

ACEA Position paper

Proposal for a Digital Networks Act



CONTEXT

Vehicles are becoming smarter, more connected, and increasingly automated. This transition of the vehicle into the Internet of Things has brought about profound changes in the business of vehicle manufacturers. Key to this transition, connectivity has become a foundational pillar of the modern automotive industry, underpinning the development of connected, cooperative, and increasingly automated vehicles. This is best evidenced by the fact that connectivity is now fully expected of a modern vehicle under European legislation such as eCall, Intelligent Speed Assistance, or On-Board Fuel Consumption Monitoring.

From safety-critical functionalities and real-time data exchange to over-the-air updates and enhanced in-vehicle services, reliable connectivity is essential to ensure road safety and meet evolving consumer expectations. As vehicles become ever more integrated into the broader digital ecosystem, the regulatory framework governing electronic communications infrastructure and services increasingly impacts the sector's ability to compete and innovate.

In this context, ACEA welcomes the opportunity to provide feedback on the Commission's proposal for a Digital Networks Act, with a particular focus on ensuring that the framework effectively supports the specific connectivity needs of connected vehicles while preserving innovation, competitiveness, and technological neutrality.

KEY RECOMMENDATIONS

1. Incorporate the exception to the switching rules for internet access services envisaged in Recital 275 in the operative text of the Digital Networks Act.
2. Detail the conditions for offering optimised connectivity for critical services to ensure that connected vehicle services are clearly recognised as eligible use cases.
3. Encourage investment in widespread and resilient 5G coverage while preserving the availability of commercially sustainable connectivity options that can support mass-market deployment of connected vehicle services throughout Europe.
4. Task the Commission with closely monitoring market developments to ensure that the implementing framework preserves a level playing field and to prevent the emergence of *de facto* network fees.
5. Require MNOs to provide clear and coordinated transition plans when phasing-out existing network generations, or in the alternative, to maintain a minimal level of service on legacy networks, subject to incremental phase-out.
6. Ensure that the provisions of Article 106(1) apply explicitly to automotive eCall callback communications.
7. Maintain the proposal's technology-neutral approach by refraining from imposing mandatory in-vehicle FM/DAB+ receiver or radio prominence requirements.
8. Foster un-interruptible connectivity by combining terrestrial and satellite NTN communications.

ENSURING SAFE AND PROPORTIONATE SWITCHING RULES FOR CONNECTED VEHICLES

ACEA supports the overarching objective of promoting competition and consumer choice in electronic communications markets, as reflected in the switching framework established in the European Electronic Communications Code (EECC), and reprised by the Proposal for a Digital Networks Act. However, experience with the implementation of these rules in several Member States has revealed significant challenges when applied to connected and cooperative vehicles, which require a more nuanced regulatory approach.

Vehicles rely on embedded connectivity solutions to simultaneously enable a wide range of functions. Including safety-critical¹ and regulatory services such as emergency call systems (eCall) and over-the-air software updates, alongside consumer-facing services such as internet access for infotainment systems. This multi-use architecture means that connectivity is not a standalone retail service but an integral component of the vehicle's convenience and safety ecosystem.

In this multi-use architecture context, the application of switching obligations has created practical and legal difficulties. In some Member States, interpretations of the EECC have led to expectations that end-users should be able to freely switch internet access providers associated with the vehicle's connectivity, even where this connectivity is embedded and serves essential functions. Such expectations do not sufficiently consider the technical realities of vehicle design.

Switching connectivity providers in vehicles poses significant risks. It can disrupt over-the-air software updates, which are essential for functionality, cybersecurity, and regulatory compliance, and may affect the reliability of eCall systems that must operate without interruption. It can also compromise secure communication channels between the vehicle and manufacturer back-end systems, undermining overall system integrity.

In addition, vehicle connectivity is deeply embedded in the vehicle's architecture and linked to type approval requirements. Unlike smartphones, vehicles are not designed for dynamic provider switching without substantial redesign, making such requirements often technically infeasible or disproportionately burdensome.

These challenges are compounded by divergent national approaches, leading to fragmentation across the internal market and legal uncertainty for manufacturers operating across multiple jurisdictions.

