

**Fédération Française des Télécoms views regarding the Commission’s White Paper
« How to master Europe’s digital infrastructure needs? »**

June 2024

Foreword

Established on 24th September 2007, the French Telecoms Federation (Fédération Française des Télécoms, hereinafter “FFTélécoms”) represents the electronic communications operators in France. Its missions are to promote an innovative and responsible industry with respect to society, the environment, people and businesses, to protect the economic interests of the sector and to promote the image of its members and of the profession at national and international level.

To fulfil these missions, and with the interests of its members in mind, the Federation coordinates a continuous and structured dialogue with all public and private stakeholders. Furthermore, it ensures the highest standards of representation for the sector in issues of common interest, complying with competition law.

FFTélécoms welcomes the opportunity to respond to the public consultation on the White Paper "How to master Europe's digital infrastructure needs?" (hereinafter “the White Paper”) published by the Commission on February 21, 2024. As the telecommunications sector in Europe stands at a breaking point both technologically and financially, we commend the White Paper's commitment to addressing these challenges and ensuring European operators' ability to invest significantly and sustainably in digital infrastructures, which are crucial for the future of European innovation and competitiveness.

In a context where digital infrastructures are faced with ever-increasing levels of data-traffic generated by a small number of large content and applications providers, leading to network investment costs for operators and environmental costs, we fully support several levers identified within the White Paper to reinforce fairness within the evolving digital ecosystem and to promote greater efficiency in network usage, with the aim of successfully achieving the digital and green transition.

Regarding the deepening of the single market and regulatory review, we advocate for pursuing a modern yet rational strategic path. As a professional federation representing the electronic communications sector in France, FFTélécoms urges the European Commission to ensure that any update to the regulatory regime effectively supports network investment and does not negatively impact or dismantle workable solutions that incentivize fibre rollout, as exemplified by the French symmetric framework for fibre.

We welcome the Commission's proposals for greater harmonization, for example with regard to spectrum policy, and believe that achieving internal market integration requires harmonization of the regulatory framework in many areas, beyond infrastructure considerations.

Finally, some proposals call for closer examination, or raise concerns, as they seem irrelevant or unrelated or counterproductive to the objectives set.

Fédération Française des Télécoms and its members have welcomed with great attention the White Paper published by the Commission on February 21, 2024, as it builds on works initiated since the exploratory consultation on the future of the electronic communications sector and its infrastructure, in which operators were actively engaged.

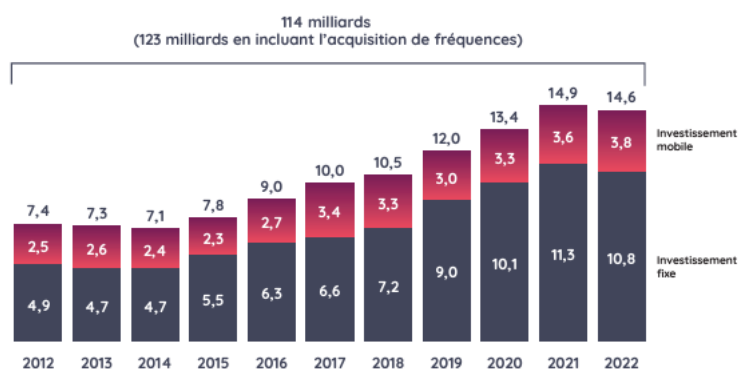
Echoing operators' persistent calls for public authorities to take action in order to guarantee Europe's digital and green transition in the upcoming years, **the White Paper reflects FFTélécoms' members shared perspectives on critical issues regarding the sector's present and future situation, as it stands at a breaking point both technologically and financially.**

Thanks to the enhanced capabilities they offer, next-generation networks, including FTTH and 5G, serve as catalysts for innovation and economic growth, as they are the underlying platform for accelerating the development of cutting-edge technologies like edge-cloud computing, IoT solutions and AI models. Such developments underline the critical importance of electronic communication networks in strengthening the competitiveness of the European Union, better serving the European customers, and reducing asymmetries in digital dependencies with third countries.

