

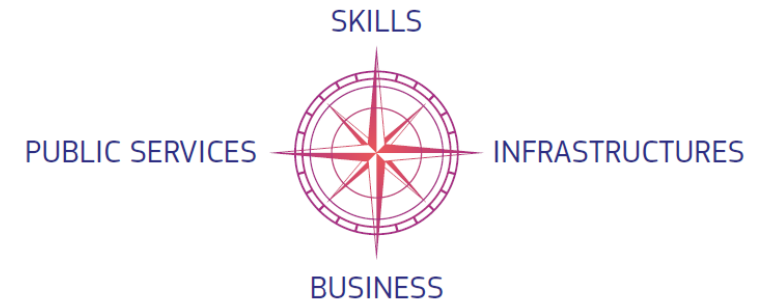


Hexa-X in the European policy context for future networks

Hexa-X-II Workshop – 13 February 2024

Agustin Diaz-Pines
Deputy Head of Unit
Future Connectivity Systems (CNECT E1)
European Commission

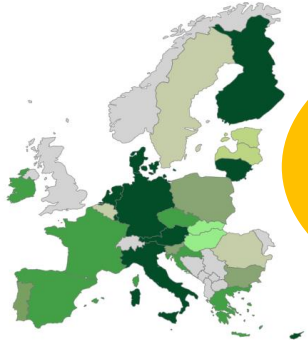
Connectivity in the Digital Decade



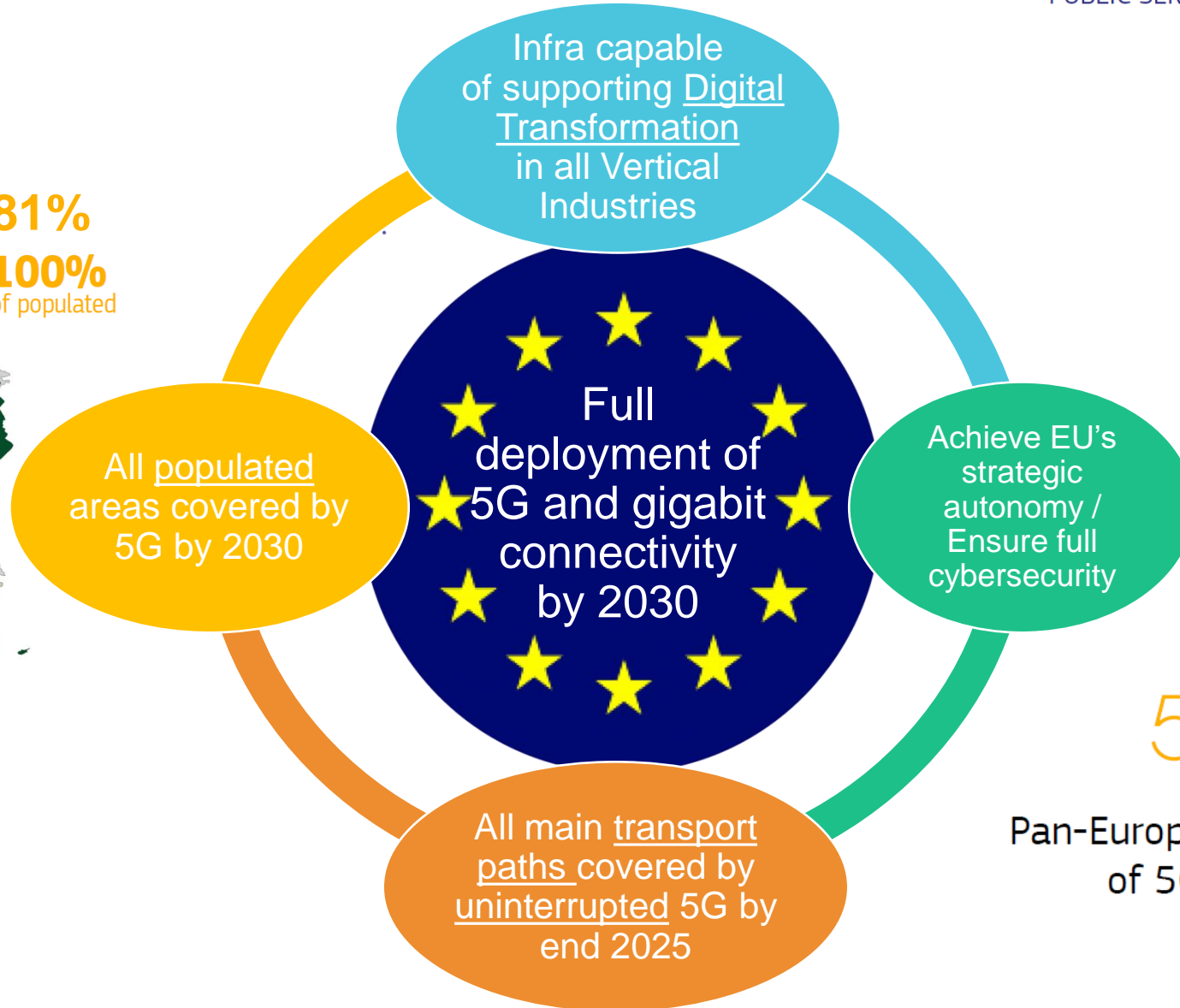
High-speed mobile coverage (at least 5G)



