

Executive Summary 5G Broadcast

August 2025

CONTEXT AND PRESENTATION OF 5G BROADCAST TECHNOLOGY

- 5G Broadcast is a technology for broadcasting linear video content to mobile devices such as smartphones. The technology operates in the ultra high frequency (UHF) band, i.e. on frequencies currently used by DTT in particular. It represents a major step towards the modernizing terrestrial television and a complement to traditional DTT broadcasting with fixed reception in homes.
- It will enable to smartphones to benefit from the advantage of broadcast technology in terms of security, resilience, economy (no use of a mobile plan) and energy efficiency.
- Broadcast service providers from various European countries (TDF in France and its counterparts in Germany, Spain, Poland, Italy, Czech Republic) are collaborating within an international working group called the 5G Broadcast Strategic Task Force (5BSTF) (5BSTF) to align approaches. Chipset and device manufacturers are working alongside broadcast service providers to ensure smartphones are equipped quickly, enabling the launch of services as early as 2028 in certain countries.
- In France, a large-scale trial carry out during the Paris 2024 Olympic Games enabler end-to-end technical validation of the system.
- A field survey and an economic study commissioned by TDF and shared with broadcasters confirmed the potential for user adoption and the viability of the business model.

PUBLIC INTEREST, POTENTIAL AND BUSINESS MODEL

- 5G Broadcast could help expand mobile usage for TV content, thanks to certain advantages of its own (low battery and data consumption, image quality, absence of latency), particularly in certain situations:
 - Public transport
 - Major events
 - Long-distance surface transport
- An unprecedented consumer study conducted in January 2025 by the Kantar institute with a representative sample of 2000 respondents confirms the potential of linear TV on the move:
 - Mobile video is watched primarily at home (59%), but transport is an important use case (35%, and even 52% for 16–34-year-olds), as well as holiday locations (26%)
 - More than 1 in 2 people aged 15-49 say they are willing to use 5G Broadcast to watch TV on the move, representing a target audience of interest for broadcasters.
- A study commissioned by TDF and shared with broadcaster validated both the usage potential and the business model.

SCENARIO FOR DEPLOYMENT IN FRANCE

Source: work of the Interprofessional Working Group with the main broadcasters - April to June 2025

5G Broadcast is a complementary broadcasting technology, focused on mobile uses and outdoor reception:

- 5G Broadcast is designed to complement 'indoor' uses, which are already covered by DTT on TV sets, and by OTT via WiFi for mobile terminals;
- The technology is based on the infrastructure of the existing DTT broadcasting sites that contribute most in terms of coverage, targeting the most densely populated areas;
- With a view to limiting investment and costs, 5G Broadcast does not rule out the possibility of supplements and gradual adaptation of the service in line with changes in usage and technological innovation.
- **The service could be scaled up in several stages:**
 - **Phase 1:** an optimised approach to coverage based on the existing network that would result in coverage of up to 68% of the population of mainland France.
 - **Phase 2:** Targeted complementary coverage to key main use cases will improve coverage in a controlled economy (Metro, stations, motorways, indoor).
 - **Optional phase 3:** wider outdoor coverage is possible using other existing sites or new sites, on a perimeter and an ROI that remains to be determined.

5G Broadcast technology is being considered in France as an additional reception mode that smartphone users could access through one or more applications without any action on their part:

- The operation will be based on a technical system at the core network level to process the audiovisual signal and adapt it to 5G Broadcast.
- This signal broadcast by the terrestrial network will be reconstructed into a file format, which can be directly used in the smartphone's player, leveraging the mobile device's *middleware* and native hardware components.
- In target vision, the smartphone's *middleware* will be able to seamlessly switch from one reception mode to another, in order to allow an optimal user experience.

In order to ensure this optimized coverage, technical assumptions are being considered to adapt to the specific constraints of smartphones. These parameters are the result of the work and large-scale experimentation carried out in the summer of 2024 during the Paris Olympic Games.

A co-innovation approach between ecosystem actors with R&D work is already underway to anticipate, streamline, and accelerate the integration of 5G Broadcast into the two technical layers of the terminals:

- On the software side ("middleware") with the provision of a labeling platform for proprietary middleware (foundries / Original equipment manufacturer OEM), and participation in the development of a standard middleware;
- On the "player" side, within the various applications that will restore the signal, by understanding the technical prerequisites of the broadcasters and sharing the technical foundation built for the needs of experimentation (e.g. InsTNT application) and the development of additional functionalities.

The broadcaster's offer could consist of a takeover of existing channels:

- Their simultaneous broadcast ("simulcast") – for a limited number of services (8 to 10) – will enable this service to be deployed in a cost-effective manner. (i.e. no additional technical or editorial resources) and a simplified legal framework: a 5G Broadcast authorization in simulcast could not be considered as an autonomous authorization, but as a simple extension of the basic authorization.
- The 5G Broadcast streams would be accessible in the broadcasters' apps, and also available in the apps of all "audiovisual service distributors" who would like to take them over, including a possible "neutral application".
- This scenario would not require an impact study, as it would include existing and already broadcast content, and would not require 95% coverage or a change in the law.

Deployment is possible from 2028:

- **A launch could be envisaged from the end of 2028 or early 2029**, and at the latest at the beginning of 2030, subject to two conditions: having a sufficient fleet of compatible smartphones and the availability of a multiplex. This would follow the transition of DTT from DVBT to DVB-T2 and the end of UHD multicast.
- **A large-scale multi-city trial in the multiplex R9** is conceivable from January 2028.