Introduction to EU's proposal on Digital Networks Act (DNA)

Aalto University
CKIR
(Center for Knowledge and Innovation Research)

March 2026

Aalto University
School of Business

Table of Contents

Executive Summary: The Digital Networks Act (DNA)

Foundational Objectives and Market Integration

The proposed DNA would replace today's patchwork of national telecom rules with **one EU-wide binding regulation**. Its goal is to help deliver **gigabit broadband** everywhere in the EU and full 5G and 6G coverage by 2030. The DNA introduces a **Single Passport system** aiming to reduce cross-border red tape. It would let network operators and service providers work in multiple EU countries using the same standard notification form, instead of dealing with different national procedures and authorities. To speed up investment in modern networks, the DNA would also require EU countries to **phase out old copper networks** entirely by 31 December 2035. This switch-off would be tied to clear, objective sustainability criteria. Finally, the proposal would adjust **up-front market regulation**. It would create EU-harmonised wholesale access products to support cross-border demand, and it would lighten some regulatory obligations for companies that operate as wholesale-only providers.

Spectrum Administration and Satellite Governance

The DNA treats radio spectrum as a critical strategic asset. It would shift the default rule toward **open-ended rights of use** for wireless broadband, and it would require **sharing of spectrum** that is currently underused. To limit national decisions that could distort competition in individual countries, it would introduce a mandatory **single-market procedure for spectrum**. Under this procedure, the European Commission would be able to block national measures that would significantly shape the market. Because satellite connectivity is inherently cross-border, the proposal would also move **satellite authorisations** from national regulators to the EU level. It would create a single EU authorisation framework run by the Commission, using strict comparative selection procedures to assign scarce satellite spectrum and support operators that can serve the market at pan-European scale.

Infrastructure Resilience and End-User Protections

Protecting digital infrastructure from physical and cyber threats is a core part of the proposal. It would require an **EU-wide preparedness plan for digital infrastructure**, and it would push operators to build more resilience into their networks by ensuring redundancy across both terrestrial and non-terrestrial connectivity. **Consumer rules would be fully harmonised** across the EU to avoid national deviations. The DNA would cap contract lengths at 24 months, require switching providers and porting numbers within a single working day, and update universal service obligations so they focus on affordable, adequate broadband access for vulnerable groups.

Upgraded Governance and Financial Capacity

To implement this more integrated framework, the proposal would **significantly reshape EU telecom governance**. The current BEREC Office would be turned into an Office for Digital Networks, a more independent body with expanded analytical tasks. These would include managing key EU-level databases and supporting the assessment of market mergers. Its funding would come from dedicated revenue sources, including fees linked to EU-level satellite spectrum authorisations. The Radio Spectrum Policy Body would be upgraded to play a more active role in cross-border coordination. At the same time, national regulators would face stricter requirements on political independence, aimed at ensuring unbiased work on geographic network mapping and the handling of local disputes.

Strategic Context (White Paper Alignment)

The 2024 White Paper set out broad ambitions, including concerns about major funding gaps and the need for greater convergence across the European connectivity ecosystem. The proposed legislation turns those ideas into binding rules. Instead of staying at the level of scenarios and options, the DNA sets **fixed compliance deadlines and detailed obligations**. It focuses on structural market rules, stronger EU-level governance, and clearly defined cost-recovery arrangements, rather than on creating large new industrial investment funds.

Document Structure and Contents

The executive summary gives a high-level view of the proposed Digital Networks Act. The rest of this document provides a detailed, section-by-section explanation of the legislative text. The following sections set out the specific binding requirements, including compliance deadlines, the division of responsibilities between the proposed new EU-level governance bodies and national authorities, and the practical obligations placed on network and service providers. The document covers the main regulatory rules, the financial and digital implementation arrangements, and the technical requirements set out in the annexes. The appendices then compare the exploratory 2024 White Paper with the final legislative text, showing how the ideas in the White Paper have been translated into binding provisions.

Abbreviations

BEREC	Body of European Regulators for Electronic Communications Regulation
CAP	Content and Application Provider
CPEI	Cable Project of European Interest
CSO	Copper Switch-Off
DNA	Digital Networks Act
EECC	European Electronic Communications Code
IPCEI	Important Project of Common European Interest
NRA	National Regulatory Authority
ODN	Office for Digital Networks
OIR	Open Internet Regulation
PSAP	Public Safety Answering Point
RSPB	Radio Spectrum Policy Body
RSPG	Radio Spectrum Policy Group
RSPP	Radio Spectrum Policy Programme
STEP	Strategic Technologies for Europe Platform
USO	Universal Service Obligation

1. Foundational Context and Core Objectives

The initiative is based on the need to modernise Europe's electronic communications networks. It aims to move away from legacy systems and toward more advanced digital networks that are cloud-based and integrated with AI. Its main goal is to deliver gigabit broadband everywhere and full 5G and 6G coverage in all populated areas by 2030. The proposal presents these connectivity targets as essential for the EU's industrial competitiveness, social welfare, and strategic autonomy. To support this shift, the proposal would repeal and merge several existing EU rules into a single, unified framework. This includes the European Electronic Communications Code, the rules and structures linked to BEREC, the Radio Spectrum Policy Programme, and selected parts of the Open Internet Regulation and the ePrivacy Directive.

