EU Initiatives for Building the European AI Telecoms Stack

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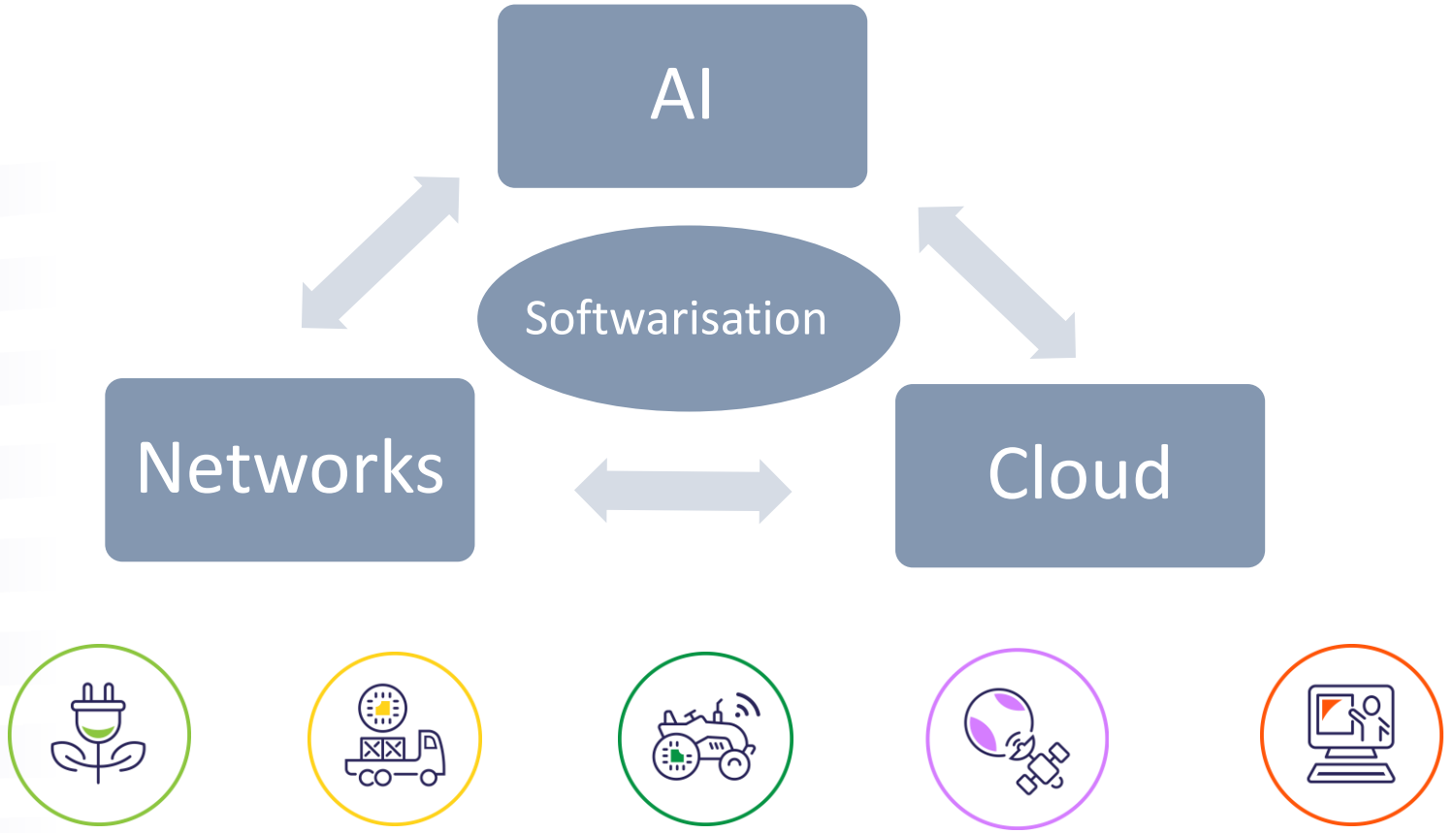
Summer 2026 OAI Workshop – Open Source in the times of AI Native Networks