≤20% ≥20% ≥40% ≥60% ≥80% 100%



■ Non-EU country



Pan-European deployment of 5G corridors

Cybersecurity and Economic Security



EU toolbox for 5G security (Jan '20)

Criteria and security measures to

- maintain a diverse and sustainable 5G supply chain
- further strengthen EU capacities in 5G and post-5G technologies by using relevant EU programmes
- identify high-risk suppliers

Commission Communication on the implementation of the toolbox (June '23)

- assessment of the criteria of the toolbox
- clear risk of persisting dependency on high-risk suppliers with potentially serious impacts across the EU and the EU's critical infrastructure
- the Commission is strongly concerned by the risks posed by certain suppliers of mobile network equipment to the security of the Union

European Economic Security Strategy (June '23)

Joint Communication from the EC/HR:

- risks to the resilience of supply chains
- risks to physical and cyber security of critical infrastructure
- risks related to technology security and technology leakage
- risks of weaponisation of economic dependencies or economic coercion

Implementation measures (Jan 2024)

Five initiatives to strengthen the EU's economic security:

- Foreign direct investment
- Outbound investment risks
- Dual-use good exports
- R&D for tech with dual-use potential
- Enhance research security in EU

Smart Networks and Services Strategic areas

Applications

- Seizing the “Trillion €” opportunity in network-based industrial sectors
- New types of applications



Industrial leadership

- Starting 6G race: an opportunity to consolidate EU lead



Societal, Sustainable Development Goals

- Smart connectivity underpinning key societal issues



Sovereignty/ Open Strategic Autonomy

- Value chain approach for a comprehensive EU supply capacity
- Leverage to components to cloud services