2. Economic and Structural Justifications (Market Functioning)

The proposal introduces several changes meant to make it easier for providers to scale across borders and to cut administrative work for network and service operators.

- **The Single Passport Regime:** The DNA would replace the current patchwork of national authorisation conditions with one EU-wide approach. A provider would submit a single notification, using a mandatory template, to one national regulator. That notification would allow the provider to operate in multiple Member States without having to repeat separate national authorisation procedures.
- **Copper Switch-Off and transition to fibre:** The proposal sets a structured timetable to phase out legacy copper networks to speed up fibre-to-the-home rollout. A switch-off would be triggered before 31 December 2035 in areas where two conditions are met: fibre coverage reaches 95 % and affordable retail connectivity is available. After 2035, copper switch-off would apply everywhere that remains, with only narrow exceptions where fibre is not economically viable and no adequate alternative exists.
- **Wholesale access and market power rules:** The proposal keeps the significant market power framework but adjusts how ex ante regulation is applied. It would introduce EU-harmonised wholesale access products to serve cross-border demand, especially for firms with multiple sites. National regulators would be expected to prioritise access rules that support investment, particularly for civil engineering assets, and to use symmetric access obligations to address local bottlenecks such as in-building wiring.

3. Security, Resilience, and Strategic Autonomy

A core part of the proposal is about protecting digital infrastructure from physical, cyber, and hybrid attacks, as well as from natural disasters.

- **Network preparedness and redundancy:** The proposal treats electronic communications networks as critical to the economy. It would require an EU-level preparedness plan for digital infrastructures. Operators would be expected to build redundancy into network architecture, including links between terrestrial networks and non-terrestrial satellite networks, so services can continue during major disruptions.
- **Advanced capabilities for critical services:** The proposal highlights the need for modern technical capabilities. It points to network slicing as a way to prioritise emergency and critical government communications during congestion. It would also require a gradual move to post-quantum cryptography to protect sensitive communications against future decryption risks.
- **Satellite communications:** Satellite connectivity is framed as important for strategic autonomy. To avoid uneven national rules and to support pan-European scale, the proposal would move satellite authorisations from national regulators to the EU level. It would create an EU-wide authorisation framework run by the Commission, covering both the provision of satellite services and access to satellite spectrum.

4. Radio Spectrum Management

The proposal treats radio spectrum as a scarce public resource with major strategic, geopolitical, and economic importance. It would change how spectrum is managed in three main ways.

- **Indefinite rights and a "Use it or share it" rule:** The default would shift toward granting wireless broadband rights of use for an open-ended period, to give investors more predictability. These rights would still be reviewed regularly, and they could be withdrawn under strict conditions to prevent stockpiling. The proposal also makes spectrum sharing the default expectation. Holders would be required to use the spectrum or share it, unless sharing is genuinely impossible because of technical limits or security constraints.
- **Cross-border interference:** The text recognises that spectrum interference is increasingly used as a hostile tool, including jamming of satellite navigation signals. It would introduce a solidarity mechanism that allows the EU to step in and support a Member State facing sustained harmful interference coming from outside the EU.
- **Single market procedure for spectrum decisions:** The proposal would replace today's voluntary peer review approach with a mandatory up-front coordination process. National regulators would have to notify the Commission of draft decisions on spectrum assignments, licence duration, and market-shaping rules such as spectrum caps or wholesale access obligations. The Commission would have the power to block licence durations and market-shaping measures that it considers harmful to the coherence of the single market.

5. End-User Rights and Universal Service

The proposal aims to fully harmonise consumer rules across the EU, so that providers cannot face different national requirements when offering services across borders.

- **Modernised universal service:** Universal service would be narrowed and updated. It would focus only on ensuring affordable, adequate internet access and voice communications at a fixed location. Funding would be simplified, moving away from telecom-specific funding models and toward the use of general state aid rules.
- **Consumer protections:** The proposal would set fixed EU-wide rules for end-user contracts, applying them not only to consumers but also to microenterprises and not-for-profit organisations. Contract lengths would be capped at 24 months. Number portability would have to happen within one working day. Providers would also be required to offer free tools to help prevent fraud, such as blocking caller ID spoofing.
- **Emergency communications:** Calls to the European emergency number 112 would remain free and would need to be routed to the correct emergency response centre. The rules would require caller location information derived from the handset, and they would ensure that people can initiate emergency communications through European Digital Identity Wallets.

