



Italy - Positive steps to digital

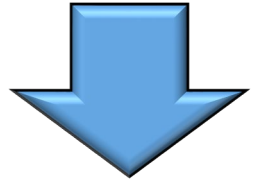
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WorldDAB General Assembly
Brussels, 5th - 6th November 2019

- I. Rai digital radio offer**
- II. Italian regulatory framework for DAB+**
- III. Rai DAB+ network expansion plans**

Rai digital radio offer

Rai broadcasts 12 stations on digital radio



Traditional stations (simulcast on FM)

Rai Radio 1 Rai Radio 2 Rai Radio 3 Rai GrParlamento Rai IsoRadio

Rai Radio Tutta Italiana Rai Radio Classica Rai Radio Techete' Rai Radio Live Rai Radio Kids Rai Radio 1 Sport Rai Radio 2 Indie



Digital only stations



	Rai Radio1	96 kbps / Stereo
	Rai Radio2	96 kbps / Stereo
	Rai Radio3	96 kbps / Stereo
	Rai Radio Classica	96 kbps / Stereo
	Rai Radio Techete'	64 kbps / Stereo
	Rai Radio Live	48 kbps / Stereo
	Rai Radio Kids	64 kbps / Stereo
	Rai GrParlamento	48 kbps / Mono
	RaiTuttaItaliana	96 kbps / Stereo
	Rai Radio1 Sport	64 kbps / Stereo
	Rai Radio2 Indie	96 kbps / Stereo
	Rai Isoradio	64 kbps / Stereo

In addition to these national contents, Rai broadcasts three local stations in the autonomous province of South Tyrol:

- **Rai Radio 1 TAA+** 64 kbps /Stereo;
- **Rai Radio 2 TAA+** 64 kbps / Stereo;
- **Rai SÜDTIROL+** 96 kbps / Stereo.

