
The aim of the exploratory consultation was to gather data and views on the technological and market developments, measures regarding fairness for consumers, barriers to the Single Market and the question regarding a fair contribution by all digital players benefitting from the digital transformation.

Innovation, Single Market, and Security: building Europe’s digital infrastructure of tomorrow

As a global tech race is taking place, Europe has thrown its hat into the ring with the regulatory framework and investments needed to foster innovation and technological leadership in areas such as online platforms, AI, data, cloud, quantum and virtual worlds.

For this technological revolution to succeed, we need to ensure that our networks are up to the task in terms of transmission speed, storage capacity, computing power and interoperability.

This is why we have consulted broadly on the infrastructure and investments required for our digital networks to support this tech revolution.

The answers of the consultation (https://ec.europa.eu/eusurvey/publication/Future_of_Connectivity) that we publish today provide the perspectives of telecom providers, broadcasters, cloud service providers and platforms, business associations, consumer organisations, citizens, non-governmental organisations, public authorities, trade unions and academics.

There are the three main take aways:

Takeaway 1: We need innovation and efficient investment

The overall feedback from the consultation is clear: network virtualisation, edge cloud, artificial intelligence and open networks are new technologies that will have a significant impact on the electronic communications sector. It is widely recognised that copper networks – originally designed for telephone calls – will have to give way to new infrastructures capable of transmitting not just a few kilobits or megabits of data per second, but gigabits and soon terabits (or even petabits) of data per second. We are talking about new software-based, highly programmable, cloud-native networks. The consultation feedback is clear: this transformation will have a significant impact on business and regulatory models, skills, infrastructures, security of vendors and of course investments.

The majority of respondents to the relevant question anticipate that, up to 50% of their annual revenues (which analysts currently estimate at around €300 billion per year for the EU telecoms sector) will have to be allocated over the next five years to meet the investment needs in connectivity infrastructure and replacement of high-risks vendors. Respondents consider that public funding is crucial to foster investments. Yet, views diverge on whether it will suffice to bridge the gap, and how to attract more private capital.
Several policy and funding initiatives have been put in place in the past years, including the Smart Networks and Services Joint Undertaking and the Alliance for Industrial Data, Edge and Cloud. Yet, to succeed in a fast-evolving landscape we need to ensure coherence and maximise the multiplier effect of EU actions on private investments, as we did for semiconductors under the Chips Act.

**Takeaway 2: We need to leverage the Single Market to boost investment and innovation**

The majority of respondents are clear: EU-wide regulatory streamlining and simplification can slash administrative costs and speed up infrastructure deployment. Among the examples provided, it is indicated that being able to operate on the basis of a single 5G core network across the EU, would result in benefits in the range of €200-300 million over the next five years. Moreover, most replies among telecom providers, platforms, business and consumer organisations indicate that a more harmonised approach to spectrum management would unlock larger market potential, making it easier to deploy cross-border services and driving investment and innovation.

It is clear from the respondents’ replies that exploiting economies of scale in the EU Single Market, and leveraging full access to 450 million European customers, would be key to overcome investment difficulties. The majority of the respondents agreed that the removal of obstacles, notably burdensome sectoral regulation, can facilitate cross-border consolidation and emergence of true Single Market.

Yet, the full integration of the telecoms Single Market is still hampered by the fragmentation of the sector into national markets. Public authorities’ input to the consultation confirms that achieving a unified regulatory approach that promotes fair competition and innovation remains a challenge.

**Takeaway 3: We need to secure our networks**

The third main element on which we see convergence of views among respondents is security. In the current interconnected world, with rising geopolitical tensions, we need to ensure full control over our decision-making processes in strategic sectors, such as connectivity, and avoid harmful external interference in our EU connectivity infrastructure.

The EU has come a long way in securing 5G networks, which are critical infrastructures in their own right. But there are important loopholes when it comes to securing our network infrastructure. For example, on spectrum, respondents underlined that a more coordinated European approach could improve coverage at our national border zones and considerably strengthen the EU in cases of harmful interference from third countries at our external borders.

The results of this exploratory consultation gave us a direction on where to dig deeper and engage in a thorough reflection on how to unleash the Single Market for digital networks and make our connectivity more secure and future-proof.

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The future of the electronic communications sector and its infrastructure
The Commission has launched an exploratory consultation to gather views on the potential developments of the connectivity sector and its infrastructure.

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