6. Upgraded Governance Architecture

To make this more integrated system work in practice, the proposal would reorganise the EU-level governance structure and tighten the role of national regulators.

- **Office for Digital Networks (ODN):** The current BEREC Office would be converted into an Office for Digital Networks. This body would have legal, administrative, and financial autonomy. It would run key EU-wide databases, such as the Single Passport register and pan-European numbering resources, and it would provide stronger analytical support for implementation and oversight.
- **Radio Spectrum Policy Body (RSPB):** The current Radio Spectrum Policy Group would be upgraded into a Radio Spectrum Policy Body. Its role would be formalised and strengthened, with responsibilities that include advising the Commission and

helping run the new single market procedures for spectrum, as well as the centralised EU framework for satellite authorisations.
- **National Regulatory Authorities (NRAs):** The proposal would reinforce the political independence of national regulators. It would set stricter rules for how their leadership is appointed and dismissed, with the aim of preventing political or external interference. The intent is to ensure regulators can carry out demanding tasks such as market analysis and detailed geographic mapping of network rollouts.

Part I: Scope, Objectives, and Definitions (Articles 1–3)

The horizontal part of the proposal updates key definitions to match how the sector is evolving. In particular, it replaces the older term "very high capacity networks" with "gigabit networks". Gigabit networks are defined as either:

- networks made entirely of optical fibre up to the network termination point, or
- networks that can deliver equivalent performance in download and upload speeds, resilience, and latency.

The proposal also broadens and clarifies what counts as an electronic communications network. It would cover transmission systems such as satellite networks, fixed and mobile networks, and even electricity cable systems when they are used to transmit signals.

Finally, the proposal sets out the main objectives that should guide both national and EU authorities. These objectives focus on strengthening industrial competitiveness, building a fully integrated single market, and promoting digital infrastructure that is sustainable and energy-efficient.

Part II: Resilience and Preparedness (Articles 4–8)

The proposed legislation would require strong, preventive measures to keep essential network services running during crises, whether caused by natural disasters, attacks, or other force majeure events. Providers of public electronic communications networks, together with national regulators and civil protection authorities, would have to put preparations in place to protect emergency communications and public warning systems.

A key requirement is that BEREC would have to adopt an EU-wide preparedness plan for digital infrastructures within 12 months of the regulation entering into force. The ODN would draft the plan. This would involve a detailed review of network design and capacity across Europe, and an assessment of where systems might fail.

Network providers would then have to implement the required resilience measures. This includes steps such as diversifying routes and ensuring that terrestrial networks can connect smoothly with non-terrestrial satellite networks, so critical services can continue even under severe disruption.

Part III: Single Market Authorisation and Passporting (Articles 9–12)

This section would replace today's fragmented national authorisation systems with one EU-wide Single Passport regime for terrestrial networks and services. A provider that wants to operate in one or more Member States would submit just one notification to the national regulator of its choice, using a standard template.

Importantly, the provider would not need a separate approval decision before starting operations. The regulator that receives the notification would forward it to the ODN, which would keep a central, publicly accessible EU database of all notifications.

The right to provide services would be governed only by a harmonised set of EU conditions. These conditions would include requirements on cybersecurity, interoperability, and lawful interception. National regulators would not be allowed to add extra local conditions beyond what the EU framework permits.

Part IV: Resources – Radio Spectrum and Numbering

Title I: Terrestrial Radio Spectrum (Articles 13–35)

Radio spectrum is treated as a strategic shared resource. The proposal makes spectrum sharing the default rule. Operators would have to share any unused parts of their assigned spectrum, unless they can show that sharing is technically impossible or would seriously harm service quality. It also reinforces technology and service neutrality, meaning operators can use any technical standard within the bands they hold.

To give investors more certainty, rights of use for wireless broadband would normally be granted for an unlimited period. These rights could still be reviewed, but not earlier than 20 years after they are granted. Reviews would focus on whether the operator has met coverage and quality obligations.

To reduce national decisions that could fragment the internal market, the proposal would create an EU single market procedure for spectrum. National authorities would have to notify the Commission and other bodies about planned spectrum measures, especially those that shape markets such as spectrum caps or wholesale access obligations. The Commission could intervene if a national measure risks undermining the single market.

Finally, the proposal would make it easier to deploy small-area wireless access points. If an installation meets defined physical and technical criteria, it would be exempt from individual town planning permits. This is meant to speed up the densification of urban networks needed for advanced wireless services.