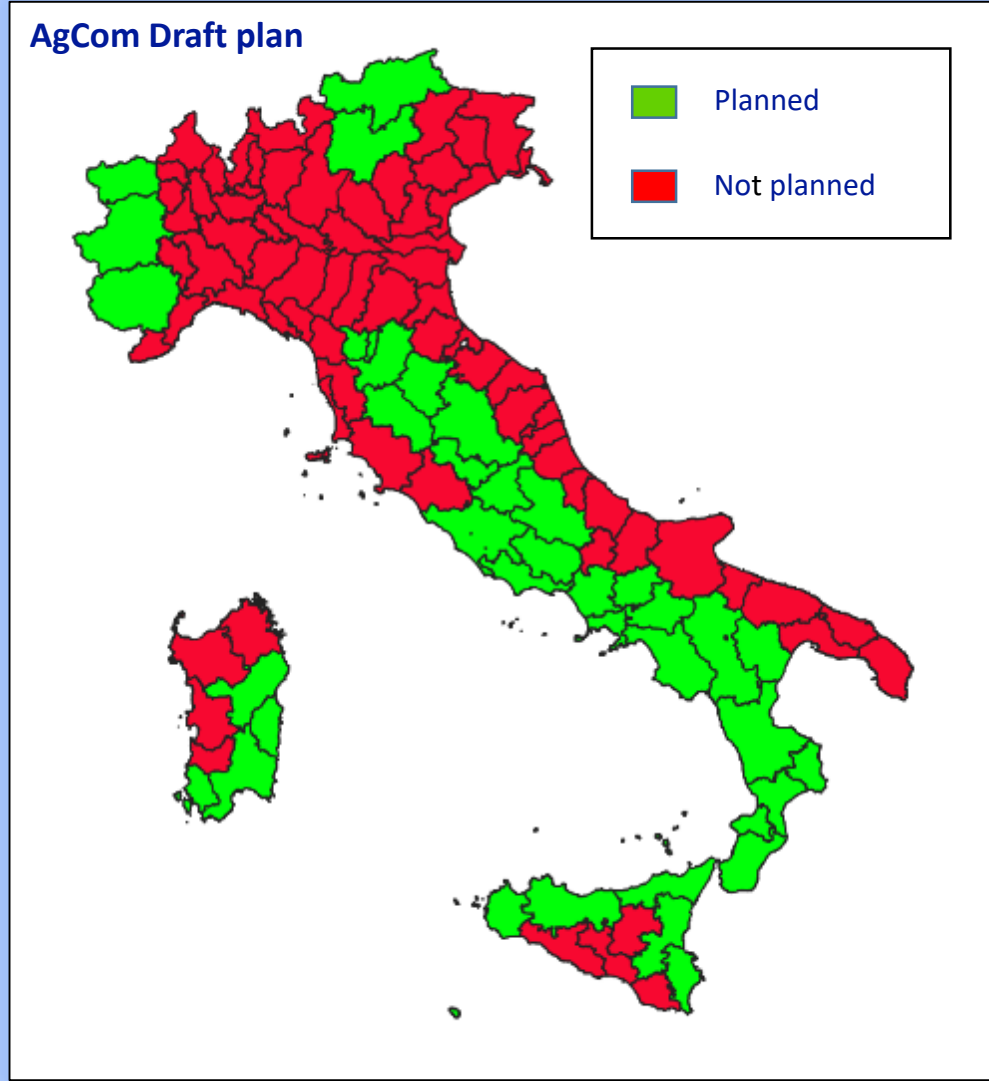


Italian regulatory framework for DAB+

Some key facts

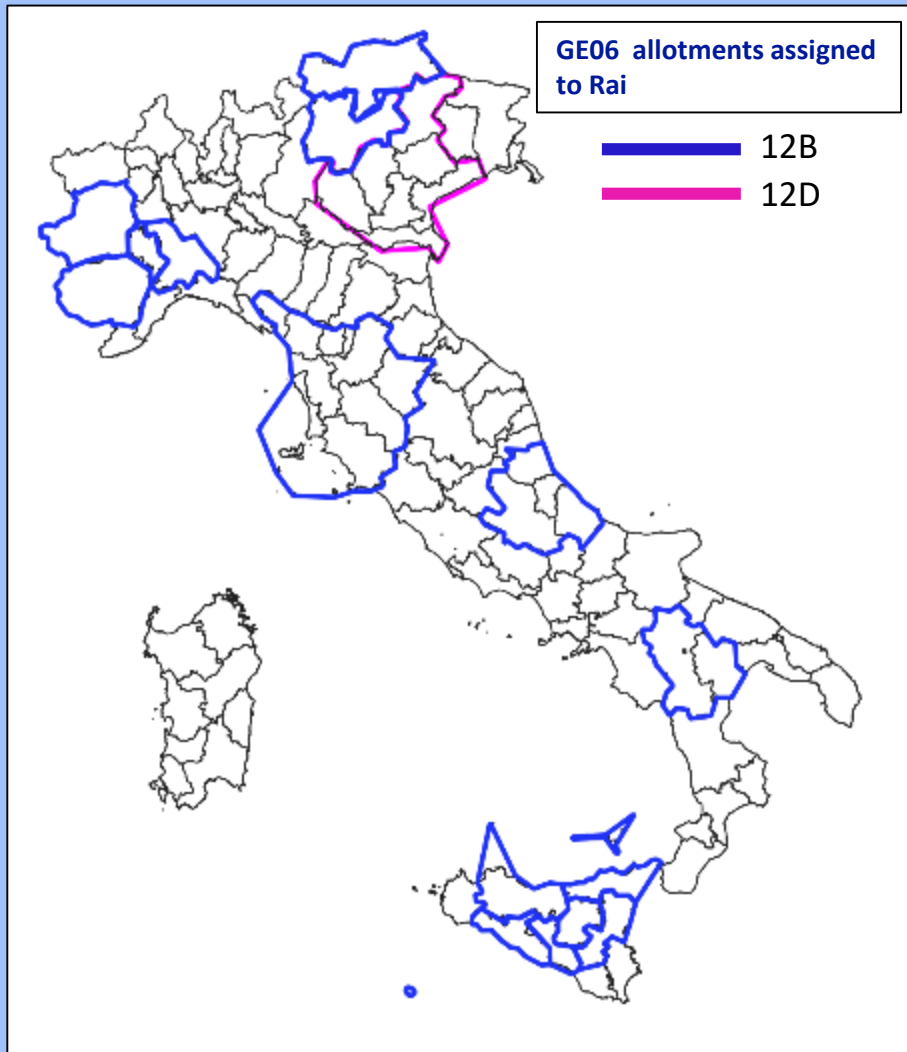
- ❑ The first trials of a digital radio service in Italy were made at the end of the nineties by Rai, followed over the years by other operators. Rai set up its first DAB network in 2011 including the main cities (Rome, Milan, Turin).
- ❑ From then on, digital radio has made impressive progress in Italy. Besides Rai, two private national operators are active (Eurodab Italia, Dab Italia). The three national multiplexes totally broadcast 49 services, 24 of which are digital native. In addition, more than 200 local services are on air among several regions. **It's a fact that digital radio is becoming increasingly popular in Italy.**
- ❑ In 2017, the Italian Parliament has adopted a law requiring that all the radio receivers sold in Italy starting from 1 January 2020 have to be capable of receiving digital terrestrial radio.
- ❑ In 2018, the European Parliament and the European Council have adopted the new European Electronic Communications Code which includes a similar obligation in all the EU.
- ❑ According to some studies half of the new car radios sold in Italy are already capable of receiving DAB+.

Draft frequency plans for digital radio before 2017



- ❑ Starting from May 2012, the Italian National Regulator, AgCom, has published several decrees to plan DAB blocks for national and local broadcasters, mostly relying on blocks of channels 10 and 12.
- ❑ At the end of 2016, only less than half of the Italian territory had been planned for DAB services.
- ❑ Without a complete national frequency plan for digital radio, many of the transmitters of national and local networks are operating in not planned areas, on the basis of experimental authorizations.

The Italian Budget Laws 2018 and 2019



- ❑ Later, the AGCOM draft frequency plans have been substantially replaced by the Italian Budget Laws 2018 and 2019 which, in relation to the 700 MHz band release process, have prescribed that the VHF band must be mostly reserved to digital radio and must be exclusively planned within the GE-06 allotments.
- ❑ Since the planned end date of the Italian release process of the 700 MHz band is 2022, the national plan for DAB+ will come into force only after that date.
- ❑ As a consequence, Rai cannot provide coverage in the whole country before 2022 since the only available frequency resources are few DAB+ blocks assigned to Italy by the GE-06 Plan (only one block for region) and Rai can only rely on allotments on block 12B (12D in Veneto).
- ❑ Even in this complicated regulatory context and still in the absence of a definitive national frequency plan for DAB+, Rai has recently made considerable efforts to ensure coverage as extensive as possible, in compliance with the international agreements on the VHF band.