SNS JU – Towards 6G in Europe



The Hexa-X flagship + 6G exploratory projects



**Accelerating 5G Deployment
Connecting Europe Facility (CEF2)**

6G SNS

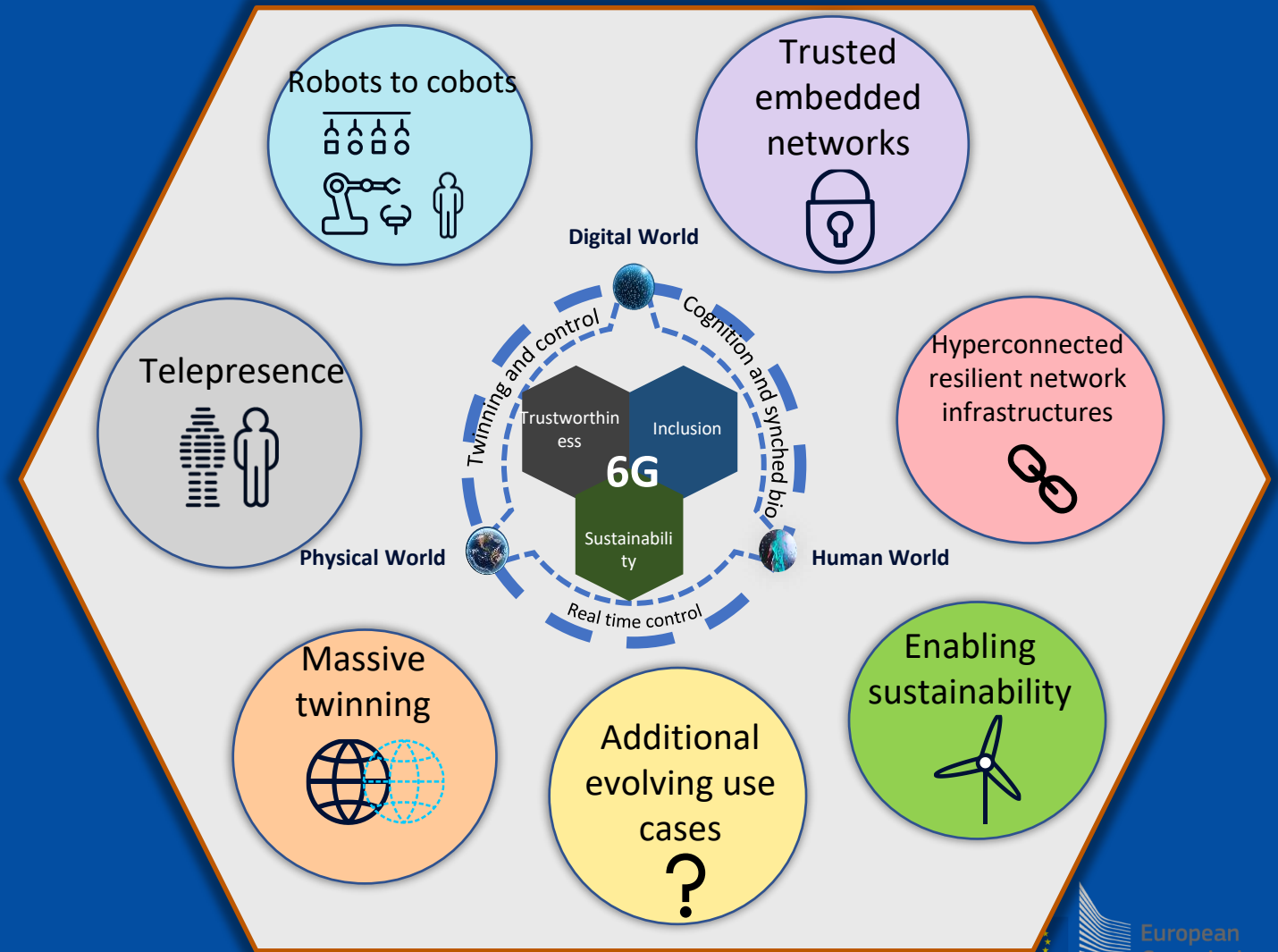
**6G Vision and R&I (Horizon)
across the broader supply chain**

- Tasks set by Council Regulation (2021/2085)
- EU upfront commitment of **EUR 900M** between 2021-2027 (to be at least matched by industry)
- Close involvement of Member States for strategic guidance
- Dedicated Programme Office
- CEF 2: Road and Rail Strategic Deployment Agendas
- Horizon Europe : Calls 1 and 2 - 63 Projects, EUR 380M, <https://smart-networks.europa.eu/project-portfolio/>

Hexa-X new services

New services:

- Compute-as-a-Service (CaaS) for resource-constrained devices
- AI-as-a-Service (AlaaS)
- AI-assisted Vehicle-to-Everything (V2X)
- Flexible device type change
- Energy-optimised services
- Internet-of-Tags
- Security as a service for other networks