Title II: Use of Radio Spectrum by Satellite (Articles 36–45)

Because satellite connectivity is inherently cross-border, the proposal would move satellite communications regulation to the EU level. The European Commission would have exclusive authority to manage satellite spectrum and to grant EU authorisations for operating satellite networks and providing satellite services.

This would remove national regulators from the authorisation process. A single EU authorisation would be valid in all Member States and would include the right to use the relevant satellite spectrum across the Union.

Operators would have to follow International Telecommunication Union rules on satellite coordination and on preventing harmful interference. If spectrum is scarce, or if wider public interests require it, the Commission could run EU-level selection procedures to decide who receives the rights. The Commission would also be able to suspend or withdraw authorisations and impose significant financial penalties for breaches of the rules.

Title III: Numbering Resources (Articles 46–52)

The proposal sets out an EU-wide numbering strategy to support cross-border services, especially machine-to-machine communications. National regulators would still run their own domestic numbering plans, but they would have to coordinate with the ODN so that pan-European numbering resources can work smoothly.

It also strengthens the rules for using non-geographic numbers across borders within the EU. To reduce fraud and misuse linked to cross-border numbering, the authority that issues the

number would have to attach conditions that ensure the user of the number follows consumer protection rules in the countries where the number is actually used.

In addition, providers would be required to make sure callers can reach all non-geographic numbers across the EU. National authorities would also have clear powers to block access to specific numbers when needed to prevent fraud.

Part V: Transition to Fibre, Markets Functioning and Competition

Title I: Transition to Fibre Networks (Articles 53–61)

This section turns the phase-out of legacy copper networks into a concrete, enforceable process to speed up the rollout of gigabit infrastructure. It relies on national planning and on clear, objective conditions that trigger switch-off.

- **National transition plans:** Any Member State that still has active copper networks after 30 June 2029 would have to submit a national transition to fibre plan to the Commission by 31 October 2029. The plan must describe rollout actions and classify areas based on how migration will be handled.
- **Sustainability conditions that trigger switch-off before 2035:** The proposal sets a two-part test for designating copper switch-off areas and requiring switch-off before 2035. Switch-off must be required when both conditions are met:
    1. at least 95 %t of premises in the area are covered by a fibre network, and
    2. affected users have access to affordable retail services of comparable quality.
- **Mandatory switch-off by the end of 2035:** By 31 December 2035, Member States would have to legally require copper switch-off in all remaining copper switch-off areas, even if the 95 % fibre threshold is not met. Exceptions would be allowed only where fibre rollout is not economically viable, and no adequate alternative connectivity option exists. Once a switch-off decision is adopted, the physical switch-off would have to start within one year and finish within three years.
- **Operator obligations:** Operators would have to submit detailed switch-off plans to national regulators for approval. These plans must cover the technical steps, the timetable, and how customers and wholesale access seekers will be moved over, with safeguards to keep essential services running, such as telecare and alarm systems.

Title II & III: Access to Land and Interconnection (Articles 62–71)

To lower the environmental impact and the cost of building new networks, the proposal strengthens rules on access to physical infrastructure and network interconnection.

- **Co-location and infrastructure sharing:** Public authorities would be able to require providers to share physical infrastructure such as ducts, masts, street cabinets, and building entry points when this is needed for sustainability goals, public security, or urban planning.
- **Symmetric access rules:** To avoid local bottlenecks turning into permanent monopolies, national regulators could impose access obligations on all relevant infrastructure owners, not only on firms with significant market power. This would apply in particular to wiring that cannot realistically be duplicated, such as in-building wiring or wiring up to the first distribution point. If that still does not remove the economic barrier to duplication, regulators could extend the access obligation beyond the first distribution point.
- **Fibre connection requirement in switch-off areas:** In areas where copper networks are being switched off, regulators would have to require fibre-to-the-home operators

to connect households that their network already passes, if the user requests it. The connection could be subject to fair and reasonable fees.

Title IV: Markets and Competition (Articles 72–86)

This section tightens the ex ante regulatory approach. It says regulators should intervene only when there is clear evidence of market failure and competition law alone is not enough.

- **Significant market power:** National regulators must review relevant markets every five years. If an operator is found to have significant market power (SMP), the regulator must impose obligations that are proportionate to the problem identified.
- **Union harmonised access products:** To meet cross-border wholesale demand, the Commission would be able to set technical specifications for Union harmonised access products. Before imposing other, more local access remedies, national regulators would have to assess whether requiring an SMP operator to offer these harmonised products would be enough to solve the competition concern.
- **Price control and accounting rules:** Regulators could still impose cost-recovery, accounting, and price-control obligations. However, the proposal encourages restraint. Regulators should avoid setting regulated prices if the SMP operator is already constrained by competition at the retail level and is subject to strict non-discrimination rules and economic replicability tests.
- **Wholesale-only undertakings:** Firms that operate only in wholesale markets and do not sell retail services would face lighter regulation. Even if they have significant market power, they would generally be subject mainly to non-discrimination and fair pricing obligations, reflecting a lower risk of anti-competitive conduct than vertically integrated operators.