Italian digital radio regulations update

On June 7, 2019, the National Authority (AgCom) launched a public consultation through the 223/19/CONS decree concerning amendments and additions to the digital radio broadcasting regulations, dating back to 2009.

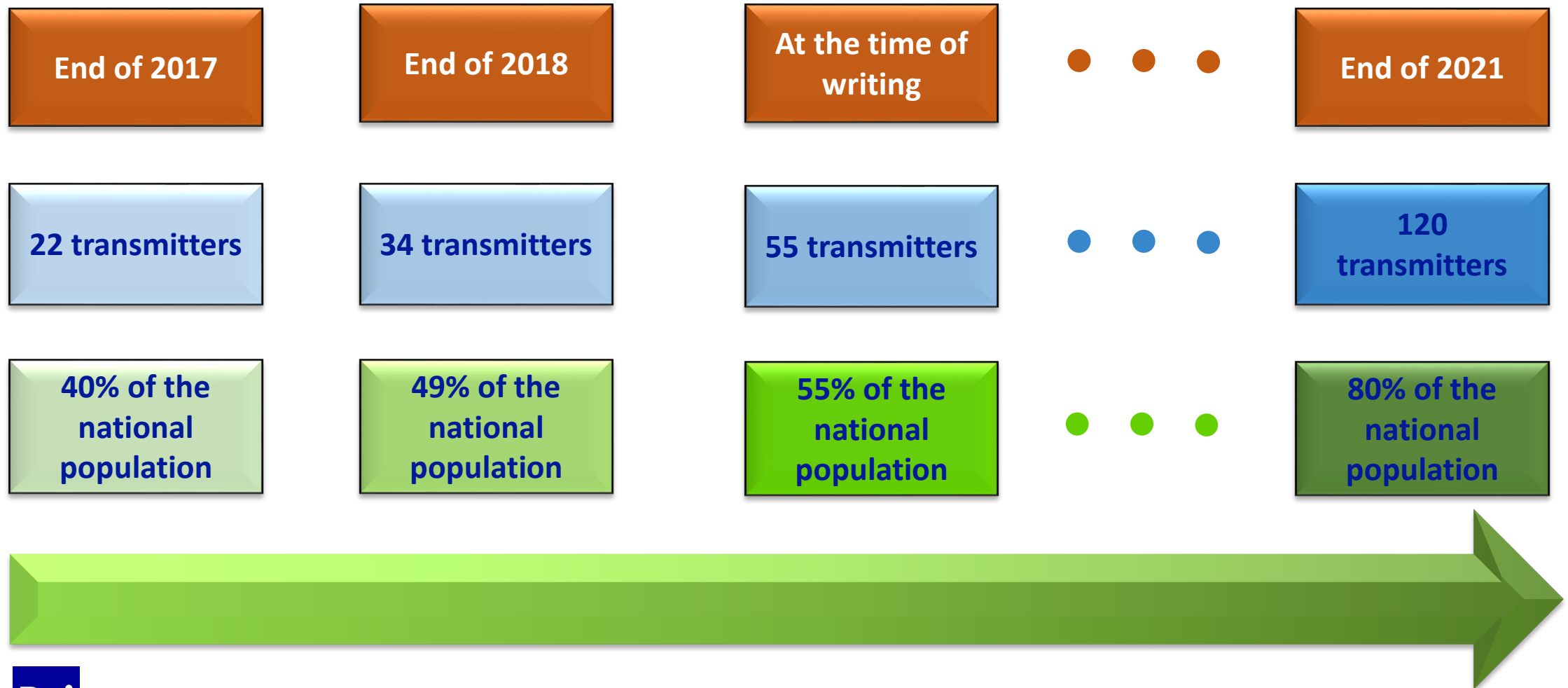
AgCom has introduced the obligation, for all the national operators, to reserve part of their assigned capacity in favor of independent providers of radio contents.

The amount of reserved capacity has been set to 216 CU for Rai and to 144 CU for private broadcasters.

Rai has opposed to this option that, if confirmed, will force Rai to rethink its offer on DAB+.

