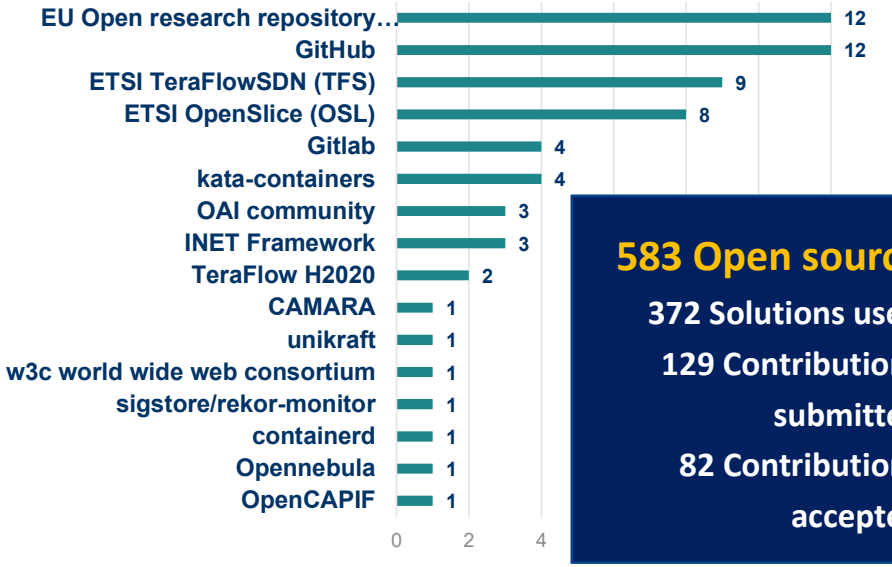
The EURO-3C project realises the 3CN vision by developing and demonstrating the first large-scale federated, open, and sovereign European infrastructure pilot for supplying market-ready, interoperable and converged Telco-Edge-Cloud services, towards strengthening the European digital market, and addressing societal, techno-economic and vertical-specific demands.

Open source and Standardisation in 6G

SNS JU participation in ETSI SDGs

SNS JU Call 1 and Call 2 projects

Approved Contributions to Open-Source Communities



583 Open source

372 Solutions used

129 Contributions submitted

82 Contributions accepted

Source: SNS-OPS 2025 Questionnaire on SNS projects, April 2025

6G network softwarisation is about **convergence of open-source software, standardization, and cutting-edge research**

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EU approach to 6G Standardisation

- Global standardisation is our policy goal
- The EU is working in coordination with other countries
- 3GPP and ETSI roles in 6G are paramount
- ETSI strong contribution on 5G standards (NFV,SDN,MANO, MEC)
- ETSI key to promote EU 6G research and pre standardisation, including through ISGs (on THz, RIS, ISAC, Multiple Access)
- Cooperation between ETSI and SNS JU on 6G is essential

SNS JU Policy WG –standardisation

Mandate

Discuss standardisation, in particular, how to further streamline the priorities so that we maximize support in standardisation for topics related to future connectivity and service provision, including policy issues such as security, sustainability, EU strategic autonomy, and other related topics.

Possible future topics for discussion could be the current and emerging trends in the telecom industry, including their implications on the SNS JU activities

Selected recommendations

Support the participation of European stakeholders in SDOs where needed.

Establish a forum to facilitate coordination among European stakeholders.

Strengthen the link between R&I and standardisation, as already happening under the SNS JU and assess whether further emphasis is needed.

Support the organisation of standardisation meetings in Europe, especially for 3GPP.

Coordinate work for 3GPP SA1-related submissions and other 3GPP WGs where possible (identify potential areas for co-signed docs)

Coordinate work for submitting to SDOs European input on KVIs

Key tasks performed

- Set the scene of relevant SDOs & Industry Alliances
- Identify the key current trends for 6G
- Identify areas for potential collaboration among European Stakeholders
- Illustrate key findings
- Provide Recommendations

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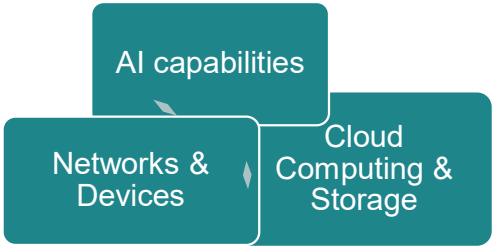
THANKS

Perspective of Future Networks under next MFF

- **Convergence of AI, cloud computing and networks**



- infrastructure to train and deploy advanced AI models
- infrastructure to host next generations of cloud/edge/AI-native networks
- process massive datasets
- deliver instant insights to mobile users, real-time translation, video analytics… extending device capabilities and supporting new devices, like smartglasses
- optimize network and cloud operations, improve energy/resource efficiency
- connect and converge physical and virtual worlds.

- Increasing **demand of AI-ready edge cloud continuum** with evident **synergy between telco and sectoral** applications.
  - Highly performing connectivity, cloud and AI continuum integrating **new compute paradigms**: confidential, cognitive, quantum.
  - New **designs** for chips, servers and infrastructure, and new **software engineering and development** paradigms to face **rising energy demand and prices**.
- Other regions (US, China, Korea, Japan, India…) investing massively in advanced connectivity, cloud and AI.
  - Europe's leading **position in advanced connectivity under threat**
  - US and China extremely active in **6G standardization**
  - China has developed **alternatives to western** platforms
  - China targets traditional **industrial markets** based on its lead in connectivity
  - US and China allocate **public funding to advanced connectivity**, including chips.
  - US invests heavily in **open-source software.**
  - China and India **promote national OSS** aggressively through policy initiatives.

Europe has **potential to retain and develop advanced capabilities**, innovating and deploying in real-world settings **key technologies** for **digital comms** and **advanced computing**

a) develop & deploy beyond-state-of-the-art sustainable technology for **sovereign Future Digital Infrastructures**
b) develop & deploy **secure and resilient software** in an **open federated multi-provider** approach
c) support **EU open-source software** (through R&D, scale-up, sustainability and market integration) in strategic areas
d) nurture **digital ecosystems** & **advanced skills**.

Standardisation - next Steps and points for discussion

- **Align EU priorities in SDOs**:
  - Workshop on **potential common priorities** of European organisations **on 6G features** for the **first release**– **scheduled for January 2026**
  - Establish a forum to facilitate coordination among European Stakeholders
  - Other ongoing examples – KVIs, AI activities (e.g., including WP2026 call on datasets)
  - 3GPP activities e.g., 3GPP SA1 or other 3GPP groups
  - Investigate opportunities in other SDOs (e.g., IETF) or Business Alliances
- How to **strengthen the links between projects and standardisation**
  - Well selected topics for proposal with significant potential for impacting standardisation
  - 6G e2e testbeds
  - Forum to facilitate coordination for standardisation
- **Increase EU presence in SDOs**:
  - How to increase EU presences (e.g., MNOs role, other stakeholders)
  - Organise 3GPP events in Europe
  - Evaluation activities for ITU-R WP5D for 6G specifications
  - Work on a workshop(s) with ETSI to increase the presence of projects results and stakeholders
    - ➢ **Mandate of Policy WG to be renewed in January 2026!**