Softwarization and virtualization of network functions, as well as the creation of cloud-native and disaggregated network architectures are also part of the major developments that will affect the ecosystem in the coming years. These trends open up new opportunities for European services but also deliver the potential threat that external non-European players will be most financially fit to exploit them, as hyperscalers are increasingly entering the various segment of the value chain.

For telcos, the main challenge is therefore to maintain high network investments in order to unlock these technologies, while meeting deployment objectives and modernizing their networks in order to accommodate an ever-increasing level of traffic, generated by online services and the exponential growth of video content.

Indeed, operators are already facing a massive increase in investment needs to improve network capacity in response to the explosion of inbound traffic¹ - particularly from certain major content and application providers, who alone account for over 50% of traffic².



*Fig. 1 : Investments in fixed and mobile networks in France, 2013 – 2022
(Source : étude économique 2023 ADL, FFTélécoms)*

¹ According to Arcep ([Baromètre de l'interconnexion de données en France, juillet 2023](#)), inbound traffic at the interconnection to the main ISPs in France increased almost 20-fold between H1-2012 and H2 2022.

² According to Arcep (ibid), the 5 largest players account for 54% of traffic in France.

While European operators have already spent several hundred billion euros over a decade, including nearly 114 billion euros in France only – without counting the cost of spectrum, there is no guarantee that networks can keep pace with these trends.

Faced with these constraints, operators are grappling with declining revenues³ and low returns on capital, exacerbated by intense competition in the retail markets, slowing down the Digital Decade coverage objectives decided at EU level. The electronic communications sector is furthermore subject to particularly heavy specific taxes and levies, amounting to 1.5 billion euros in France in 2022, which represent value that is not allocated to infrastructure investment.

The valuation of European telecommunications operators in relation to their revenues is thus not only substantially lower than that of key players in the digital value chain, but also lower than that of non-European operators.

This challenging economic climate compromises Europeans operators’ ability to invest significantly and sustainably in digital infrastructures, hindering the long-term viability of networks.

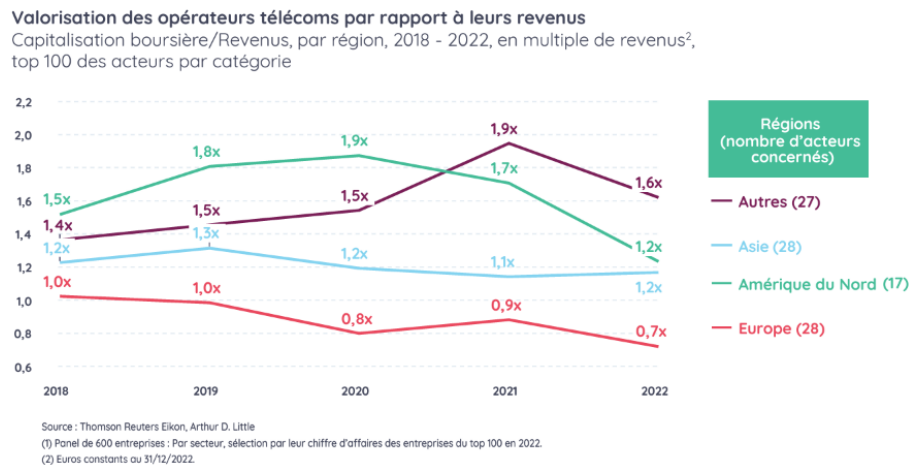


Fig.2: Valuation of telecommunications operators in relation to their revenues, 2018 – 2022
(source: étude économique 2023 ADL, FFTélécoms)

In the short term and without additional incentives, there is especially a looming risk of Europe failing to meet its digital targets, thereby jeopardizing its competitiveness and economic growth compared to other leading regions.

The White paper clearly points out that according to a recent study conducted for the European Commission **reaching current Digital Decade targets for Gigabit connectivity and 5G may require a total investment of up to 200 billion euros⁴**, and that “*under current trends, and without further investment and incentives, the targets are unlikely to be met by 2030*”⁵

³ While the ARPU (Average Revenue Per User) for American operators was €42.5 on mobile and €58.6 on fixed lines in 2022, it stood respectively at €15 and €22.8 for European operators, nearly three times lower. These lower revenues translate into a diminished investment capacity, capex per capita being more than two times higher in the US than in Europe (source: “The State of Digital Communications, 2024”, ETNO).