Part VI: Services

Title I: Universal Service Obligations (Articles 87–92)

Universal service would be narrowed and updated so it functions mainly as a social safety net. Older elements such as public payphones and printed directories would be removed.

- **Adequate broadband:** All consumers would have a right to affordable access to an adequate internet access service and to voice communications at a fixed location. What counts as adequate would be updated over time, based on BEREC guidelines, so the service remains sufficient for full participation in society and the economy.
- **Affordability measures:** National regulators would have to check retail prices every year. If prices are not affordable for low-income users, the Member State would have to step in. This could be done through direct support such as vouchers, or by requiring providers to offer specific social tariff options.
- **Availability where the market fails:** If the market does not deliver adequate broadband in certain areas, a Member State could require specific providers to ensure availability. This would be supported through public funding under state aid rules, rather than through sector-funded compensation schemes.

Title II: Open Internet Access (Articles 93–94)

The regulation would write net neutrality rules directly into law. It would ban providers from blocking, slowing down, or otherwise treating certain content, applications, or services differently.

- **Traffic management:** Providers could still manage traffic when needed, but only in a reasonable way. Any traffic management measures would have to be transparent,

applied without discrimination, and based on objective technical needs, not on commercial interests.
- **Specialised services:** The proposal would allow specialised services that need guaranteed performance, such as industrial internet of things applications or critical public communications supported by network slicing. Providers could offer these services only if doing so does not reduce the availability or quality of normal internet access for other users.

Title III: End-User Rights (Articles 95–114)

This chapter would set one EU-wide consumer protection rulebook at a high level of protection. Member States would not be allowed to apply different national rules in these areas.

- **Contract rules:** Service contracts could not require commitments longer than 24 months. Consumers could cancel without penalties if the provider changes the contract in a way that harms them, unless the change is purely administrative or required by law. If a contract renews automatically after the initial term, the consumer would be able to end it at any time with at most one month's notice.
- **Switching and number portability:** Switching provider and keeping a number would have to be carried out quickly. Any loss of service during the switch could not be longer than one working day.
- **Emergency communications:** End-users would have free access to emergency number 112, with calls routed to the right public safety answering point. Providers would have to transmit accurate caller location information, including both network-based and handset-derived data, as soon as the call connects. Emergency communications would also have to be fully accessible for users with disabilities through functionally equivalent options.
- **Anti-fraud tools:** Providers would have to offer free tools that let users block incoming calls from specific numbers or from anonymous callers, to help reduce fraud such as caller ID spoofing.

Part VII: Governance

Title I: National Regulatory and Competent Authorities (NRAs)

The proposal would require National Regulatory Authorities to be fully independent in both practice and governance. The aim is to shield them from political influence, outside intervention, and commercial pressure.

- **Mandate and independence:** National regulators would be responsible for key tasks, including running the Single Passport procedure, applying market regulation, overseeing copper switch-off, and resolving disputes. To reduce the risk of regulatory capture and to prevent arbitrary removals, the head of an authority, or members of a collegiate body, would have to be appointed for at least a three-year term through an open and transparent selection process.
- **Budgetary autonomy:** Member States would have to provide national regulators with their own annual budgets and give them autonomy over staffing and spending. The intent is to ensure they have enough capacity to carry out their duties and to participate effectively in EU-level governance.

Title II & III: BEREC and RSPB

The proposal would reshape EU-level governance into two separate bodies with stronger powers, operating through a work programme that is set every two years.

- **BEREC:** BEREC would keep its role of promoting consistent application of telecom rules across the EU, but its mandate would expand. It would be responsible for adopting the Union Preparedness Plan for Digital Infrastructures, issuing guidance on cooperation across the connectivity ecosystem, and setting out detailed rules for switching provider and number portability. Most decisions would be taken by simple majority, which would make it easier to adopt guidelines and opinions.
- **Radio Spectrum Policy Body:** The current Radio Spectrum Policy Group would be replaced by a Radio Spectrum Policy Body with a more operational role. It would advise the Commission on strategic spectrum policy, help mediate disputes about cross-border interference, and play a central role in the spectrum single market procedure and in the EU-level satellite authorisation process.

Title V: The Office for Digital Networks (ODN)

The proposal would turn the current BEREC Office into the Office for Digital Networks (ODN), a new EU body with its own legal personality, based in Riga.