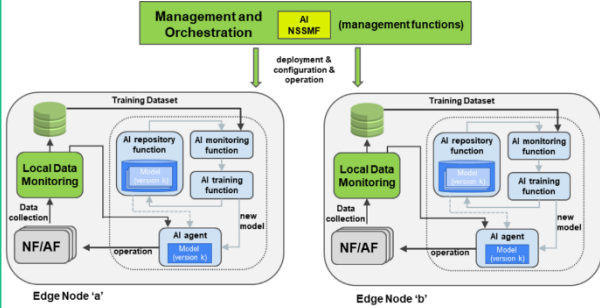


Network evolution and expansion towards 6G

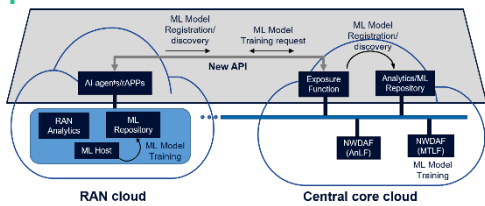


Intelligent networks

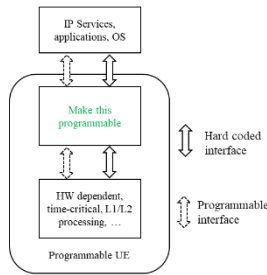
AI-assisted network automation



Analytics framework



Programmability

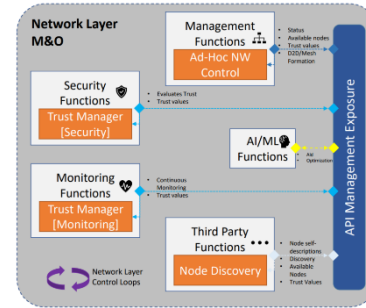


Federated explainable AI demo

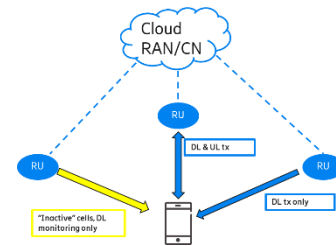


Flexible networks

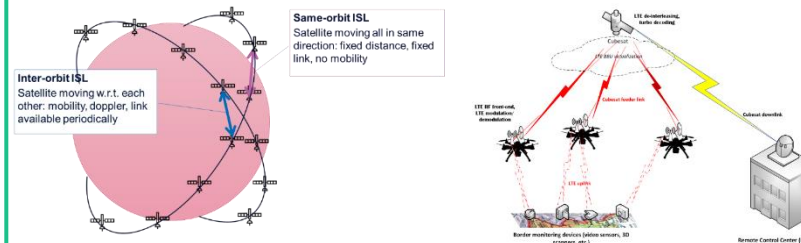
D2D/Mesh, Ad-hoc networks



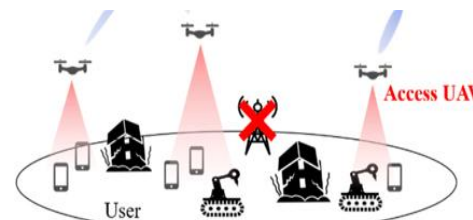
Multi-connectivity



Non-terrestrial networks

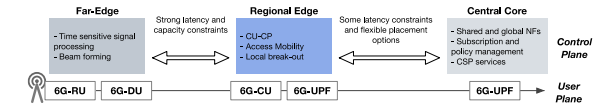


FLEX-TOP demo

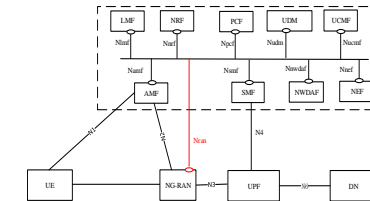


Service-based networks

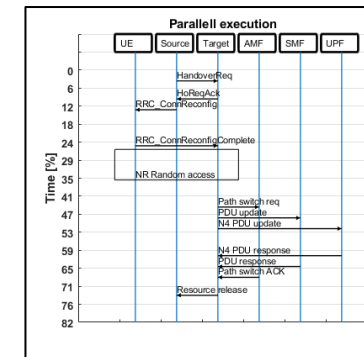
Function elasticity



RAN cloudification



Efficient signaling



Thank you



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