⁴ <https://digital-strategy.ec.europa.eu/en/library/investment-and-funding-needs-digital-decade-connectivity-targets>

⁵ White paper, “How to master Europe's digital infrastructure needs?”, p.7.

In light of these challenges, it is imperative for policymakers to adapt regulatory frameworks to stimulate investments and foster innovation within network infrastructure. Electronic communications infrastructures play a vital role in shaping the future of the European economy, contributing significantly to the GDP⁶ and serving as the cornerstone for the digital and green transition of European society.

The European Commission's White Paper on Connectivity is a welcomed initiative in this regard, offering a comprehensive assessment of Europe's connectivity landscape and advocating for increased investment levels, thereby maximizing benefits for European citizens and businesses.

Enrico Letta's report, "Much More Than a Market", which the Heads of State or Government, as well as European Commission President have welcomed with interest, along with operators, also supports the Commission's White Paper and echoes many of the sector's demands, recognizing the crucial role it has to play for the EU competitiveness and economy, green transition, innovation and resilience of the Union. The report, highlighting the evolution of global digital markets and the resulting unbalanced relationship between telcos and large online platforms, specifically calls for harmonized regulations within the market in order to bridge the growing connectivity investment gap.

The White Paper is a first step on the road to addressing the challenges faced by the telecommunications sector. It should be followed by urgent concrete actions as mentioned in the Letta report. FFTélécoms, committed to engaging constructively with policymakers to navigate these challenges and unlock the full potential of Europe's digital future, hereafter reviews the main action levers considered by the Commission.

1. Supported measures and scenarios to enhance fairness within the ecosystem, in favor of infrastructure investment and sustainability

The issue of asymmetries – both regulatory and in market power – among the stakeholders within the value chain, to the detriment of telecommunications operators, emerges as a critical concern within the White Paper.

Among these stakeholders, some are “hyperscalers” diversifying their activities along the value chain and some are major digital players, known as Big Techs and relying on so-called “attention economy” dynamics, driving exponential growth in usage. The latter entities currently benefit from a quasi “free riding statute”/“zero-cost economy,” as internet players today do not bear the costs associated with their network usage. Consequently, asymmetries enable these entities to generate network investment costs onto operators and environmental costs that they are not required to limit or directly bear.

The White Paper highlights several levers to address this situation, which FFTélécoms commends. These levers offer potential avenues for correcting the existing imbalances and ensure effective fairness within the digital ecosystem. By addressing these disparities, policymakers could foster a more equitable environment that encourages innovation, investment, and sustainable growth for all stakeholders involved in the sector.

⁶ White paper, “How to master Europe's digital infrastructure needs?”, p.3.

1.1. Restoring fairness through the implementation of a level playing field across the connectivity and digital value chains

In today's fast-changing landscape, the dynamics of the connectivity value chain have undergone significant shifts, requiring a reassessment of the relationships between operators and tech companies, and calling for a revision of current frameworks.

In this regard, we believe that the inclusion of new dimensions within the objectives of the Code, such as sustainability - including related to climate change -, industrial competitiveness, and economic security, deserves to be examined to address the new challenges facing the sector, while safeguarding and reinforcing investment objectives.

Operators also fully agree with the need to recognize the role and responsibilities of tech companies in the connectivity value chain, especially in light of current asymmetries in regulation and market power. **Measures to ensure fairness in the ecosystem must be implemented, given the significant impact of these players on connectivity.**

One pressing issue acknowledged by the White Paper is indeed the changing nature of the relationships between electronic communications operators and very large content and applications providers, that now interact way more directly due to the rapid expansion and growth of the latter. By the position they have in adjacent markets, the unavoidable nature of their content for end-users and the pressures they can exert on telecom services providers, these large traffic generators have real market power to maintain the status quo, with unbalanced contractual conditions for operators to terminate traffic. Regulatory wise and considering the consumers impact, operators cannot cut off or degrade the QoS, and if they want to negotiate better tariffs that truly cover the capacity costs incurred, they run the risk of being caught between the ability of Large Traffic Generators to divert their traffic through other routes and the associated degraded QoS for customers, for which operators will be blamed.