- **Core functions:** The ODN would provide expert, analytical, and administrative support to both BEREC and the Radio Spectrum Policy Body. It would also act as a central operational hub by managing key EU-wide databases, including the register of Single Passport notifications, pan-European numbering resources, and the E.164 emergency call centre contact numbers. It would also prepare the Union Preparedness Plan for Digital Infrastructures.
- **Structure and leadership:** The ODN would be overseen by a management board made up of BEREC members, the chair of the Radio Spectrum Policy Body, and a Commission representative. Day-to-day leadership would be handled by a Director appointed for a five-year term, renewable once, through a strict selection process.
- **Funding:** The ODN would be funded mainly through the EU budget. In addition, it would be allowed to charge fees to firms for obtaining and maintaining EU-level satellite authorisations and for access to pan-European numbering resources.

Part VIII: General and Final Provisions

Title I: Provision of Information and Geographical Surveys

To support evidence-based regulation, the proposal would give authorities stronger powers to collect data from providers.

- **Information requests:** Authorities could require undertakings to provide detailed operational and financial information. To keep reporting burdens manageable, routine reporting linked to general authorisations and spectrum rights would be limited to at most once a year, using standard templates prepared by BEREC.
- **Geographical surveys:** National regulators would have to produce a highly detailed map of broadband coverage within 12 months of the regulation entering into force, and update it at least every three years. The survey would distinguish between premises passed by a gigabit network, premises that are ready for connection, and premises that are actually connected and in use. These maps would be used to assess when copper switch-off conditions are met and to guide decisions on state aid.

Title III & IV: Dispute Resolution and Ecosystem Cooperation

The proposal introduces faster ways to settle market disputes and to encourage cooperation across the wider digital sector.

- **Dispute resolution:** If companies disagree about access or interconnection, national regulators would have to issue a binding decision within four months. For disputes that involve more than one country, BEREC would issue an opinion to help the national regulators reach a consistent outcome.
- **Ecosystem cooperation:** The proposal recognises that telecom networks, cloud computing, and AI are increasingly intertwined. BEREC would be required to publish guidelines that support technical and commercial cooperation across this broader ecosystem. National regulators would also have to provide a voluntary conciliation option, so companies can resolve commercial disagreements with other digital sector actors through mediation rather than through formal regulatory action.

Title V: Compliance and Enforcement

The proposal would make enforcement much stricter, especially for the Single Passport system, spectrum obligations, and end-user rights.

- **Penalties and sanctions:** Member States would have to give the relevant authorities powers to issue immediate stop orders and to impose meaningful financial penalties. For serious or repeated violations, authorities could also suspend or fully withdraw a provider's right to offer networks or services.
- **Cybersecurity non-compliance:** If an operator does not meet ICT supply chain security requirements under the Cybersecurity Act, the national regulator would be required to withdraw the operator's general authorisation or its spectrum rights.
- **Right of appeal:** Companies and users affected by a regulatory decision would still have the right to appeal to an independent body or a court. However, the decision would generally remain in effect while the appeal is pending, unless interim measures are granted to pause it.

Title VI: Final Provisions and Implementation Timeline

The proposal would repeal and replace three existing EU instruments, bringing their rules into one new framework: the European Electronic Communications Code (Directive 2018/1972), the BEREC Regulation (2018/1971), and the Radio Spectrum Policy Programme (Decision 243/2012).

Application timeline:

- **Entry into force:** The regulation would enter into force 20 days after it is published in the Official Journal.
- **Main application date:** Most provisions would start to apply 6 months after entry into force.
- **NRA task reassignment:** National regulators would take full responsibility for the Single Passport procedure and certain market regulation tasks 12 months after entry into force.
- **Satellite framework transition:** The EU-level satellite authorisation system would start to apply 12 months after entry into force. Existing national satellite authorisations could continue temporarily, but they would have to be replaced by an EU authorisation within 36 months.

Legislative Financial and Digital Statement

1. Budgetary and Human Resources Architecture

Implementing the new framework would require a clear increase in EU-level staffing and expertise. The proposal moves from a model where the EU mainly provides administrative support to one where EU bodies also carry out substantive analysis and enforcement.

- **ODN capacity increase:** The ODN would need around 25 additional full-time staff, added gradually up to 2034. The proposal says this expansion should not be funded only from the general EU budget. The extra cost, estimated at about 18.66 million euros for 2028 to 2034, would be covered mainly through fees for EU satellite spectrum authorisations, fees linked to pan-European numbering resources, and voluntary contributions. The first major fee income is linked to EU-level selection procedures for the 2 GHz Mobile Satellite Service band expected in 2027.
- **European Commission capacity increase:** The Commission would need 5 additional full-time staff to manage the new cross-border responsibilities. These would include running the EU satellite authorisation system, reviewing national spectrum auction measures in advance under the new single market procedure, and handling harmful interference cases and International Telecommunication Union filings.