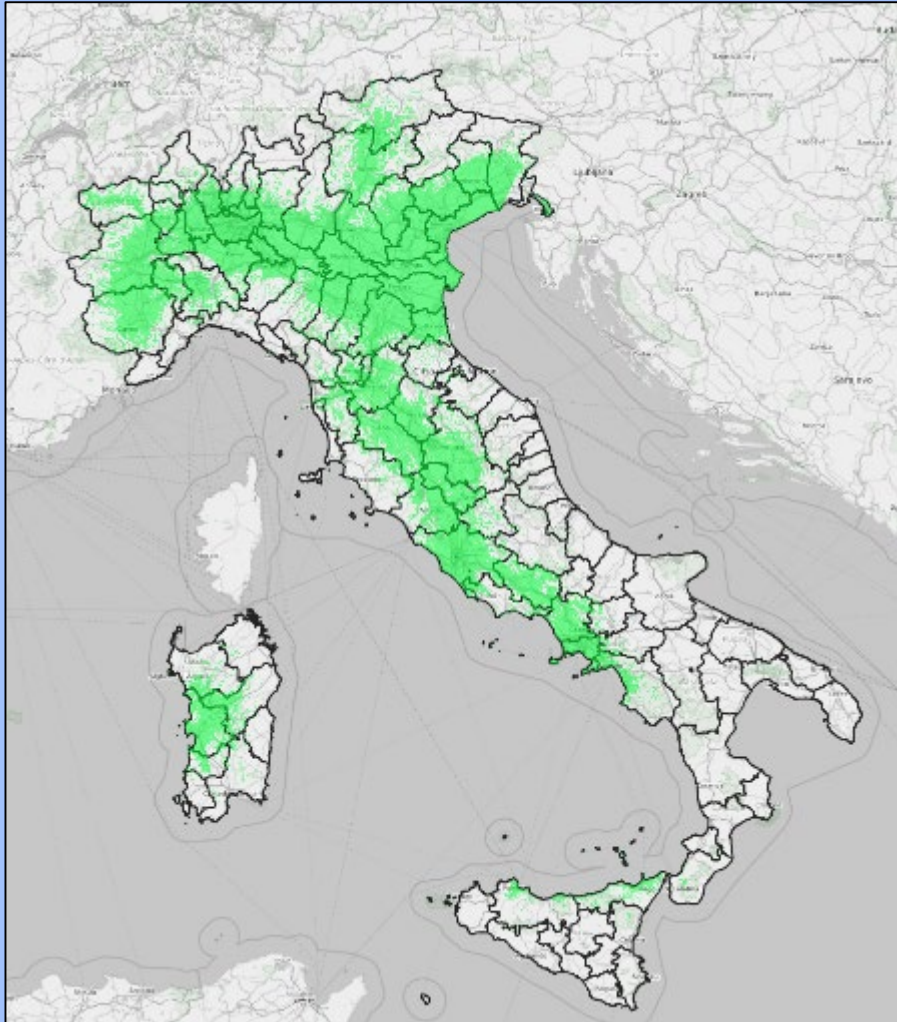
Rai DAB+ network expansion plans

Rai DAB+ coverage: what has been done and what to do next



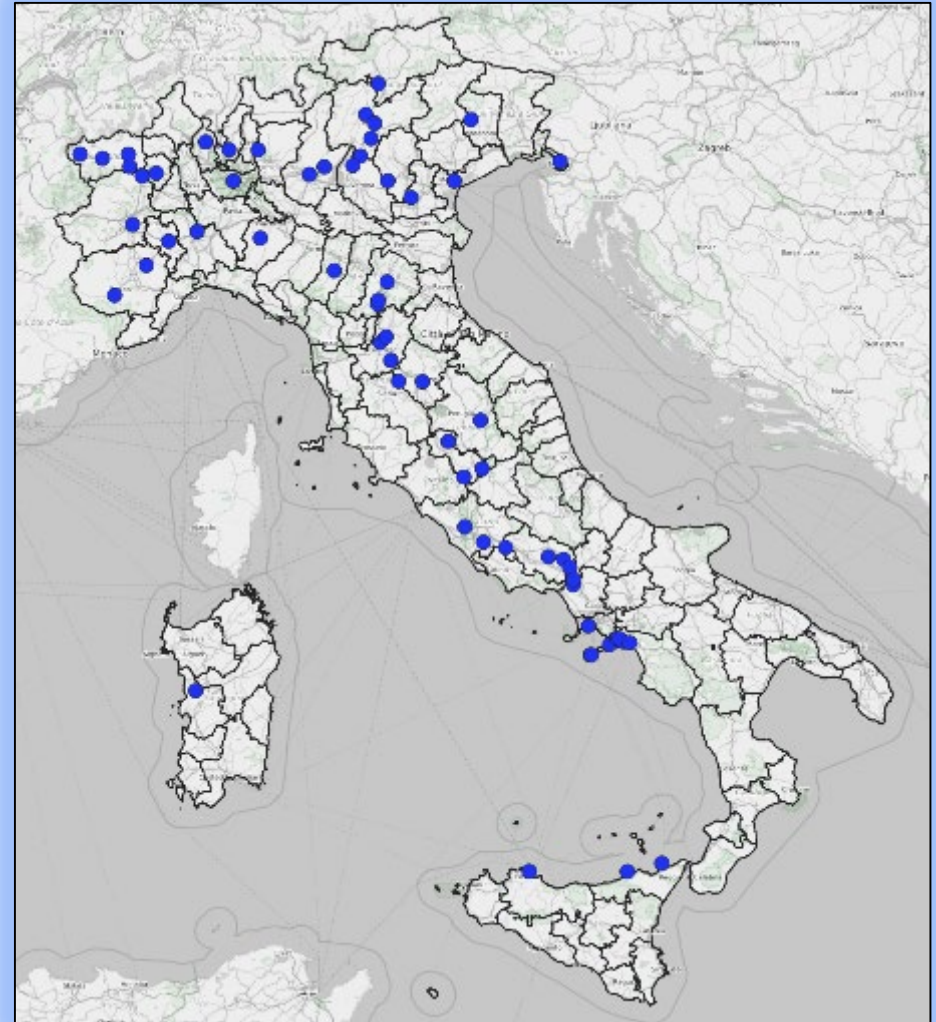
Rai DAB+ coverage by the end of 2019