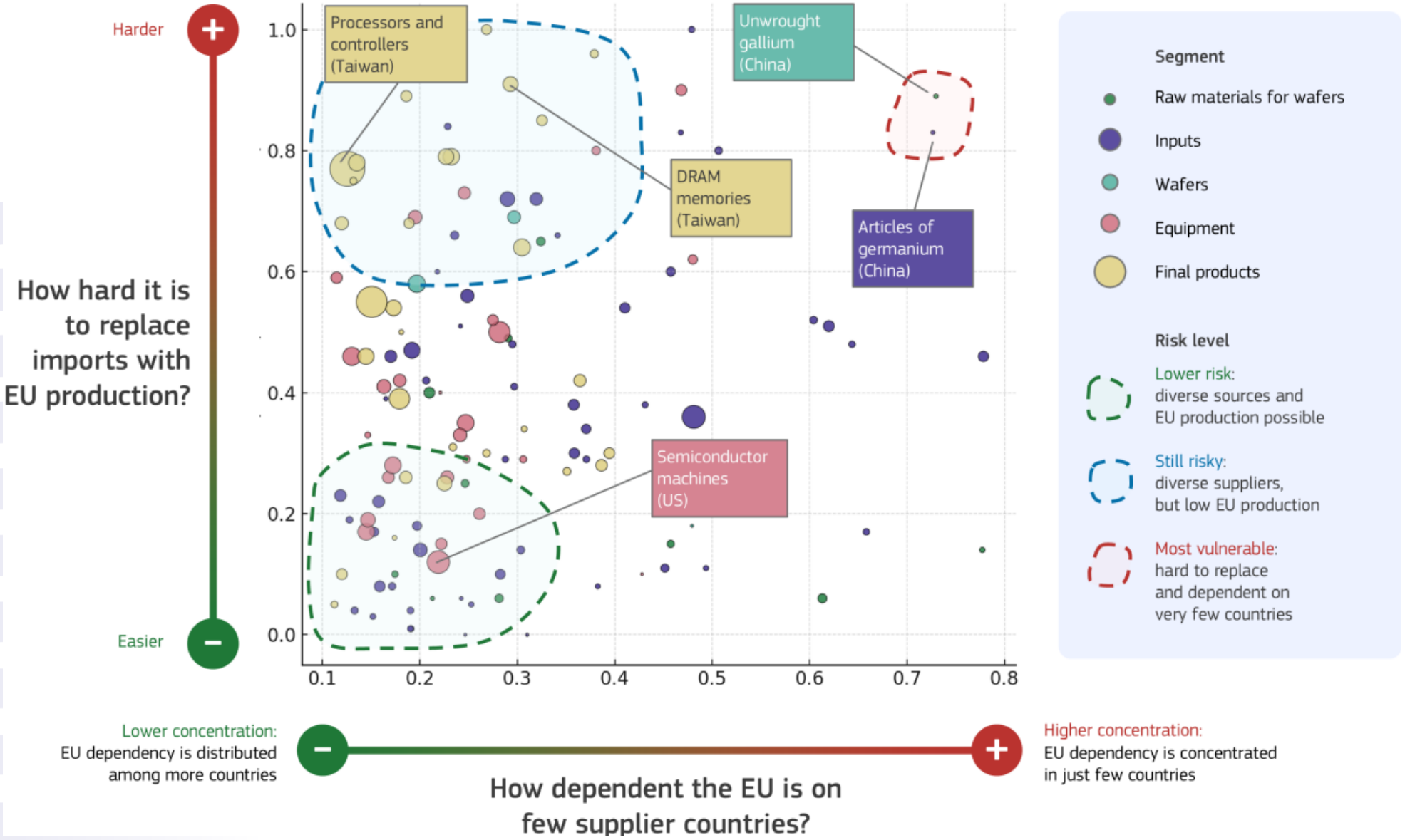
European Commission

Convergence of AI, cloud and networks



Connected, Collaborative, Computing (3C)

