



NL non-paper: Towards a strong and competitive European digital connectivity ecosystem

Summary

Connectivity should be regarded as an integral part of a wider European ecosystem of computing, high quality data and AI, which is crucial to limit European dependencies. We need to further develop a **comprehensive alternative European connectivity ecosystem**. This should be a **large, attractive, open, interoperable and federated ecosystem** consisting of individual larger and smaller European players, such as application developers, vendors, telecom and cloud providers.

We therefore need to **1) strengthen the regulatory framework, 2) maintain effective competition, and 3) realize a wider integrated European ecosystem of connectivity and computing**. This will strongly contribute to Europe's resilience and digital sovereignty in an open manner. This European alternative is not something that can be imposed solely through adjustments to the electronic communications framework, as this extends far beyond the telecommunication domain and requires **extensive public-private partnerships and co-operation** across the entire ecosystem.

The Netherlands highly appreciates the efforts of the Commission to successfully raise awareness around the importance of digital infrastructure in the context of Europe's current and future competitiveness and sovereignty in an open manner. We share the sense of urgency to address the substantial geopolitical challenges. The digital infrastructure spans from e.g. fixed and mobile networks, datacenters and computing capabilities to sub-sea cables and satcom.

World class 5G and fiber coverage is crucial, but only a starting point

The European telecom policy framework has in many respects been a **success story**: end-users benefit from affordable prices and can freely roam across Europe, while the EU is well underway to reach its Digital Decade goals on 5G and fiber roll-out.

Investment has been spurred by **competitive pressure**, not in the least from **new entrants**. Not only have new entrants deployed most of the fiber lines in Europe¹, their investments have also forced **incumbents** to start investing in fiber.

At the same time, we cannot simply maintain the current **status quo**, as Europe faces important **strategic challenges** in the context of the **geopolitical** situation and the weakening of Europe's position on **key technologies** compared to other regions. The different key technologies do not stand on their own, but are inextricably linked. For example, a leading position on **network technology** is difficult to conceive in the absence of a strong European position on **semiconductors, quantum technology, cloud technology, AI and cybersecurity**.²

Important steps have already been taken to strengthen the single market for telecommunications. Much has been achieved. However, we are far from ready and swiftly need to further develop a **truly European single market for telecommunication**. In order to build a **strong and competitive European connectivity ecosystem** we need to strengthen the regulatory framework, maintain effective competition, and realize a wider integrated European ecosystem of connectivity and computing. Avoiding unnecessary burdens for the industry is vital.

¹ See: FttH council 2024: [White Paper Contribution FTTH CE.pdf](#)

² See: [Financing the European digital economy | Tweede Kamer der Staten-Generaal](#), 16 December 2024.



1. Strengthen the regulatory framework

A single market should be about ensuring the **same rules apply everywhere**, and to ensure networks work **seamlessly** across the EU. The goal of single market policy is not to build a handful of very large pan-European telecom networks, as this is not a goal in itself. Cross-border consolidation is not the only possible nor the most feasible way to address fragmentation and reach optimal scale. More awareness among policymakers is needed about the main obstacle for cross-border consolidation in Europe: the highly significant post-merger integration costs. These are related to e.g. integrating complex operations and (legacy) ICT systems. Challenges with regard to fragmentation of telecom networks and reaching optimal scale can be addressed by **harmonization** and **interoperability**, as this allows individual networks and other participants in the **wider ecosystem** to reach optimal scale without a need to merge. The Netherlands is fully committed to strengthening the single market in the light of a strong and competitive European industry.

In the context of the Digital Networks Act and, where appropriate, other initiatives, we therefore call upon:

- The Commission to investigate in the context of the review of the European Electronic Communications Code (EECC) whether the EU can take further steps on harmonization by opting for strict **maximum harmonization** (putting an end to 'gold plating').
- The Commission, member states and relevant stakeholders to take stock of the main regulatory bottlenecks as a result of a **lack of harmonization** across member states to focus on the most important elements and make informed policy choices. The Commission can play a driving role in this stocktaking, for example via the review of the EECC.
- The Commission to investigate whether additional requirements are needed to support **permanent roaming** in the context of emerging applications such as Internet of Things, including the support of advanced Quality of Services (QoS) requirements across the EU. The evolution towards stand-alone 5G and 6G will lead to advanced QoS propositions that should also be made available in case of permanent roaming. This important step towards advanced pan-European connectivity should be part of the review of the **Roaming regulation**, which is currently limited to best effort service. In addition, further standardization efforts are needed to support quality of service across European networks.
- The Radio Spectrum Policy Group to identify opportunities for member states to further optimize co-operation on **spectrum policy** within the current structures and governance, and in doing so, support European vendors in achieving optimal economies of scale within the European single market.

