



VISION PAPER ON THE FUTURE OF ELECTRONIC COMMUNICATION NETWORKS IN EUROPE

Traditional telecommunication networks are undergoing a major transformation into cloud-based, virtualised, and software-defined networks. This will enable the next generation of data-driven technologies, i.e. AI, Robotics, IoT, Web 3.0.

These technological developments will lead to significant changes in the digital ecosystem. Traditional players will need to adapt their business models in order to remain competitive, while new players will emerge from this transformation.

New technologies will require stable, reliable and resilient connectivity infrastructures, with heavy investment in 5G standalone and ubiquitous fibre. In turn, technologies such as network virtualisation, softwarisation and automation, standardised application programming interfaces (APIs), edge cloud, network slicing and open and interoperable networks, including Open RAN will enable the evolution of networks into highly programmable and disaggregated architectures.

On 21 February 2024, the European Commission published its White Paper on the future of digital infrastructure, in which it describes the transformation of the telecoms sector and the need for an ambitious industrial policy to support European leadership in advanced network technologies.

A policy framework enabling the transformation and competitiveness of the connectivity ecosystem:

- Scale and investment capacity are key to master the technological transformation:
 - The regulatory framework needs to adapt to technological changes and increasingly support investments, not only in network rollout but also network modernisation.
 - Without the necessary scale and investment capacity, the European industry will lack the resources necessary to ensure European competitiveness in the network space and the achievement of EU 2030 connectivity targets.
- Simplify the regulatory landscape to better enforce the Digital Single Market, removing barriers to achieve growth:
 - Varying legal standards and requirements and fragmented national markets are hampering innovation.
 - Legal and economic barriers are impeding growth. The regulatory framework should be efficient and fit for the future. The current regulatory requirements and obligations for ECN no longer correspond to the reality of today's markets and are in need of revision.
 - Unnecessary and additional regulatory burden should be avoided.
- Develop an ambitious industrial policy for the digital infrastructure value chain:
 - Ensure stable and future-proof research and investments in new technologies to foster innovation (e.g. network automation, AI/ML, quantum) and strengthen competitiveness
 - Allocate a dedicated budget for an ambitious industrial policy, covering the entire telecoms value chain from chips to network equipment, software, cloud, AI, and applications.
 - Establish a pan-European initiative that can bring together the telecoms ecosystem and streamline funding measures based on a coherent strategy. Make it simple: avoid lengthy bureaucratic processes and aim to foster the deployment of next generation connectivity infrastructure with a view to enable innovative use cases and technologies.

For questions and clarifications regarding this vision paper, please contact Benedict William Gromann (gromann@etno.eu), Policy Manager at ETNO.