EU tech dependency



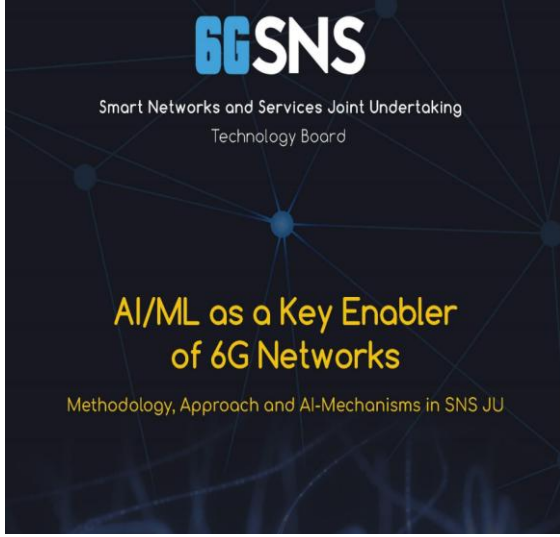
EU in support of tech sovereignty

- AI
  - AI Continent Action Plan
  - CADA (Cloud and AI Development Act)
  - AI Factories
  - AI Act
- Digital Decade
- Infrastructure and strategic technologies
  - European Chips Act and Chips Act 2.0
  - Quantum Europe Strategy
  - Digital Networks Act (DNA)
- Data
  - Data Union Strategy
  - Data Rules
- EU Startup and Scaleup Strategy
- Open Source and innovation
- DSA/DMA
- Cyber and IT Security
  - Cyber Resilience Act
  - ICT Supply Chain Security Toolbox

Smart Network Services JU

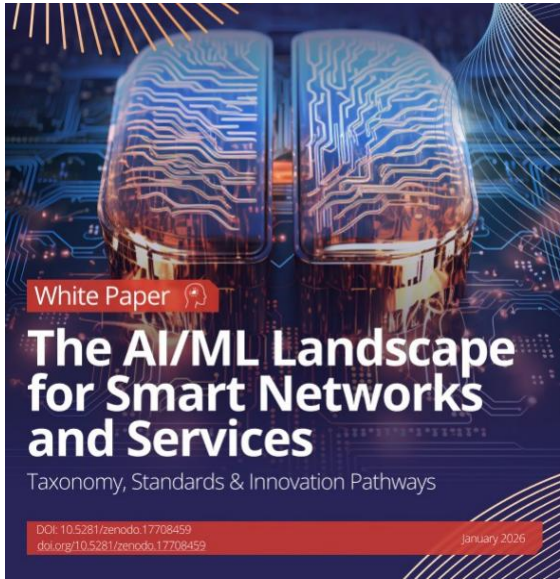
6G Network Function	AI for Network/ **AI for RAN**	Network for AI/ **AI and RAN**
L1/RU Physical Layer	**6G ARROW** AI-native RAN	
L2/DU Data Link/MAC	**NANCY** secure AI; **DETERMINISTIC** TSN + AI	**ACROSS** Zero touch e2e; **6G-SANDBOX** Testbed platform
L3 Network/ RIC	**PREDICT 6G** Deterministic AI; **DESIRE 6G** AI orchestration	**ADROIT 6G** Distributed AI; **INTENSE 6G** Intent driven LLM
L4 App/Services	**BEGREEN** Energy AI; **6G GREEN** SBA Efficiency	**SOVEREIGN 6G** Telco Cloud AI; **6G DALI** ML Ops