This asymmetry, fueled by differences in scale, scope, and regulatory constraints, poses significant challenges for operators seeking fair agreements that cover the costs incurred and has shown the need to regulate negotiations through a harmonized framework.

In this regard, **FFTélécoms welcomes the Commissions' proposal to consider policy measures in order to facilitate agreements between operators and content providers by "providing a specific timeline" and the possibility "for requests for dispute resolution mechanisms"**⁷. Establishing efficient and timely dispute resolution mechanisms, with the involvement of regulatory authorities and following guidelines aimed at ensuring fair compensation of network usage costs would be a key lever for addressing commercial disputes and promoting investment in network infrastructure.

Furthermore, to strengthen the affirmation of greater fairness within digital ecosystem and to reduce regulatory asymmetry, we believe that the application of the Open Internet principles to the ICT value chain, which today only apply to internet access providers, has to be seriously considered to effectively foster fairness.

We also believe that the Commission could provide further clarification regarding the implementation of the Open Internet Regulation to specialized services and to novel use cases such as those relying on

⁷ White paper, "How to master Europe's digital infrastructure needs?", p.26.

5G slicing technology or on network-as-a-service development, through the issuance of recommendations. A forward-looking approach is needed to provide more regulatory certainty to operators, eventually promoting investment and innovation in an evolving digital landscape.

Regarding the Commission's proposal to extend the scope of the European Electronic Communications Code to cloud providers, we hereby express the **need for further clarification regarding the precise nature of stakeholders targeted by such an extension and how it would be implemented**.

Additionally, we believe the EC should further assess some other issues related to cloud services currently not addressed in the white paper (such as switching costs and data portability for “custom built” cloud solutions, etc.), in order to be an effective approach in rebalancing relationships within the value chain.

Finally, when looking at fairness in the value chain the White Paper also mentions the issue of the universal service. In our opinion, the universal service regime has lost its effectiveness over time, as the goals of availability, accessibility and affordability have been largely met by the market. In case of risk of social exclusion, we consider that demand subsidies or vouchers granted directly by public authorities would be more justified and efficient than sector financing.

1.2. Enforcing the optimization of digital services as a lever towards a fairer and greener ecosystem

FTTélécoms commends the Commission's White Paper for its proactive stance on addressing sustainability challenges for the digital ecosystem and European economy, facing green transition imperative.

As stated, the digital infrastructure and electronic communications sector plays a pivotal role in environmental transition efforts, with the potential to significantly reduce global emissions by up to 15%, if properly used and governed.

French operators have already demonstrated their commitment to sustainability through initiatives like the voluntary charter for sustainable digital development, aiming to eliminate, reduce, or offset all Scope 1 and 2 emissions by 2040. The telecoms sector is making a major contribution to reducing the environmental impact of facilities with the replacement of legacy technology by modern equipment, which is more energy efficient. In this regard, **the inclusion of connectivity networks in the EU Taxonomy for sustainable finance could mark a positive step towards directing financing to green activities and recognizing the environmental contributions of telecommunications networks**.

However, despite the continuous efforts of operators to invest in the most efficient technologies to provide new services, optimize their networks and replace obsolete infrastructure, the costs entailed by a very sustained growth in data traffic (25% per year⁸), largely driven by a few digital giants, remain huge and borne essentially by telecom operators. As video streaming stands for more than 70% of the costs of an efficient mobile telecom operator, this situation crowds-out investment towards continuous

⁸ See Arthur D Little: [The Evolution of Data Growth in Europe](#), May 2023. (Measured in gigabytes per month per user (GB/month), consumption has increased from approximately 5 GB/month in 2018 to 15 GB/month in 2022, for a growth rate of 25%. [It is expected] to continue growing in the coming years, increasing from the 2022 level of approximately 15 GB/month to 75 GB/month by 2030)

capacity upgrades in the most densely populated areas and affects the ability to invest in coverage and to innovate in new services.