57% of the national population on mobile reception



Mostly in
SFN on
block 12B

62 Transmitter sites

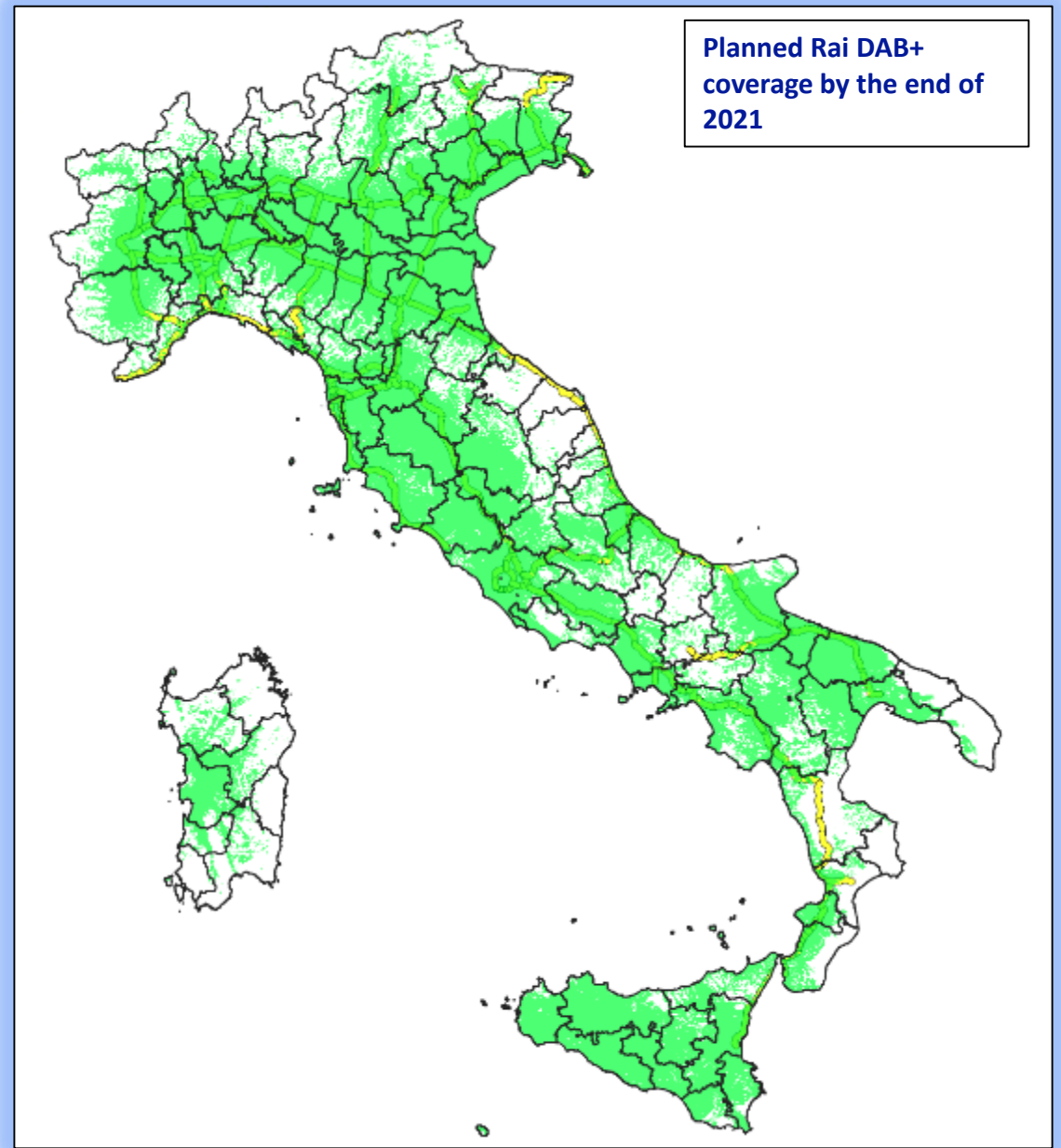
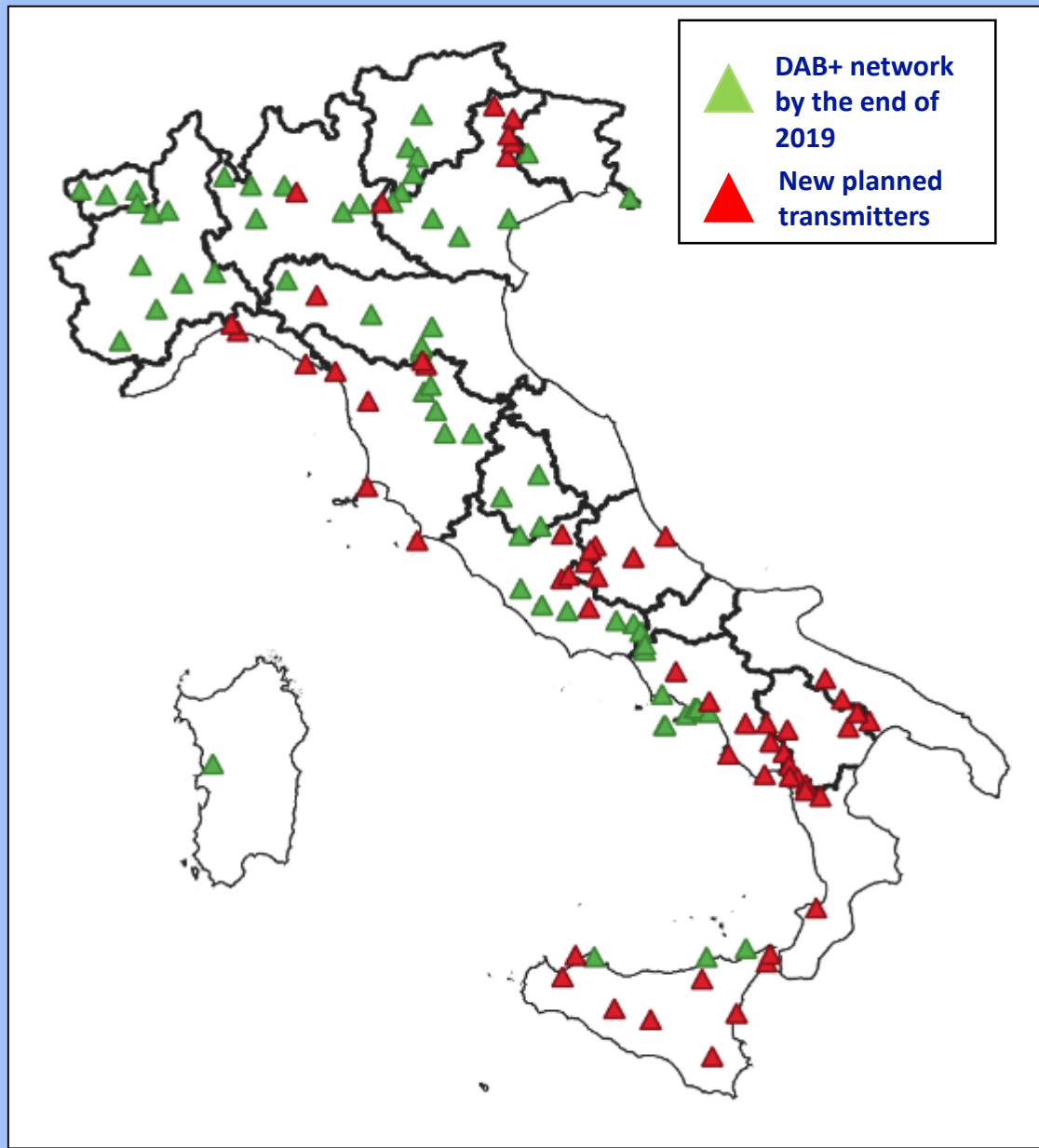