Against this background, the industry welcomes the explicit recognition of these issues in Recital 275 of the Digital Networks Act. The recital acknowledges that while switching is important for competition, there are exceptional circumstances in which switching is impractical for objective technical reasons, particularly where the secure functioning or integrity of terminal equipment is endangered. It explicitly refers to embedded SIM or eSIM solutions used simultaneously for machine-to-machine services and internet access, citing

¹ Automotive Safety Integrity Level (ASIL), a risk classification scheme for road vehicles defined under ISO 26262 on road vehicle functional safety.

the example of a vehicle where the same eSIM supports both automotive software updates and infotainment connectivity.

This recognition is both accurate and necessary. It reflects the technical reality of connected vehicles and provides a sound basis for a proportionate regulatory approach that reconciles competition objectives with safety and security requirements. The automotive industry therefore strongly supports the approach outlined in Recital 275 as an appropriate way to address the issues encountered in practice.

However, this positive development is undermined by the absence of a corresponding provision in the operative part of the Digital Networks Act. Recital 275 does not have binding legal effect and cannot, on its own, provide legal certainty or ensure consistent application across Member States. Without a clear operative rule, there is a risk that national authorities will continue to apply switching obligations in a manner that does not adequately account for the specificities of embedded connectivity in vehicles, thereby perpetuating the problems identified above.

Recommendation

Incorporate the exception envisaged in Recital 275 in the operative text of the Digital Networks Act.

The legislation should provide that switching obligations do not apply where it is technically impractical or disproportionately burdensome, including economically, or where it would endanger the security, integrity, or proper functioning of terminal equipment, including in cases involving embedded eSIMs used for both machine-to-machine services and internet access.

In addition, the exception should also cover situations where imposing switching capabilities would be economically disproportionate, requiring manufacturers to duplicate connectivity hardware (modems², antennas) and software to separate safety-critical and consumer connectivity functions. Such a requirement would significantly increase production costs and system complexity without delivering commensurate benefits to end-users and would risk undermining efficient vehicle design.

Such an approach would preserve the general principle of switching as a driver of competition, while introducing a narrowly tailored and justified exception for complex, safety-critical use cases such as connected vehicles. It would also ensure that regulatory obligations remain realistic and do not inadvertently compromise vehicle safety, cybersecurity, or compliance with other EU legal requirements.

² Automotive solutions are required to operate for 20 years, in mechanical (vibrations) and temperature conditions (up to [-40°C, +105°C]) that neither consumer nor industrial grade hardware could support. Automotive-grade modems are specific, hardened solutions which are expensive and do not support dual SIM as do some mass-market solutions.

OPTIMISED CONNECTIVITY FOR CRITICAL SERVICES

ACEA welcomes the Commission's proposal to explicitly recognise and permit specialised services that are optimised for specific content, applications or services, including channels with guaranteed Quality of Service (QoS), for applications that demonstrably require enhanced and reliable network performance. This clarification is both timely and necessary, as it provides legal certainty for innovation in sectors where connectivity is critical.

Connected vehicles are a prime example of such applications. Many of their core functionalities, such as real-time hazard warnings, advanced driver assistance systems (ADAS), over-the-air software updates, and, increasingly, automated driving features, depend on highly reliable, low-latency, and secure data transmission. In these contexts, best-effort internet delivery is not always sufficient. QoS-guaranteed connectivity, prioritised and provided with adequate protection, ensures safety-critical communications contribute to road safety, system integrity, and user trust.

Ensuring connectivity by enabling and stimulating Non-Terrestrial Networks (NTN) is a good solution to increase the continuity in areas where Terrestrial connectivity is limited, in particular for emergency services. While the Commission's efforts have moved things in the right direction, continued support remains essential.

With the advent of Cooperative, Connected, and Automated Mobility (CCAM) systems, predictable and resilient connectivity will have to be ensured by realising dedicated performance levels tailored to the stringent technical requirements that advanced vehicle services call for.

In this context, it is essential that the framework for specialised services is implemented in a way that is accessible and workable for connected vehicle applications.

Nevertheless, we also believe that this framework must be carefully balanced, in that the provision of specialised services should not come at the expense of the overall performance, availability, or quality of the general-purpose network capacity. It is essential to avoid any unintended degradation of baseline network conditions as a result of the increased use of prioritised traffic lanes. While certain specific and safety-critical use cases in the connected vehicle ecosystem may indeed warrant QoS-guaranteed connectivity, such as real-time safety alerts or highly latency-sensitive cooperative driving functions, for many other applications, robust best-effort connectivity will continue to be sufficient. Therefore, the reliability and resilience of the overall network remain fundamental, particularly for connected vehicles, which increasingly depend on ubiquitous and consistent connectivity across borders and operating environments.