2. Maintain effective competition

It is essential that the regulatory framework keeps a strong focus on **effective competition** as the main driver of investment and affordable, high quality services. **Access regulation** remains a necessary instrument for national regulatory authorities to warrant effective competition in all markets. The **end-user** should remain at the heart of European telecommunication regulation. A move towards a more **oligopolistic market model** with less competition and higher prices might be very attractive to larger European telecom companies from a business perspective. However, it would be harmful to European consumers and business users, European infrastructure quality, innovation and ultimately European competitiveness. **A resilient, secure, reliable and sustainable European digital infrastructure** is top priority, and we highly appreciate the commitment of the Commission to ensure this, in close co-operation with member states.

3. Bring together the wider ecosystem of connectivity and computing

The future of connectivity in the EU is of a highly strategic nature and goes well beyond fiber and 5G networks. As such it entails much more than telecom networks and services.



Connectivity has become inextricably linked to a **wider digital infrastructure ecosystem**.

Against the backdrop of a large uptake of smart, connected devices across all sectors and all parts of our society, connectivity and computing will become increasingly linked. Computing is expected to become less concentrated at hyperscale locations. Rather we can expect to see a **highly distributed architecture** where computing moves closer to end-users (to the '**edge**' but also '**on premise**' and '**on device**'). This will create a flexible pool of computing resources, which need to be made accessible through connectivity.

Connectivity and computing resources also need to cooperate seamlessly to meet the high requirements of AI powered applications in terms of e.g. latency, bandwidth, security, reliability or energy efficiency. Since this **combination of connectivity and computing** will thus constitute the infrastructure for **developing and applying AI** across the EU, it is of a highly strategic nature. This combination of computing and connectivity forms, together with the availability of high quality data, the backbone of AI. As such, it is of paramount importance in the light of Europe's digital sovereignty in an open manner. However, at the moment European companies cannot develop or deploy AI outside the closed ecosystems of non-EU hyperscalers.

This interplay between **connectivity and computing** and the need for **orchestrating** the two requires cooperation across the wider ecosystem. European players are lacking the scale of **hyperscalers**. It is unlikely that policy measures will actually induce European telecom players to merge into very large pan-European operators, let alone within a reasonable timeframe. Most importantly, the convergence of connectivity and computing reaches far beyond the telecommunication markets and their scale. Rather than emulating these hyperscalers, Europe should turn its lack of extremely large, monolithic and closed ecosystems into a competitive advantage by creating a European alternative: a **large, attractive, open, interoperable and federated ecosystem** consisting of individual larger and smaller European players, such as **application developers, vendors, telecom and cloud providers**. This will strongly contribute to Europe's resilience and digital sovereignty in an open manner. This European alternative is not something that can be imposed solely through adjustments to the electronic communications framework, as this extends far beyond the telecommunication domain and requires extensive public-private partnerships and co-operation across the entire ecosystem.

The Netherlands therefore calls upon:

- The Commission, member states and, where appropriate, financial institutions such as the EIB Group, to explore the possibility of facilitating **large scale investment** in cutting-edge cloud and connectivity infrastructure through ambitious **public-private partnerships** to contribute to an attractive alternative European ecosystem. The announced **EU Cloud and AI Development** and a **single EU-wide cloud policy** could be useful instruments subject to their further scoping (which is currently work in progress). **Public procurement** across Europe can be an important catalyst that needs to be exploited to its full potential. Therefore, the proposed introduction of a **European preference in public procurement** for strategic sectors as outlined in the Competitiveness Compass for the EU, needs to be assessed.
- The Commission and member states to build upon the achievements of **IPCEI CIS** (Cloud Infrastructure and Services) to establish a large, open, federated European cloud infrastructure, with more focus on deployment in the context of actual use-cases. We welcome the new IPCEIs that are currently being assessed and possibly developed, such as candidate **IPCEI ECI** (Edge-Computing Infrastructure and services). IPCEIs should target strategic technologies that demand EU-level action, with streamlined, swifter procedures that minimise administrative burdens.
- The Commission to facilitate **cooperation** among industry players to integrate distributed computing resources into 5G (and 6G) networks through e.g. **SNS-JU**.



- The Commission and member states to promote and coordinate the development of **cutting-edge applications** around smart connected devices and AI to **stimulate demand** and boost innovation through the exploration of **existing and new instruments** such as IPCEI, or the announced 'Apply AI' initiative. This should be aimed at **promoting use-cases** in all sectors and all parts of our society, from e-governance, smart manufacturing, smart grids, autonomous driving, e-health, precision agriculture, defense, to smart cities and many more. Developing demand as well as supply is a critical success factor.