

# **GIGAEurope's Submission to the European Commission's Consultation on the Future of Connectivity**

## **SUMMARY**

May 2023

[GIGAEurope](#) commends the Commission's Future of Connectivity consultation on its efforts to tease out the complex interrelationships and interdependencies that exist across the digital and technology value chain. The connectivity market is at an important inflection point as a result of the progressive adoption of innovative network technologies, such as AI, IoT, cloud computing and virtual reality solutions. With content-hungry and performance-sensitive applications nearing the tipping point of mass market adoption, it is increasingly clear that the future evolution of the internet relies on high-quality connectivity.

As infrastructure competitors with a long-term investment horizon, GIGAEurope's members appreciate the Commission's efforts to think ahead and to forge a wide-ranging dialogue on the future evolution of Europe's connectivity sector. It is important to evaluate what the dynamic relationships along the digital value chain mean for the evolution of connectivity networks, and for the policies affecting that transition, over the next 10 years.

Last December, GIGAEurope called for an inclusive discussion on operationalising the path to the Digital Decade.<sup>1</sup> This is not only a case of fostering a more inclusive conversation between the different commercial actors along the value chain, but also about taking a more holistic view of the various regulatory policies that affect this sector and understanding how those policies interact with one another.

It is therefore welcome that the questionnaire seeks input on a variety of regulatory topics, including the remaining obstacles to the single market for electronic communications. This type of comprehensive exploratory exercise is a step in the right direction in terms of facilitating more joined up thinking about the policies and regulations needed to support new connectivity business models and a sustainable business case for globally competitive digital infrastructure in Europe.

Our common goal is the availability of Gigabit and 5G connections for citizens and businesses everywhere in the EU by 2030, whilst stimulating the delivery and uptake of innovative digital applications and preserving a healthy climate for private investment. These are essential building blocks to European users reaping the full socio-economic benefits enabled by future networks.

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<sup>1</sup> GIGAEurope (2022), GIGAEurope underlines focus needed on internet ecosystem to deliver on Europe's virtual worlds aims, available [here](#).

# 1. Technological and market developments: impacts on future networks and business models for electronic communications

Connectivity providers will need to re-dimension their businesses to support the performance-sensitive and bandwidth-hungry applications and technologies promised by the digital transformation over the next 10 years.<sup>2</sup> In addition to completing Gigabit and 5G network deployments, the focus will be on building capabilities in AI, data analytics, cloudification and virtualisation to accommodate unprecedented technological demands, such as guaranteeing ultra-low latency end-to-end.

For performance-sensitive applications (such as autonomous cars, remote surgery, digital twins and immersive gaming) to become a reality, investment-heavy fixed Gigabit and advanced 5G infrastructure must be installed at pace and scale. As latency requirements get lower, it also becomes more important to bring data processing/storage capabilities (edge computing) as close to the end users as possible.<sup>3</sup> **Barriers to the rollout of Gigabit, 5G and edge computing infrastructure could seriously compromise the realisation of ultra-low latency applications in Europe.**

Structurally, mobile and fixed network architectures will be adapted to **enable the provision of tailored network specifications** to support the quality demands of emerging applications, for example in the AR/VR space.<sup>4</sup> Network virtualisation will enable fundamental changes in network architectures allowing operators to, within the confines of net neutrality, **offer customized quality** in order to capitalize on future applications.

As noted by some analysts, operators will need to “adopt carefully calibrated downstream monetization models to avoid investing in infrastructure solely to derive commodity (data) revenues”.<sup>5</sup> They need to be able to explore business models that allow for a new commercial relation that can help support future heavy investments in network infrastructure. One route could involve adopting cloud-enabled **multi-sided business models**, whereby operators provide their **network as a service (NaaS)** to application providers allowing users to acquire and orchestrate network capabilities without owning, building, or maintaining their own infrastructure.<sup>6</sup> Participants across the internet value chain will need to have flexibility to explore new models of collaboration in order to unlock fresh propositions that create value for everyone, from businesses to end users.