https://smart-networks.europa.eu/sns-ju-projects-key-achievements-2025/



SNS work on AI

45 Key achievements
27 contributing projects



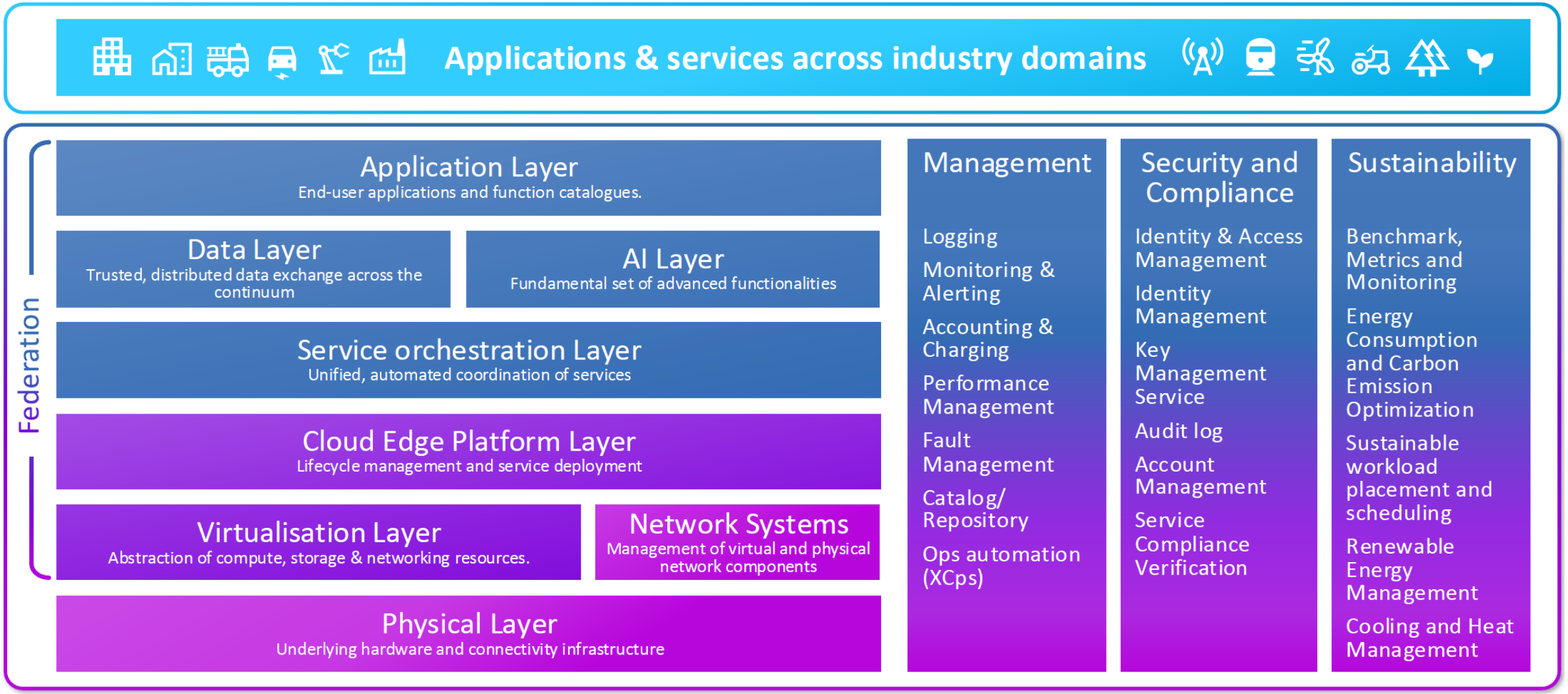
Connected, Collaborative, Computing (3C) Network

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,…

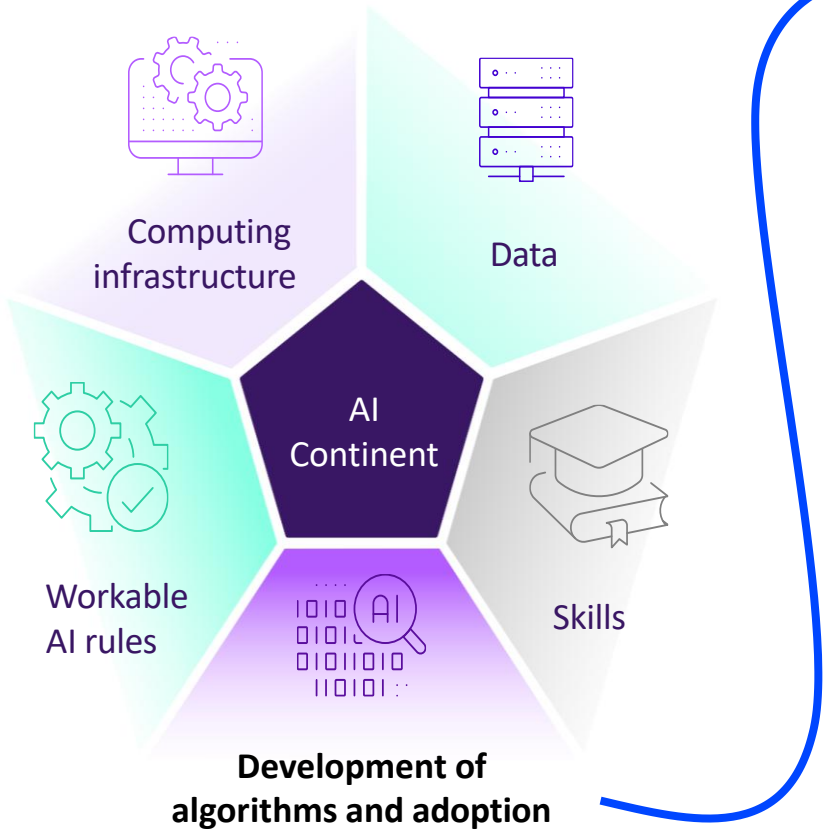
- Align relevant EU, national and private initiatives, such as Horizon Europe, SNS JU, IPCEIs, Member States strategies on 5/6G or cloud, and other initiatives under the current and future Multiannual Financial Framework.
- Link European and national policy priorities on digital communication infrastructure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