Network extension plans – motorways and cities

- ❑ The next phase of Rai network expansion plan will increase DAB coverage from 57% to 80% of the Italian population within the next two years with additional 60 transmitters in line with the international frequency plans (GE06) and the constraints prescribed by Italian Budget Laws 2018 and 2019.
- ❑ This plan will include most of the regional and provincial capitals as well as the main motorways.
- ❑ As public service broadcaster, Rai has the target to provide a widespread coverage of its digital radio stations, comparable to the analogue radio services. This will only be possible from 2022, after the adoption of National Frequency Plan for DAB.

Network extension plans - tunnels coverage

- ❑ The Italian national system of motorways has a very complex structure which is the consequence of the challenging Italian morphology. There are plenty of tunnels which can obstruct the user in getting service continuity.
- ❑ For this reason, several trials to investigate coverage in tunnels have been conducted in the last years by Rai *Research and Technological Innovation and Experimentation Center* (CRITS) along the “A1 - Variante di Valico” motorway in 2015, in the Monte Mario tunnel between Florence and Bologna (A1) in 2018 with the support of «Autostrade per l’Italia» (ASPI) and in the Aosta Valley in 2018 between Aosta and Courmayeur with the support of «Raccordo Autostradale Valle d’Aosta» (RAV).
- ❑ A new trial has recently started in the Monte Mario tunnel (2200 m length) with all the 3 national multiplexes on air.
- ❑ Results of such trials will be valuable to extend the coverage in tunnels.