2. Specific Operational and Administrative Tasks

The financial statement spells out who does what, and how the new market mechanisms would work in practice.

- **ODN's substantive role:** The ODN would do more than administrative coordination. Its staff would contribute directly to the regulatory work of both BEREC and the RSPB. It would act as the central secretariat for the RSPB and would be the main entry point for spectrum and satellite applications. It would also handle the practical side of fee administration, including invoicing and collecting EU-level satellite selection fees.
- **Performance monitoring:** The ODN would be required to publish a detailed annual report on the development of the EU single market for electronic communications. The report would track outcomes such as the effects of mergers, changes in market structure, and the real-world impact of the new regulatory measures.

3. Mandated Digital Infrastructure and Data Flows

To make the single market enforceable in practice, the proposal would require a tightly integrated digital setup. The DNA would depend on a set of EU-level digital public services and shared databases.

- **EU database of notifications:** The ODN would have to build and run a central, publicly accessible database that supports the Single Passport regime. It would record all notifications and make it possible to track providers operating across Member States.
- **Dynamic spectrum database:** The proposal requires a digital system that can locate and monitor spectrum use, including near real-time information on where spectrum is available. The purpose is to identify underused spectrum and to support the use it or share it obligation for certain bands.

- **Pan-European numbering database:** The ODN would set up a database to track how pan-European numbering resources are assigned and who holds them. National regulators would continuously feed data into this system.
- **ODN information and communication system:** A secure shared platform would be created to support information exchange between the Commission, BEREC, RSPB, and national authorities. It would include tools for early coordination and for handling requests for confidential market information.
- **European digital identity wallets and public warnings:** The proposal links public warnings and emergency communications to the use of European digital identity wallets. The Commission would be required to adopt technical implementing acts so these functions work smoothly across borders.

Annexes of the Proposal

Annex I: Broadcasting Access Conditions

This section sets strict technical and organisational rules for providers of conditional access systems used for **digital television and radio**. These providers would have to offer their technical services to all broadcasters on fair, reasonable, and non-discriminatory terms, in line with EU competition law. They would also have to keep separate financial accounts for their conditional access activities. In addition, companies that hold intellectual property rights in these systems would not be allowed to set licensing terms that discourage manufacturers from installing common interfaces or competing access systems in the same consumer device.

Annex II: Wholesale Voice Termination Rates

The proposal sets very strict rules for how regulators must calculate **wholesale voice termination rates** in both fixed and mobile networks, with the aim of preventing excessive charges. Rates would have to reflect only the costs that an efficient operator would need to recover. Regulators would be required to use a bottom-up cost model based on long-run incremental, traffic-related costs. The model must be forward-looking. For fixed networks, it must assume an IP-based core where all fixed calls are carried as packet-switched traffic. For mobile networks, the calculation must not include spectrum fees in the termination cost. The model would also assume a minimum efficient operator size, set at a market share of at least 20 %.

Annex III and IV: End-User Contracts and Transparency

The proposal sets detailed, mandatory information that providers must include in consumer contracts and in public transparency tools.

- **Contract information requirements (Annex III):** Before a contract becomes binding, providers would have to disclose precise service quality details. This includes the minimum, normally available, maximum, and advertised download and upload speeds. For internet access, the contract would also have to specify latency, jitter, and packet loss. Providers would need to explain clearly how any traffic management or data limits affect access to content and applications. The contract would also have to spell out compensation and refund rules if the provider fails to meet the stated quality levels, or if it handles a security incident or known vulnerability inadequately.
- **Public transparency requirements (Annex IV):** Providers would have to publish full information about their services, prices, standard contract terms, and dispute resolution processes. This information would need to be clear, complete, and machine-readable, and it would have to be kept up to date so customers can com

Annex V: Equipment Interoperability

To prevent consumer hardware from limiting access to digital services, the proposal would set basic interoperability requirements for certain devices. Any digital television with an integrated screen larger than 30 centimetres placed on the market would have to include at least one standardised open interface socket, so users can easily connect external devices. In addition, any car radio receiver built into a new Category M vehicle would have to be capable of receiving and playing digital terrestrial radio broadcasts.

Annex VI: Satellite Spectrum Selection Procedure

When demand for EU satellite spectrum is higher than the available supply, the Commission would run a structured, multi-step selection process.