In addition, operators will be under enormous pressure to address **potential security vulnerabilities** stemming from an expanded attack surface, due to the proliferation of devices, IoT intensification, transition to remote working environments, cloud-based digitalisation of business operations, as well as increasingly interconnected supply chains.<sup>7</sup>

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<sup>2</sup> BCG (2022), What Five Trends Mean for Telcos, available [here](#). As noted by BCG, “telco networks will need to be upgraded for a software-defined, cloud-heavy, so-called hyperplexed world”.

<sup>3</sup> Cambridge MC<sup>2</sup> (2021), Achieving Ultra-Reliable Networks in 2022: the Challenge of Delivering 5G & Low Latency, available [here](#).

<sup>4</sup> See GIGAEurope (2023), Response to the Commission’s Call for Evidence on Virtual Worlds, available [here](#).

<sup>5</sup> Arthur D. Little (2022), The Metaverse: What’s in it for Telcos? available [here](#).

<sup>6</sup> CISCO (2022), 2022 Global Networking Trends Report Special Edition: The State of SASE and The Rise of Networking as a Service (NaaS), available [here](#).

<sup>7</sup> Gartner (2022), 7 Top Security and Risk Trends in 2022, available [here](#).

The focus in policy and regulation until now has been predominantly on the development of affordable and high-performing best effort internet, while the applications of the future (e.g. innovative industrial, agricultural, health, educational and mobility applications) will require networks to deliver on other dimensions (such as low latency and jitter, guaranteed security and availability) in addition to high throughput. A **multi-dimensional policy focus** is thus needed to ensure that quality assured end-to-end internet services can develop in parallel to best effort internet services going forward.

Finally, as regards the sector's environmental footprint, Gigabit and 5G technologies will be key to managing the ICT industry's overall energy usage and carbon footprint, as well as to **enabling vitally important decarbonisation initiatives and innovations**. Research shows that the sector could deliver emissions savings estimated at seven times the growth in its own carbon footprint between 2019 and 2030. The overall ICT-enabled reduction could even amount to 9% of total world emissions.<sup>8</sup>

## 2. Fairness for consumers

Consumers in Europe have stood to benefit from the **deflationary trend** in the connectivity sector over many years. Strong (infrastructure-based) competition has led to affordable retail prices and customer bundles are consistently being upgraded to higher speeds and higher bandwidth allowances at no extra charge. GIGAEurope sees no indication that this trend will be reversed.

GIGAEurope believes that the **universal service concept must be implemented in a technology neutral manner** and its role should be confined to **supporting basic connectivity services** to ensure an adequate level of social inclusion and participation. GIGAEurope is concerned about a tendency of national regulators and consumer associations in certain markets to widen the scope of application of this tool, thereby encroaching into both private and public sector roll-out. Universal service should not be expanded to achieve other policy objectives that can be more efficiently achieved through private initiatives or through available public funds.

Going forward, this **concept may become obsolete** as connectivity infrastructure competition is driving continuous private investments in the availability of networks, as well as ensuring that basic broadband subscriptions remain at an affordable level. Availability and affordability of basic broadband in less competitive (remote and rural) areas can be effectively addressed by other means, such as subsidised network rollouts via the state aid rules, as well as using measures like broadband vouchers (introduced under the revised Broadband State Aid Guidelines) to stimulate take-up, along with the many other voluntary social broadband plans that operators put in place to alleviate pressures from the cost-of-living crisis.

## 3. Barriers to the Single Market

GIGAEurope believes that there remain significant obstacles to the internal market that negatively impact the ability for operators to gain scale and cost efficiencies and to accelerate investment in the rollout of Gigabit and 5G networks across the EU. This has contributed to a funding gap of around

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<sup>8</sup> GeSI and Deloitte (2019), Digital with Purpose: Delivering a SMARTer2030, available [here](#).