Recommendation

Detail the conditions for offering optimised services in a way that ensures that connected vehicle services are clearly recognised as eligible use cases.

The criteria should be sufficiently flexible and technology-neutral to accommodate the evolving needs of the automotive sector, while avoiding overly restrictive thresholds that could inadvertently exclude legitimate safety- and performance-critical services.

Specialised services should not only be flexible and technology-neutral, but also economically realistic, enforceable in a consistent manner across Member States, and compatible with the affordability expectations of end users and the long service life of vehicles. In any case, any provision relating to optimised or specialised services should remain clearly framed as optional and market-driven, subject to proportionality, economic feasibility, and technological neutrality.

Ensuring that connected vehicle services can effectively avail of specialised services will be key to unlocking their full societal and economic benefits, including safer roads, more efficient transport systems, and accelerated digital innovation across the mobility ecosystem.

SUPPORTING AFFORDABLE AND RELIABLE CONNECTIVITY FOR CONNECTED MOBILITY

A requisite for the success of connected mobility is the availability of reliable and extensive network coverage across the European Union. Connected vehicle services depend not only on high-quality connectivity in urban centres, but also on seamless and resilient coverage across rural areas, cross-border corridors, and major transport routes. Ensuring broad and dependable coverage is essential to guarantee that the safety, efficiency, and consumer benefits of modern vehicle connectivity can be realised consistently for all users and across all regions.

Considering the importance of reliable and extensive network coverage for connected mobility, it is essential that the DNA supports the development and availability of affordable, fit-for-purpose connectivity solutions across the European Union. While advanced high-performance connectivity services may play an important role for specific use cases, the framework should avoid implicitly prioritising premium or high-end performance profiles in a manner that could limit flexibility or increase costs across the broader automotive ecosystem.

Connected vehicle deployments rely on a diverse range of connectivity solutions adapted to different functionalities, vehicle categories, and geographic conditions. Many applications require reliable and resilient connectivity, rather than the highest technically achievable performance levels. The regulatory framework should therefore remain technology-neutral and economically proportionate, enabling manufacturers and service providers to deploy solutions that are appropriate to the specific operational and safety requirements of each use case.

Recommendation

Encourage investment in widespread and resilient 5G coverage while preserving the availability of commercially sustainable connectivity options that can support mass-market deployment of connected vehicle services throughout Europe.

This will be critical to ensuring that the benefits of connected and automated mobility remain accessible, scalable, and affordable for consumers and industry alike, including in rural and cross-border environments where connectivity challenges remain significant.

FAIR AND BALANCED ENVIRONMENT FOR COMMERCIAL NEGOTIATION

We welcome and support the fact that the proposal does not introduce provisions that would amount to so-called “network fees” or “fair-share contributions”. The absence of such mechanisms is critical. Had they been included, they could have created significant additional cost burdens for manufacturers of connected vehicles, particularly given the data-intensive nature of modern and future automotive services. This, in turn, would have risked undermining the global competitiveness of the European automotive industry, slowing innovation, and ultimately impacting consumers through higher prices or reduced functionality.

We also support the proposal’s reliance on a framework based on commercial negotiations for access, and its encouragement of voluntary agreements between market actors, including automotive manufacturers and telecommunications operators. A market-driven approach, if well-balanced, can foster innovation, enable tailored connectivity solutions, and support the development of advanced services for connected and automated vehicles.

At the same time, it is important to recognise that the introduction of specialised services and premium connectivity tiers may alter the balance of negotiating power in the ecosystem. Access to higher-quality connectivity tiers should not be leveraged to increase dependence on, and the cost of, commercial arrangements for critical services, which could ultimately distort competition and impact the industry’s competitiveness.

In this context, appropriate safeguards are necessary to ensure that this increased leverage does not lead to undue pressure during commercial negotiations. It is paramount to avoid the emergence of contractual arrangements that, while not formally labelled as “network fees,” would have equivalent economic effects, for example by requiring payment for access to baseline network performance or to avoid degradation of services.