8ra /IPCEI-CIS reference architecture



AI continent → Apply AI



Apply AI strategy

- **AI First :** help businesses to consider AI as a useful solution to tackle their challenges while also considering the risks
- Support **adoption and integration of AI in 10 strategic industrial sectors** and the public sector
- **Tailored actions to sector specific needs** to harnesses the transformative potential of AI

enhance competitiveness +

further develop EU's technological sovereignty

One of the sectors identified: telco

Electronic communications

Create an AI platform for telecoms operators to build AI elements.

Create a European Telco AI Platform

— Flagsip action: Create European Telco AI platform which brings together telecom operators, vendors and user industries

— To build specialised AI stack elements for telco (mediation layers, data engineering, cloud interfaces, and AI services, potentially based on open source)

Q1 - Q2 2026:

Workshops to prepare Telco AI Platform

Q3 2026:

Early **results from Horizon 3CN Network call** exploring the use of AI for the optimal allocation, and security of this network

Q4 2026 onwards:

Development and deployment of the **platform** in Q4 2026 onwards

Other Apply AI actions in the telco sector:

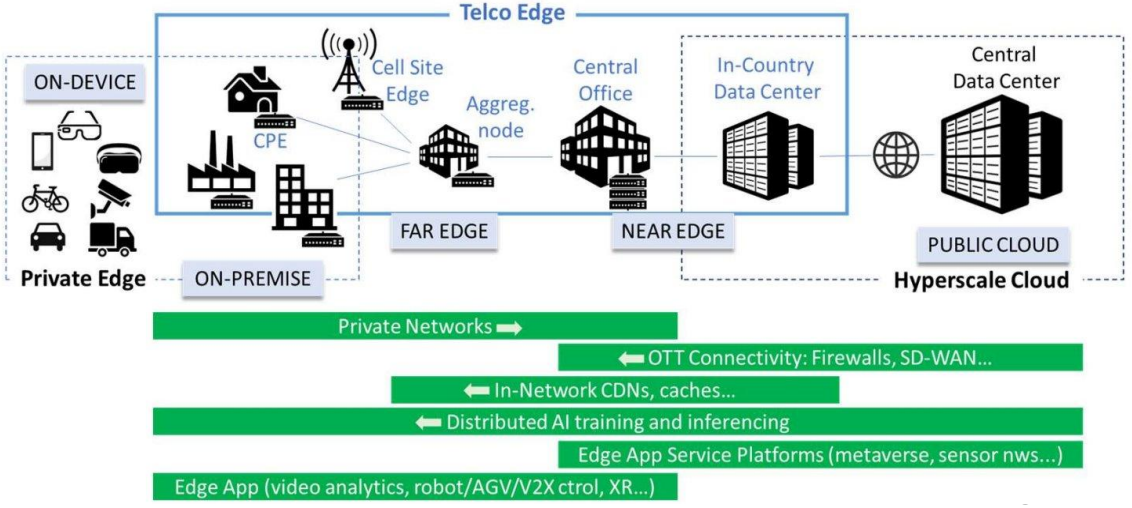
— Flagship Action: Promote EU capacities in edge AI devices (Q1 2026)
— Other Action: Creation of telecom data sets and specialised AI models and solutions (Q4 2026)
— Other Action: EU participation in Standardisation Development Organisations (Q1 2026)