€174bn for the Digital Decade goals, according to recent estimates by the Commission.<sup>9</sup> Therefore, as a matter of urgency, the following situations need to be addressed:

- The inefficiency and variability of **cost, time and administrative hurdles** regarding network deployment across Member States is widely recognised as a major obstacle to the completion of the Single Market. National red tape and divergent procedures continue to delay and impede network roll-out, which should be addressed through a swift agreement and implementation of the Gigabit Infrastructure Act.<sup>10</sup>
- Differences in transposition and implementation of the European Electronic Communications Code (EECC), e.g. **slow and piecemeal implementation of the investment-friendly spectrum provisions** of the EECC, as well as fragmented approaches to enforcement, lead to a need to localise contracts and compliance procedures.
- Legal ambiguities regarding the **flexibility to innovate and to pursue different commercially-driven business models** across the EU risk stifling important innovations.
- Assessments of **in-market consolidation** lack a forward-looking and longer-term perspective. Network rollout requires a minimum investment with a consequent need to attain a minimum effective scale in the initial deployment area as a condition for greater cross-border expansion/consolidation. GIGAEurope also urges a **multi-dimensional approach to measuring consumer welfare in digital markets** to ensure that other dynamic variables that affect consumer wellbeing, such as network quality and resilience, are given due consideration in addition to static price effects, even if not easily quantifiable.
- Finally, the lack of a coherent European legislative framework regarding the **security and resilience** of ICT infrastructures contributes to legal uncertainty. The cost and complexity of guaranteeing the necessary cyber defence mechanisms would further speak in favour of facilitating upscaling of European telecoms operators to ensure the resources and capabilities are available to support the magnitude of the investments needed.

With regard to establishing an effective internal market for spectrum, GIGAEurope advocates:

- A **binding, harmonized approach to spectrum management**, which would: (i) licence only the number of players that are viable in the market long-term; (ii) provide licensing terms that support investment objectives, such as avoiding over-inflated spectrum reserve prices; (iii) facilitate an efficient market for trading of spectrum; (iv) make existing spectrum licences at least renewable over the long term; and (v) set annual spectrum fees across Europe at a (minimum) level so as to not undermine ongoing investment incentives.
- An **ability for stakeholders to request Commission involvement** in situations where concerns about spectrum awards arise could also prove useful to facilitating an internal market for spectrum.

As regards an **EU level spectrum licensing/authorization scheme**, mentioned as a possible internal market solution, GIGAEurope believes this **would create additional complexity** as different

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<sup>9</sup> GIGAEurope / EURACTIV (2023), Interconnecting the Connectivity Talks, available [here](#).

<sup>10</sup> See GIGAEurope (2023), Feedback on the European Commission's Proposal for a Gigabit Infrastructure Act, available [here](#).

Member States have different priorities for spectrum allocation and the business case for securing spectrum licences varies by market - depending inter alia on availability, competitive demand, existing frequency allocations (across bands and operators), national network costing factors, and end market capacity needs.

Regarding the **harmonization of technical conditions for spectrum usage** in Europe, GIGAEurope believes there is a **well-established process** based on service and technology neutrality. The currently established European process is well suited to allowing for the **involvement of all relevant stakeholders** and thus enabling Europe to be best prepared for international negotiations. The ongoing debate on the upper 6Ghz band nevertheless shows that divergences across Member States may still arise. GIGAEurope therefore believes that:

- **Core representatives of the European Commission and EU Member States in the Radio Spectrum Policy Group (RSPG)** should provide a **clear opinion on spectrum matters** for the EU Member States to adopt.

#### **4. Fair contribution by all digital players**

GIGAEurope **supports the shared responsibility among all ecosystem players** to secure a viable future internet platform, as set out in the Digital Rights Declaration.

Changed traffic, functionality, and content usage trends call for reflection about the future internet platform and the role and responsibility of the underlying ecosystem players. There is an increasing recognition across the digital and technology value chain that we are all part of an interdependent system. Gigabit connectivity providers are key enablers for other digital players, by providing the essential or backbone connectivity infrastructure for content services and applications. Because of their proximity to the customer and long-standing customer relationship experience, connectivity providers have an urgent interest in resolving any commercial issues arising from disproportionate asymmetric data volumes on their infrastructure in order to warrant a high-quality customer experience going forward. An inherent condition of any contribution mechanism would entail a need to ensure that contributions flow into network investments, including coverage/capacity expansions of very high capacity networks, to support the development of a sustainable internet ecosystem.

GIGAEurope therefore calls on policymakers to adopt a '**whole-ecosystem mindset**' to support the future internet and to ensure balanced regulatory conditions across the entire value chain.

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