Recommendation

Task the Commission with closely monitoring market developments to ensure that the implementing framework preserves a level playing field.

This should include safeguards against discriminatory practices, transparency requirements around the offering of premium connectivity tiers, and oversight mechanisms to prevent the emergence of *de facto* network fees through commercial arrangements.

Maintaining a fair and balanced negotiation environment will be essential to ensure that the benefits of advanced connectivity can be realised without distorting competition or placing a disproportionate burden on the automotive sector.

PREDICTABILITY OF NETWORK TRANSITIONS AND CONTINUITY OF LEGACY CONNECTIVITY SERVICES

Predictability is of critical importance for vehicle manufacturers. Automotive development and production cycles are significantly longer than those of the telecommunications sector, with vehicles often remaining in service for well over a decade. Connectivity solutions embedded in vehicles are therefore designed based on long-term network availability assumptions. Sudden or insufficiently coordinated changes to mobile network infrastructure can create serious operational, regulatory, and consumer challenges for connected vehicles already on the road.

The experience with the progressive switch-off of 2G and 3G networks illustrates these challenges clearly. As these networks are expected to be switched off in the coming years and the spectrum they use is expected to be re-farmed, significant concerns regarding the continued operation of services and functionalities relying on older communication modules arose. This is particularly the case with eCall; while this shutdown forced vehicle manufacturers to implement new 4G-5G compatible systems on new vehicles at break-neck pace, a large volume of cars equipped with eCall systems compatible with 2G/3G networks only will still be on the roads by 2027 and onwards, and are at risk of not benefiting from the eCall service, in Member States where both 2G and 3G networks are switched off.

While the transition toward newer technologies such as 4G and 5G is both necessary and welcome, the absence of harmonised timelines and long-term visibility creates fragmentation, increases compliance risks, and may require costly retrofitting or premature replacement of vehicle systems.

In this context, long-term planning and coordination are essential to ensure continuity of service for safety-critical and regulatory applications. Vehicle manufacturers require sufficient lead times to adapt product development, homologation processes, supply chains, and fleet management strategies to evolving network conditions.

We therefore encourage the Commission to ensure that the Digital Networks Act promotes greater transparency and predictability regarding mobile network evolution, especially with respect to network switch-offs and large-scale frequency refarming decisions.

Recommendation

Oblige mobile network operators to provide, wherever possible, clear and coordinated transition plans several years in advance when intending to phase out existing network generations or repurposing spectrum bands.

At the same time, we recognise that, for practical, technical, or commercial reasons, mobile operators may not always be able to provide detailed long-term commitments regarding network availability.

In such cases, we recommend that the legislator introduce safeguards to ensure continuity for essential services. Operators should be required to maintain a minimal level of service on networks subject to phase-out for a transitional period of 8 to 10 years after the declaration of end-of-service, during which no new contracts would be concluded on those networks.

Such a transitional obligation would help ensure the continued functioning of emergency and regulatory services, including eCall, while providing industry and consumers with sufficient time to manage technological migration in a safe, orderly, and economically sustainable manner.

ENSURING FREE AND EFFECTIVE CALLBACK FUNCTIONALITY FOR eCALL SERVICES

ACEA welcomes the Commission's recognition of the importance of ensuring that access to emergency services through emergency communications is provided free of charge to end-users, in Article 106 of its proposal. In this context, it is important to ensure that these protections apply fully and explicitly to automotive eCall services, including the callback functionality used by Public Safety Answering Points (PSAPs).

The 112 eCall system is a critical safety feature deployed in vehicles across the European Union. It automatically contacts emergency services in the event of a serious road accident and transmits key information, including the vehicle's location, to support rapid intervention. Importantly, the eCall service itself is free of charge for users, reflecting its essential public safety function.

However, significant technical and commercial issues remain regarding callback procedures. In practice, when an eCall is interrupted or additional information is required, PSAPs may need to call back the in-vehicle system (IVS). These callback communications can generate very high and non-standardised charges because calls to connected vehicles are often treated by operators as international calls, roaming communications, or calls to specific numbering ranges (e.g., "+882" or "+883") associated with global mobile connectivity services.

These excessive and unpredictable charges create a serious operational problem. In some cases, PSAPs may be reluctant or unable to establish callback communications due to cost concerns, technical restrictions, or uncertainty regarding applicable tariffs. As a result, emergency operators may fail to re-establish contact with vehicle occupants following a disconnected or incomplete eCall.