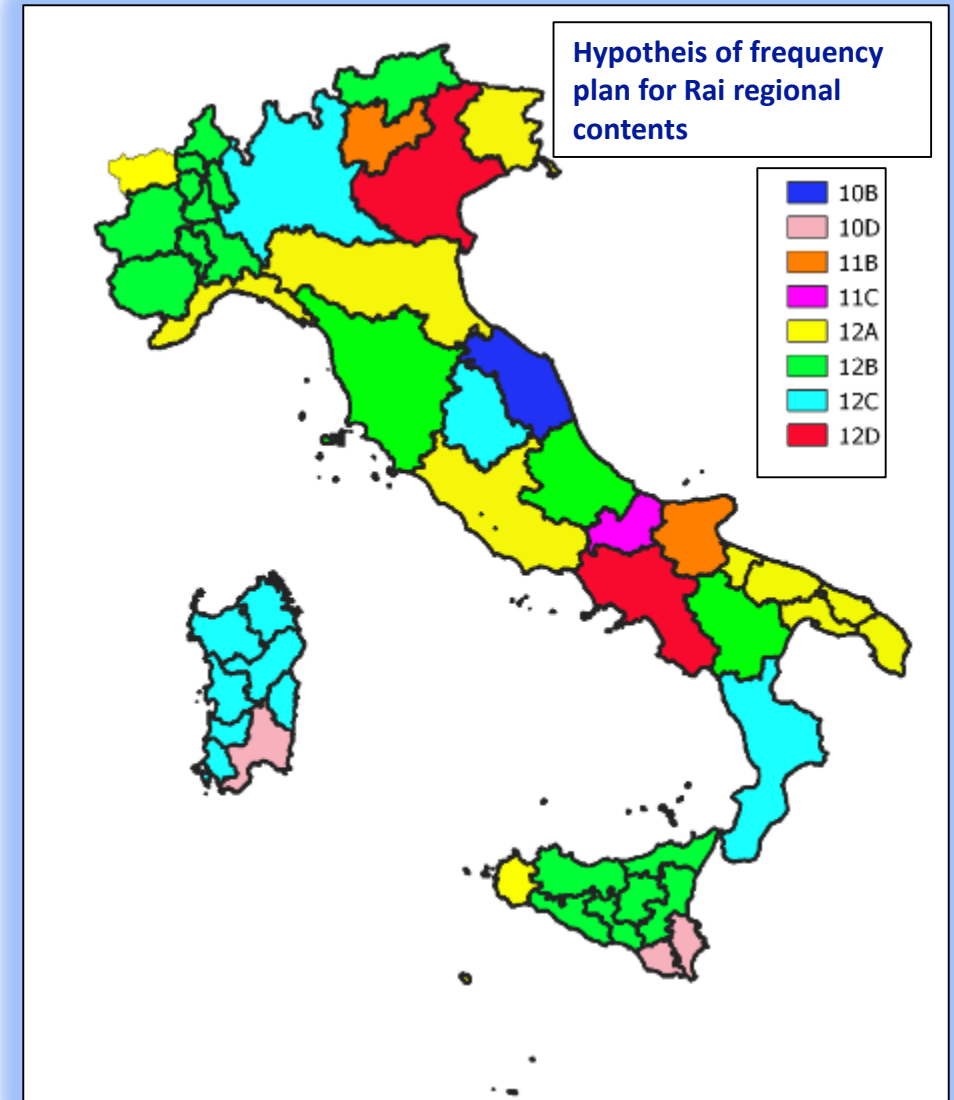
Rai plays a key role in digital radio development

Rai has greatly facilitated the development of digital radio in Italy, pushing for the VHF band, currently used to complete the coverage of the main Rai DVB-T multiplex (with coverage >99% nat. pop.), to be widely released in order to guarantee the frequency resources required in all the Italian regions for national and local operators.

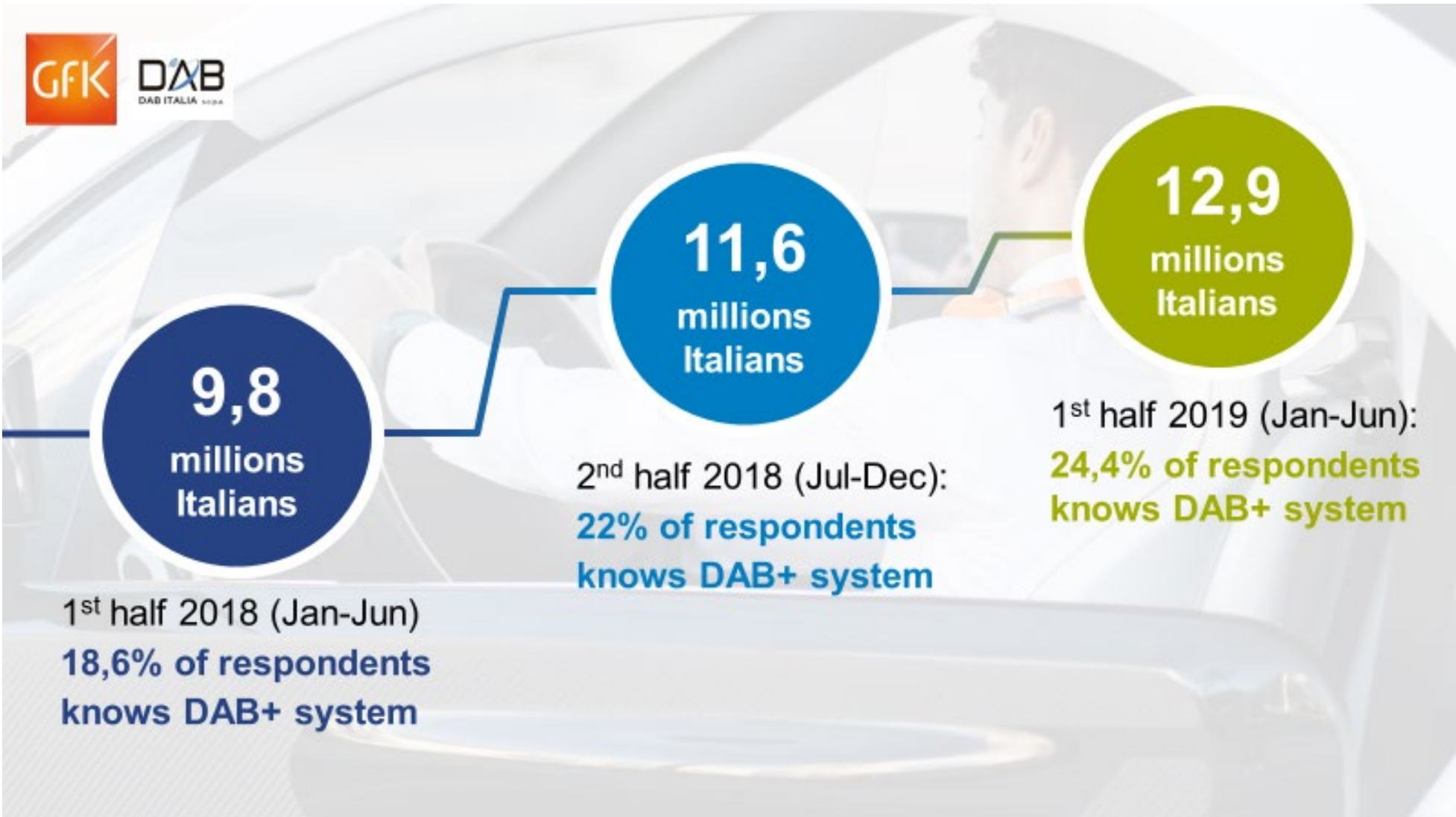
Indeed, the Italian Parliament with the 2018 Budget Law originally assigned the VHF band almost totally to Rai for its main DVB-T regional multiplex.