- **Admissibility and first phase:** Applicants would have to be established in the EU and prove strong technical and financial capacity. The Commission would test viability against clear milestones, such as submitting ITU coordination requests, securing manufacturing and launch agreements, completing critical design reviews, and completing satellite mating.
- **Second phase (comparative assessment):** If there are still more eligible applicants than spectrum available, the Commission would rank proposals using weighted criteria. The assessment would prioritise geographic and population coverage, spectrum efficiency, and environmental performance related to space sustainability. The process would also favour proposals that use open standards, integrate open-source technologies, and strengthen the EU's competitiveness and industrial capacity across the space sector value chain.

Summary Appendixes

Appendix A: Comparative Analysis of the legislative text and the 2024 White Paper

This analysis highlights where the exploratory scenarios in the 2024 White Paper differ from the binding mechanisms in the 2026 Digital Networks Act.

1. **Shift from ambition to longer timelines on copper switch-off**
   The White Paper presents copper switch-off as an ambitious pathway, suggesting targets such as 80 % switch-off by 2028 and full completion by 2030 to support Digital Decade goals.
   The legislation sets a longer and more operationally realistic timetable. It establishes 31 December 2035 as the legal deadline for switching off copper networks in all designated areas, while allowing earlier switch-off where the 95 % fibre coverage and affordability conditions are met.
2. **Financial scope changes from investment instruments to regulatory enforcement**
   The White Paper emphasises major investment gaps, citing figures such as a 200 billion euro shortfall for connectivity and an 80 billion euro gap for cloud. It points to tools like IPCEIs and STEP.
   The legislative text does not create comparable large-scale funding instruments. Instead, it focuses on market rules, cost-recovery mechanisms, and the creation of the Office for Digital Networks, with funding linked to satellite and numbering fees rather than broad industrial investment funds.
3. **Infrastructure security shifts from dedicated pillars to integration into preparedness planning**
   The White Paper treats submarine cables and quantum cryptography as standalone strategic pillars and proposes dedicated governance and a labelling approach for Cable Projects of European Interest to unlock funding.
   The legislation folds these topics into the Union Preparedness Plan for Digital Infrastructures overseen by BEREC and the ODN. It does not retain the specific labelling mechanism for funding.
4. **Ecosystem convergence moves from fair share scenarios to softer coordination tools**
   The White Paper describes convergence between network operators and large content and application providers, including on-net traffic exchange and cloud-edge integration. It explores scenarios for aligning rights and obligations across digital actors.
   The legislation takes a more cautious approach. Rather than imposing strong ex ante obligations on content and application providers, it introduces a facility for voluntary conciliation run by national regulators, supported by BEREC guidelines on ecosystem cooperation.
5. **Country of origin concept is implemented through the single passport regime**
   The White Paper suggests a “country of origin” principle for core network operations, similar to how cloud services scale across borders.
   The act operationalises this idea through the Single Passport system, allowing an operator to notify one national regulator using a standard template and then operate across the EU without facing multiple national authorisation processes.

Appendix B: Strategic Alignment Mapping

This section links the main pillars of the 2024 White Paper to the corresponding binding mechanisms described in the baseline summary of the act.

Pillar I: Creating the connected collaborative computing ("3C") network

- *White Paper focus:* Build an integrated ecosystem across semiconductors, edge computing, radio technologies, and AI orchestration.
- *Alignment in the DNA:* Implemented through the ecosystem cooperation provisions. BEREC would issue guidelines to support cooperation between network providers and cloud and AI actors. National regulators would offer voluntary conciliation to help resolve commercial bottlenecks in this converging ecosystem.

Pillar II: Completing the digital single market

- *(Authorisation) White Paper focus:* Remove barriers to cross-border provision and make cross-border operation easier.
- *Alignment in the DNA:* Implemented through the single passport regime, which replaces multiple national procedures with a single notification route.
- *(Spectrum) White Paper focus:* Improve EU-level coordination on auction timing, avoid artificial scarcity, and align licensing approaches.
- *Alignment in the DNA:* Implemented through the mandatory EU spectrum single market procedure and the default move toward open-ended rights of use for wireless broadband, with Commission powers over market-shaping measures.
- *(Access policy and fibre transition) White Paper focus:* Move toward a full fibre environment and shift regulation toward more European-level solutions.
- *Alignment in the DNA:* Implemented through copper switch-off rules with a 2035 deadline and objective triggers, the creation of Union harmonised access products, and targeted symmetric access rules for non-replicable bottlenecks.

Pillar III: Secure and resilient digital infrastructures

- *White Paper focus:* Prepare for quantum-era security risks, strengthen unified security standards, and protect submarine cables.
- *Alignment in the DNA:* Implemented through the Union Preparedness Plan for Digital Infrastructures, including requirements for redundancy and resilience. The centralisation of satellite authorisations under the Commission supports pan-European scale, security, and strategic autonomy in space-based connectivity.