Absent any efforts from content providers to ecodesign, or, in another words, to optimize the weight of their services by default, the current situation's inefficiency is holding back the transition to a more sustainable digital future. As stated in the White Paper, it is crucial to ensure success in achieving sustainability objectives that all players, including content and application providers, cooperate towards an efficient use of resources while meeting energy needs.

Indeed, some of these services, designed to increase consumption and providing mainly for video content, have adopted data intensive and environmentally harmful practices, such as:

- Auto-play, i.e. the launch of videos by default to increase content delivery.
- Pre-loading ads, with the objective to increase the monetization of the platform's audiences, thus generating mostly unnecessary data traffic.
- Ultra-high-definition videos by default with very low to no incremental value to users, especially on mobile.⁹
- Attention capture strategy to fuel screentime and data consumption.
- Unsolicited content provision and traffic exchange, e.g., background services, imposed videos associated to audio-only use.

Solutions to optimize data consumption already exist on the shelf:

- Video compression technologies and protocols (Codec, VABR).
- Adapted default video resolution settings to the user environment (video profile selection).
- Optimized use of infrastructures and protocols (Open caching, M-ABR).
- End-user empowerment in content selection and data exchange control features.

All of which, and more, are already encouraged in France within the general policy framework governing the eco-design of digital services issued by telecom regulator, Arcep, and digital regulator, Arcom, with the objective to "Decrease the IT resources mobilized over the digital service's life cycle, including by optimizing data traffic and digital infrastructure use".¹⁰

Nonetheless, the players whose services continuously increase pressure on networks are not incentivized to adopt sobriety in content design and provision and are currently under no incentive nor obligation to implement it or to collaborate with network providers to optimize network use.

FFTélécoms therefore fully supports the White Paper's proposal to **promote a more efficient use of networks (scenario 7) by default. In that sense, we believe one of the most efficient ways to ensure a better usage of bandwidth is to implement an economic signal for large traffic generators, in order to reduce the environmental and investment cost they generate on networks.**

We also support the **initiative to enforce greater transparency**, based on mandatory standards in line with Telecom Council conclusions regarding the environmental impact and emissions related to the

⁹ According to Ericson Mobility Report (2023), the bandwidth consumption of a 4K UHD video is six times greater than that of a 1080p full HD video, for an almost equivalent quality of experience felt by the user.

¹⁰ ARCEP, ARCOM, in connection with ADEME, DINUM, CNIL, and INRIA, May 2024. *General Policy Framework for the Ecodesign of Digital Services*. General policy framework for the ecodesign of digital services version 2024 (arcep.fr)

usage of digital services¹¹. This will enable to quantify and reveal the potential of traffic optimization from eco-design - based on European standards - and its enablement effect on diminishing the digital value chain environmental footprint. **Achieving sustainability objectives and mitigating the increase in carbon emissions caused by ever-increasing demand for traffic therefore requires greater responsibility and accountability from all digital players, through mandatory standards and/or pricing incentives to embrace sustainable practices.**

As the industry moves towards achieving net-zero emissions, it also becomes increasingly important to **engage with equipment suppliers to address emissions throughout the supply chain**. For many operators, a significant portion of emissions resides upstream in the supply chain, necessitating collaboration with suppliers to adopt more environmentally friendly practices. This includes energy-efficient manufacturing, transport, and storage methods, as well as embracing circular economy principles.

2. Regarding the deepening of the single market and regulatory review: the importance of pursuing a modern yet rational strategic path

In addition to the considered regulatory framework updates aimed at addressing ecosystem mutation and rectifying resulting imbalances that could jeopardize the future of European networks, the White Paper puts forth several scenarios to change the regulatory paradigm and facilitate the single market, particularly affecting access regulation and authorization regimes, which raise the following remarks.