This includes HORIZON-CL4-2026-04-DIGITAL-EMERGING-19: Challenge-Driven GenAI4EU Booster in Apply AI prioritised sectors (RIA) – including telecoms

Networks for AI: opportunities & challenges

- **MNOs transition from connectivity providers to becoming hosts of distributed compute and AI infrastructure**
- AI-driven network optimisation requires edge compute and accelerators; the same infrastructure can then be monetised by offering distributed AI inference and compute services to third parties
- **Hardware at the edge**: multi-workload GPUs deployed directly at base stations and regional nodes to enable low-latency, real-time AI inference close to users and devices. Enables **Network-as-a-Service** (NaaS) and **AI-as-a-Service models** for **latency-sensitive and data-sovereign applications**
- **Use cases:** autonomous systems and robotics, smart cities, automated mobility, healthcare, smart manufacturing, real-time sensing and digital twins, etc.
- **New monetisation opportunities** through edge inference hosting, distributed AI platforms, enterprise AI services, and neutral-host compute infrastructure

- **Lack of EU sovereign AI infrastructure** (GPUs, AI data centres, etc.) **creating dependence** on non-EU hyperscalers and silicon providers
- Virtualisation and multi-tenancy are essential to run AI and network workloads together, requiring deterministic performance, resource partitioning, and real-time orchestration
- **Key challenges** include interoperable data sharing, data sovereignty, federated learning, and standardised AI/network architectures across operators and vendors



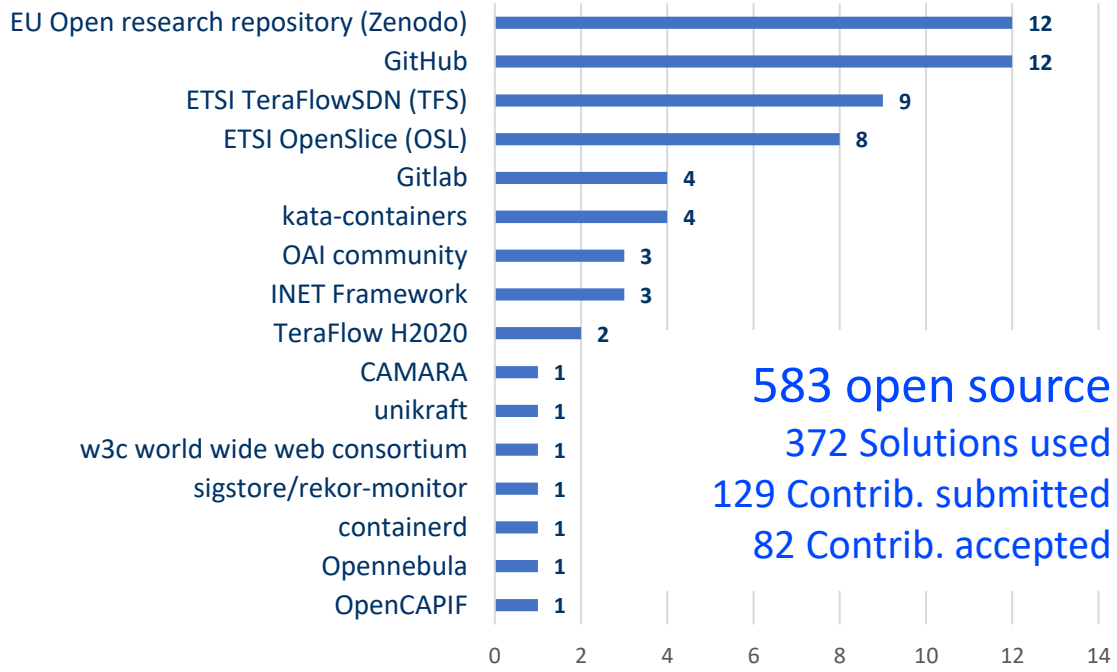
TELCO CLOUD: A CHALLENGE FOR NEXT GENERATION EDGE & CLOUD
European Alliance for Industrial Data, Edge and Cloud

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



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

Thank you

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