This situation poses clear risks to road users. The inability of PSAPs to call back a vehicle can delay emergency response, prevent the clarification of accident circumstances, or make it impossible to assess the condition of vehicle occupants. In cases where accident victims are unconscious, injured, or otherwise unable to reconnect themselves, callback functionality can be essential to ensuring timely and appropriate emergency intervention.

Recommendation

Ensure that the provisions of Article 106(1) apply explicitly to automotive eCall callback communications.

This should mean that communications initiated by PSAPs toward vehicles in the context of a 112 eCall emergency are treated as emergency communications and therefore provided free of charge, without additional fees or discriminatory tariff treatment.

Applying Article 106 to automotive eCall callback scenarios would provide legal clarity and harmonisation across Member States and remove cost-related barriers that currently risk undermining the effectiveness of eCall systems. This would directly benefit vehicle owners and road users by improving the reliability and effectiveness of emergency response procedures following road accidents. Ensuring that PSAPs can always reconnect with a vehicle without cost or technical barriers is fully consistent with the public safety objectives underpinning the EU's emergency communications framework.

PRESERVING TECHNOLOGY NEUTRALITY AND INNOVATION: AVOIDING MANDATORY RADIO RECEIVER REQUIREMENTS IN VEHICLES

We welcome the absence in the proposal of any requirements mandating the inclusion of FM or DAB+ radio receivers in vehicles. Considering recent calls from some stakeholders to introduce such obligations in the Digital Networks Act, this is an important and positive signal that the Commission is committed to a future-oriented and innovation-friendly regulatory framework.

Vehicle design and development cycles are increasingly driven by digital architectures, software-defined functionalities, and global scalability. Imposing hardware-based requirements tied to specific communication standards would constrain design flexibility, increase production complexity, and generate additional costs for manufacturers, which could ultimately be passed on to consumers.

The in-vehicle media ecosystem is rapidly evolving, with users increasingly accessing audio content through internet-based services, streaming platforms, and integrated infotainment systems that offer far greater diversity, personalisation, and cross-border accessibility than traditional broadcast technologies. Mandating specific reception technologies would divert resources away from the development of next-generation user experiences and connected services.

Furthermore, such requirements would be at odds with the principle of technology neutrality, which is a cornerstone of EU digital policy. Regulation should define outcomes and objectives, not prescribe specific technologies. By privileging specific broadcast standards, policymakers would risk distorting the market, inhibiting competition, and limiting the ability of manufacturers to adopt more efficient or innovative solutions as they emerge.

Critically, proposals that go beyond hardware requirements, expecting manufacturers to ensure discovery and accessibility of any licensed radio services from all Member States via the vehicle interface, are widely disproportionate. Implementing such obligations would require continuous aggregation, updating, and integration of thousands of radio services across all jurisdictions, each subject to different licensing regimes, metadata standards, and distribution methods. Ensuring compliance across all markets would entail significant technical complexity, ongoing operational burdens, and substantial costs.

These costs would ultimately be borne by manufacturers, at a time when it is already facing intense global competition and undergoing a major technological transformation. The

cumulative effect would be to weaken the competitiveness of the European automotive industry without delivering commensurate benefits to users, who already have multiple, flexible means of accessing audio content through connected services and personal devices.

Recommendation

Maintain the proposal's technology-neutral approach by refraining from imposing mandatory in-vehicle FM/DAB+ receiver or radio prominence requirements.

A flexible, technology-neutral approach allows innovation in in-vehicle connectivity and infotainment to flourish, while supporting consumer choice and the continued competitiveness of Europe's automotive sector.



ABOUT THE EU AUTOMOBILE INDUSTRY

- 13.6 million Europeans work in the auto industry (directly and indirectly), accounting for 6.9% of all EU jobs
- 8.1% of EU manufacturing jobs – some 2.5 million – are in the automotive sector
- Motor vehicles are responsible for €414.7 billion of tax revenue for governments across key European markets
- The automobile industry generates a trade surplus of €93.9 billion for the European Union
- The turnover generated by the auto industry represents over 8% of the EU's GDP
- Investing €84.6 billion in R&D per year, automotive is Europe's largest private contributor to innovation, accounting for 34% of the EU total

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