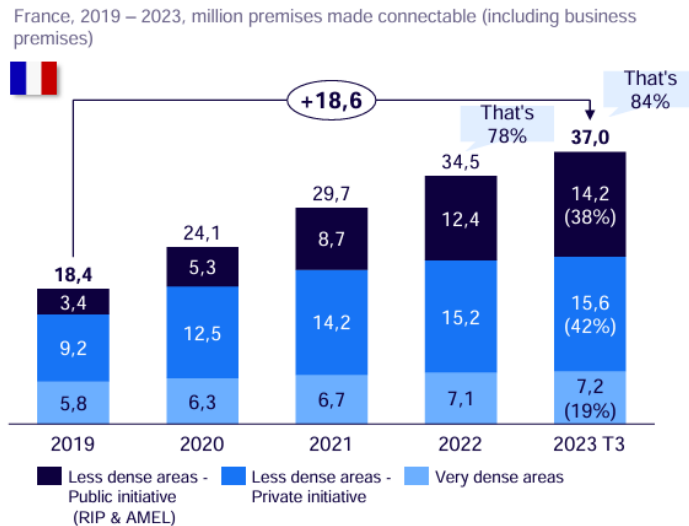
2.1. Symmetric regulation in a context of full fibre delivers numerous advantages

As a professional federation representing the electronic communications sector in France, FFTélécoms does not intend to address all the competitive policy issues raised by the White Paper.

However, in light of the proposed changes to access regulation and within the context of a full transition from legacy technologies to a full fibre environment, **FFTélécoms wishes to emphasize the effectiveness of a “symmetric” regulatory framework for optical fibre, as for instance implemented in France**. This framework, that requires infrastructure operators to provide passive access offers to commercial operators, sets up obligations related to pricing, network architecture, and information exchange, ensure fair and effective competition to the benefit of users while avoiding overbuild. It creates the conditions for the total substitution of the historic copper network with fibre, France being the most advanced country in Europe in term of deployment.

This symmetrical access regulation, which is clearly distinct and more thorough than the provisions set forth by the recent Gigabit Infrastructure Act, is enshrined in article L.34-8-3 of the *Code des Postes et des Communications Electroniques*, consistent with the **article 61-3 of the European Electronic Communications Code**. It plays a pivotal role in ensuring the conditions for effective network deployments and coverage and **should thus be safeguarded**.

¹¹ Transport, Telecommunications and Energy Council (Telecommunications), 21 May 2024. *Council conclusions on the future of EU digital policy*, §35. <https://data.consilium.europa.eu/doc/document/ST-9957-2024-INIT/en/pdf>



Source: Arcep (Market Observatory, Q3 2023, provisional results), Data.gouv.fr, FttH Council of Europe Panorama 2022, Arthur D. Little

Fig.3: Deployment of very high-speed broadband in France Eligible premises in FttH/B (source: étude économique 2023, FFTélécoms)

In this respect, the French regulatory framework forms the basis for the success of the *France Très Haut plan* in fibre deployment and allows for the realization of ambitious very high-speed broadband deployment objectives, including in more remote areas of the country. With the ever-increasing investments from operators within this regulatory framework, the availability of fibre in France has increased very swiftly in recent years while offering some of the lowest prices to customers in Europe, strengthening the **affordability, availability and accessibility of connectivity for all**.

We deem therefore essential that when moving into in a full fibre environment, the EC acknowledges the importance and relevance of symmetric rules. When assessing the next steps following the White Paper consultation, we also call on the EC to ensure any update of the regulatory regime does not negatively impact or break workable solutions to incentive fibre roll out as has been the French symmetric framework for fibre.

Finally, considering the proposal in scenario 5 of a European wholesale access product by the Commission to complement or replace the national approach in policy access, FFTélécoms believes that a European wholesale access product will not help to significantly address the digital single market issues and should in any case not increase constraints with further regulation at EU level.

2.2. Regarding the various pathways to consider and issues to address in the integration of the single market for electronic communications

Spectrum policy

FFTélécoms welcomes with interest the measures proposed by the Commission regarding spectrum authorization processes, as adopting a more investment-friendly and predictable approach to EU spectrum policy could play a pivotal role in advancing Europe's connectivity objectives.

Decreasing the financial burden of spectrum by adopting bidding process geared towards incentivising infrastructure investments is key for the sector and maximising public revenues should not be an objective of award processes.