Without the effort of Rai in changing this decision, the entire radio sector would have suffered from the lack of frequencies for the digital radio.

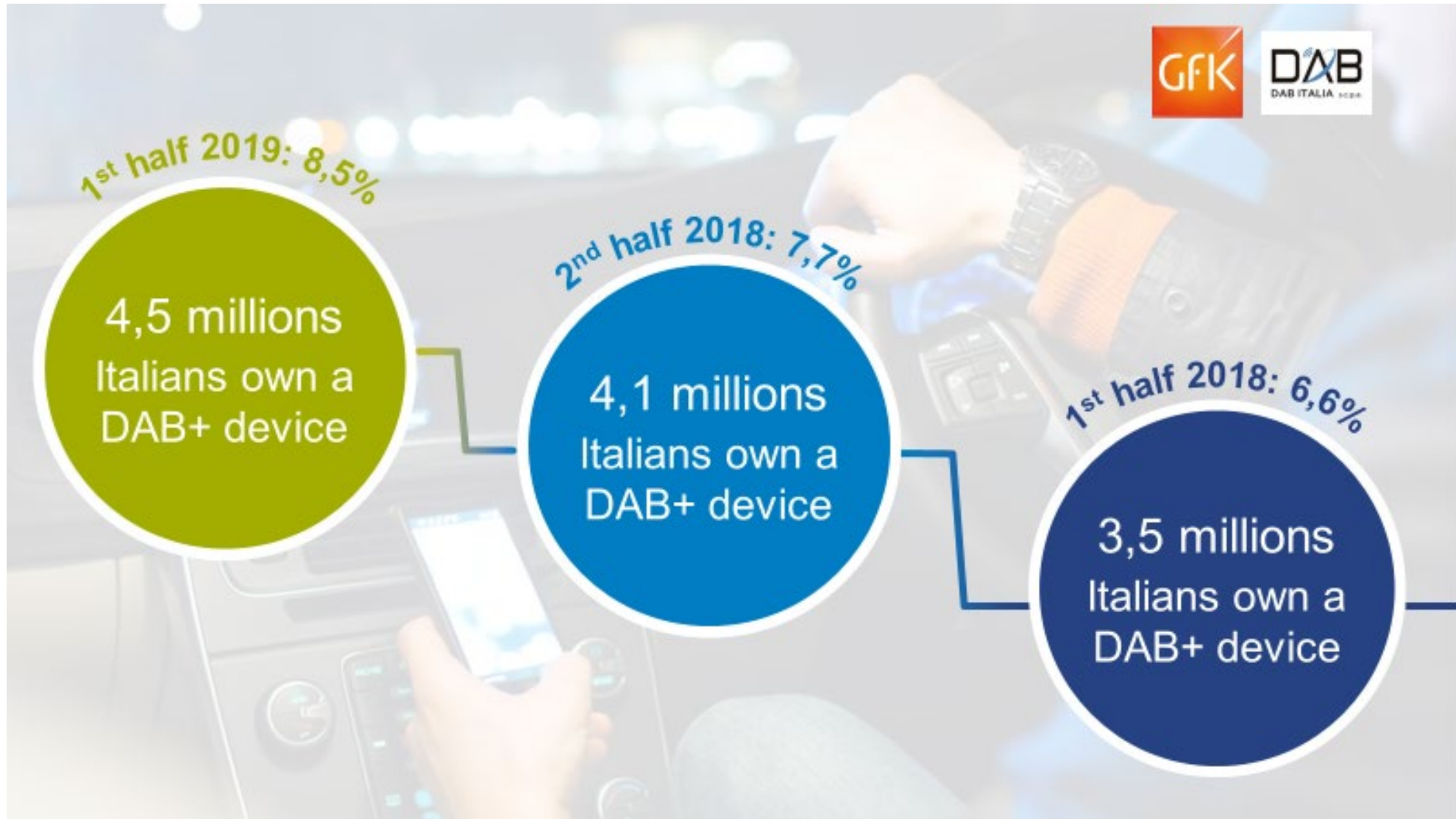
Moreover, Rai firmly believes in its role of Public Service Broadcaster and intends to work with the Authority to define a National Plan that guarantees Rai the technical feasibility of transmitting its regional contents (by Rai Radio 1) - already available on FM - also on DAB+.



Receivers 1H19 (courtesy of DAB Italia)



Receivers 1H19 (courtesy of DAB Italia)





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Thank You!

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