6G Architecture – Overview*
Hexa-X

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* Please expect changes

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Agenda

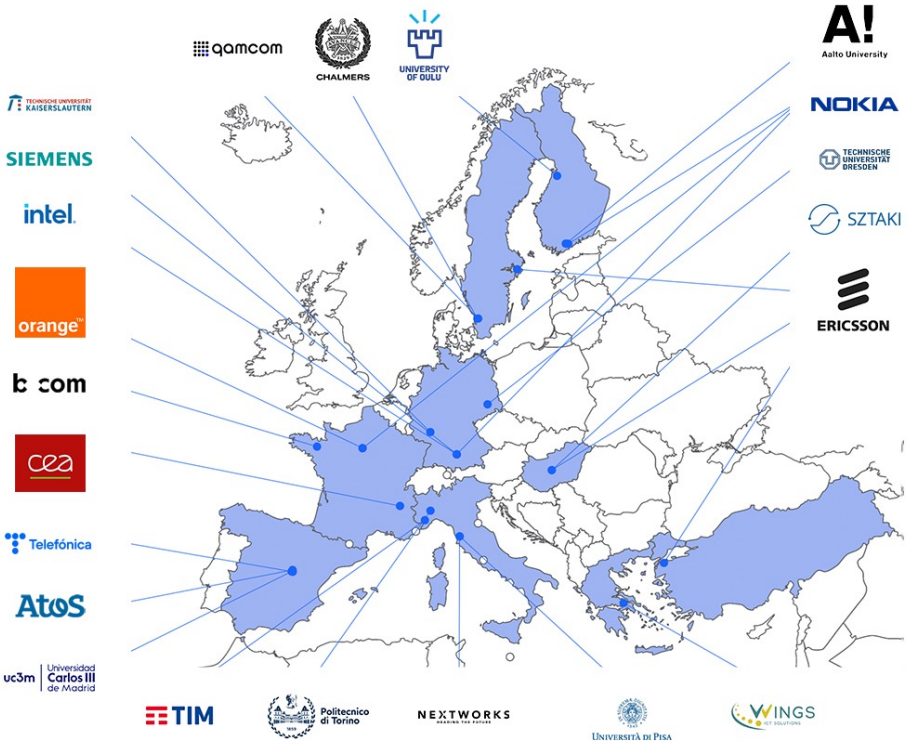
- What is Hexa-X
- Hexa-X Consortium
- 5G vs 6G
- Alignment with Standards
- Ecosystem Architecture Overview
- Extreme-Edge Integration

What is Hexa-X

will lay the foundation for the network of 2030 and develop long-term strategical roadmaps based on research outputs obtained within Hexa-X project as well as from other 6G projects

- **Connecting the worlds**
  - Physical
  - Digital
  - Biological
- **Management abstractions**
  - Intent-based management
  - MLOps – adaptation to varying circumstances
  - Automatic composition of service instances
- **Multiple platforms**
  - Support a variety of value networks
  - Platform agnostic service delivery

Hexa-X Consortium



5G vs 6G

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5G vs 6G

	5G	6G
Type of Service	Point to Point QoS Transport	Point-to-multipoint transport, compute services, sync services, AI services
Type of Resources	Communication	Communication + compute + sensing
Architecture Scope	Ran+CN	Terminal+RAN+CN
Cloud Native	Only CP in 5GC	E2E and cross-plane (User plane / Control plane / Management plane)
Microservices	No	Yes, E2E, all planes
Resource Awareness	Only air interface	Yes, all employed resources, including compute, transport, wireless
Trustworthiness	Trustworthy nodes	Trustworthy adaptive services/ network of networks
AI/ML Integration	Over-the-top	Natively Integrated
Admission Control	Access Control	Execution Control
Device/Node Disaggregation	CU/DU, IAB	Fully Flexible

Alignment with Standards

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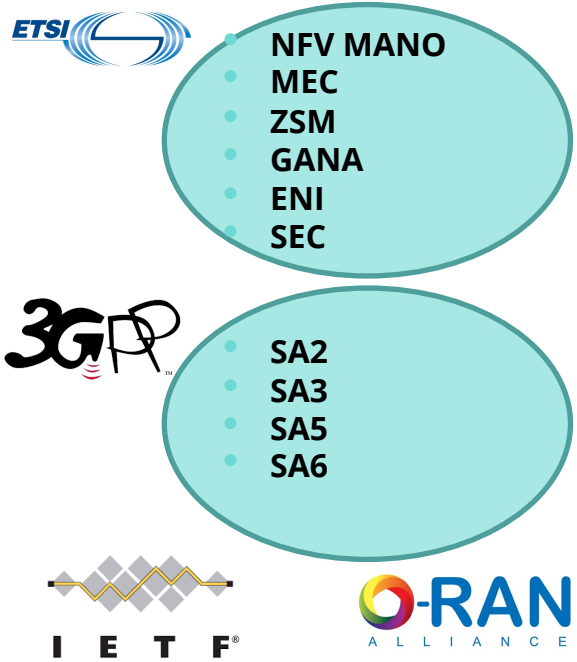
Standards from SDOs:



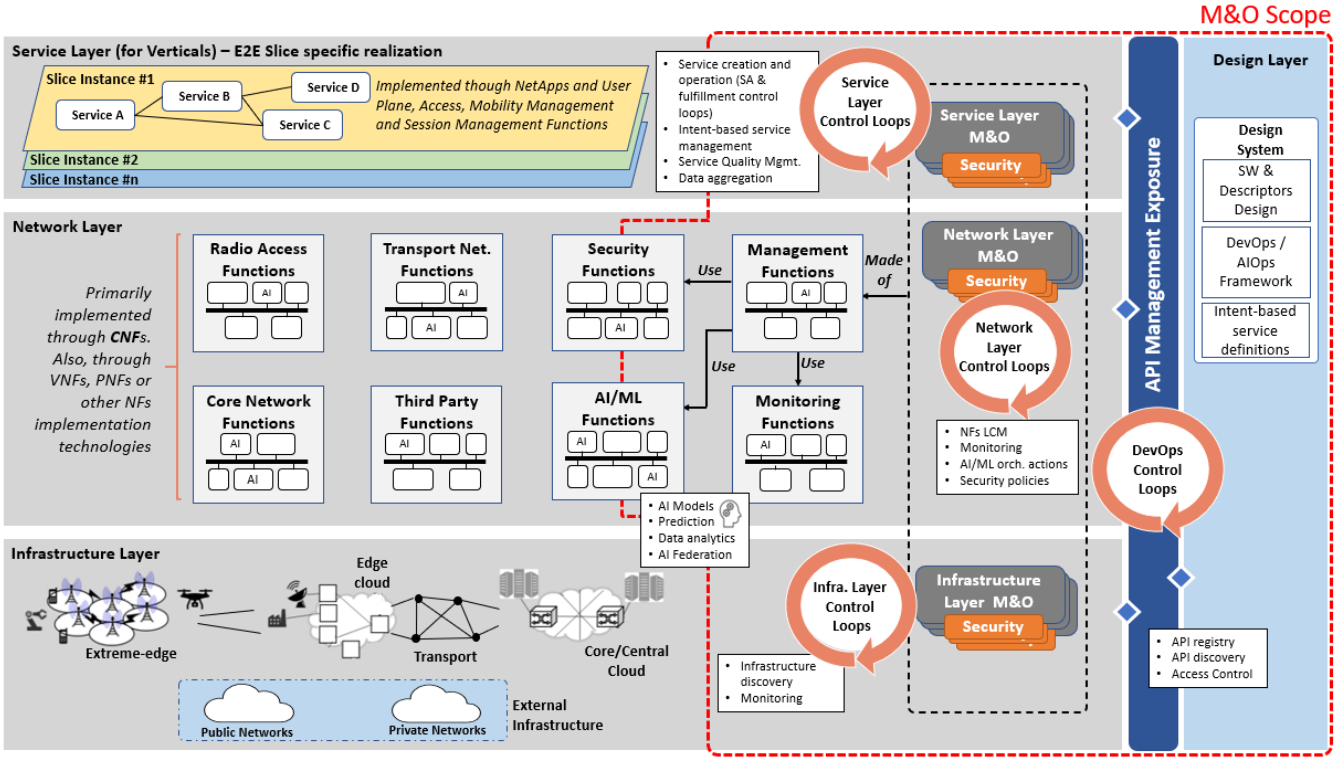
Industry Associations:

tmforum

GSMA

TELECOM INFRA PROJECT

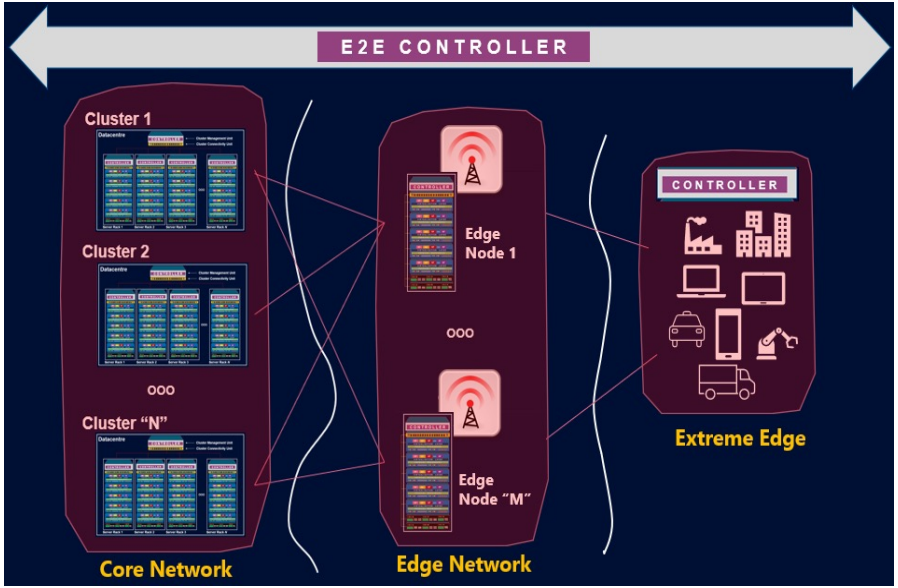
Ecosystem Architecture View



Extreme Edge Integration

Device-edge-cloud continuum management

- **Option 1 (federated lightweight controllers)**
  - Federated lightweight controllers directly installed on certain extreme-edge devices
- **Option 2 (“trusted” Management Units)**
  - Specific controllers installed on some edge nodes that would be specialised in certain sets of extreme-edge resources

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