We believe **harmonizing the conditions for the renewal of spectrum authorizations, aligning with best practices – especially regarding licenses duration¹² - and prioritizing predictability in spectrum usage and authorization renewal over abrupt resets is crucial to incentivize investments** from electronic communication operators in the development of high-capacity networks.

Nevertheless, in the context of future attribution and regarding the proposal for a more harmonized authorization landscape, the White Paper also mentions the possibility for potential single EU-level selection or authorization processes for terrestrial, satellite and other innovative applications¹³. Regarding these proposals, and while we encourage greater consistency in authorization processes between each member states to ensure the alignment on best practices, we do not support the implementation of centralized EU-level allocation processes. This should remain in the hand of Member States in full compliancy with criteria set at EU level. Additionally, FFTélécoms expresses its reservations regarding a more harmonized framework towards authorizations for satellite services. It seems important to emphasize that satellite technology remains complementary rather than an alternative to traditional 5G networks.

Finally, as the White Paper addresses the switch-off of 2G and 3G networks, which will release relevant spectrum for other uses, we underline the importance of leaving the technical and temporal control of these switch-offs in the hands of operators.

Authorization regime

The White Paper finally advocates for a more harmonized approach to authorization, potentially through the establishment of a "country of origin" principle for certain activities not connected to consumer retail markets and local access networks. However, **FFTélécoms opposes this scenario for several reasons.**

Despite the trend towards cloudification and softwarisation, which the White Paper suggests, interoperability issues and national specificities regarding infrastructures remain significant, particularly concerning high-speed broadband networks. Indeed, the lack of harmonization of regulation in the EU constitutes and will continue to constitute an obstacle to the application of this principle, as telecommunications operators build, deploy, and operate their network infrastructure within the borders of a country, according to their own characteristics.

Furthermore, the ambiguity surrounding the concrete scope of this principle for providers of core networks and services raises numerous questions, in particular because it remains unclear if the core networks of CAPs would fall in the definition of core networks or not.

¹² For example, the authorization framework in Spain provides for 40 years licenses, ensuring predictability for operators thus fostering long-term investments, versus 15+5 years in France.

¹³ Scenario 6 of the White paper, "How to master Europe's digital infrastructure needs?", p.36.

Further harmonization of regulations

Overall, FFTélécoms seizes the opportunity of the public consultation to underscore that achieving internal market integration relies on **harmonizing the regulatory framework across numerous domains**, which extend beyond infrastructure considerations.

Generally speaking, applying best practices in all areas relevant to the telco industry and ensuring enhanced harmonisation on other aspects like law interception, national security rules, fiscalité.

To address this challenge, **a comprehensive reassessment of existing sector-specific rules is essential**. These evaluations should ensure that regulations remain relevant in light of evolving market dynamics and are not redundant or contradictory with horizontal rules. Systematic impact studies, grounded in up-to-date data, should underpin these reassessments. Moreover, efforts should be made to avoid over-transposition of European directives into national legislation, which can lead to unnecessary complexity and fragmentation.

For instance, in the realm of **consumer protection**, telecom operators grapple with a convoluted landscape of horizontal European law, sector-specific regulations, mainly embedded in the EEC (2018/1972) that could need reassessment, and diverse national laws. The multiplicity of rules not only adds complexity and costs, as it poses compliance challenges for operators and inhibit investments, but also hampers end-users' ability to navigate services with ease and clarity. We believe that consumer protection rules in Europe should be fully harmonized, and that sector specific consumer protection rules should be reviewed for relevance and elimination of duplication.

In the field of **privacy**, outdated sectoral legislation, like the two-decade-old ePrivacy Directive (2002/58/EC), is now clearly inconsistent with horizontal law such as the GDPR (Regulation (EU) 2016/679) and should therefore be withdrawn, with the principle of confidentiality to be inserted in the GDPR.

In summary, achieving full integration of the single market for electronic communications requires a concerted effort to harmonize regulations and practices across the EU, for example regarding spectrum license duration, removing outdated legislation, and ensuring consistency in regulatory frameworks. Implementing these measures while safeguarding efficient national frameworks where observed will certainly enable Europe to unlock the full potential of its digital economy.