South 180 FUTURES STRATEGY IMPACT

DAB+
PUBLIC POLICY TOOLBOX

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South 180 FUTURES STRATEGY IMPACT

We are an international consulting company specialized in foresight, strategy design and impact assessment.

We enable leaders to turn great ideas into strategies that work.

Rue de Lyon 77
1203 – Geneva
Switzerland

www.south–180.com

worlddab

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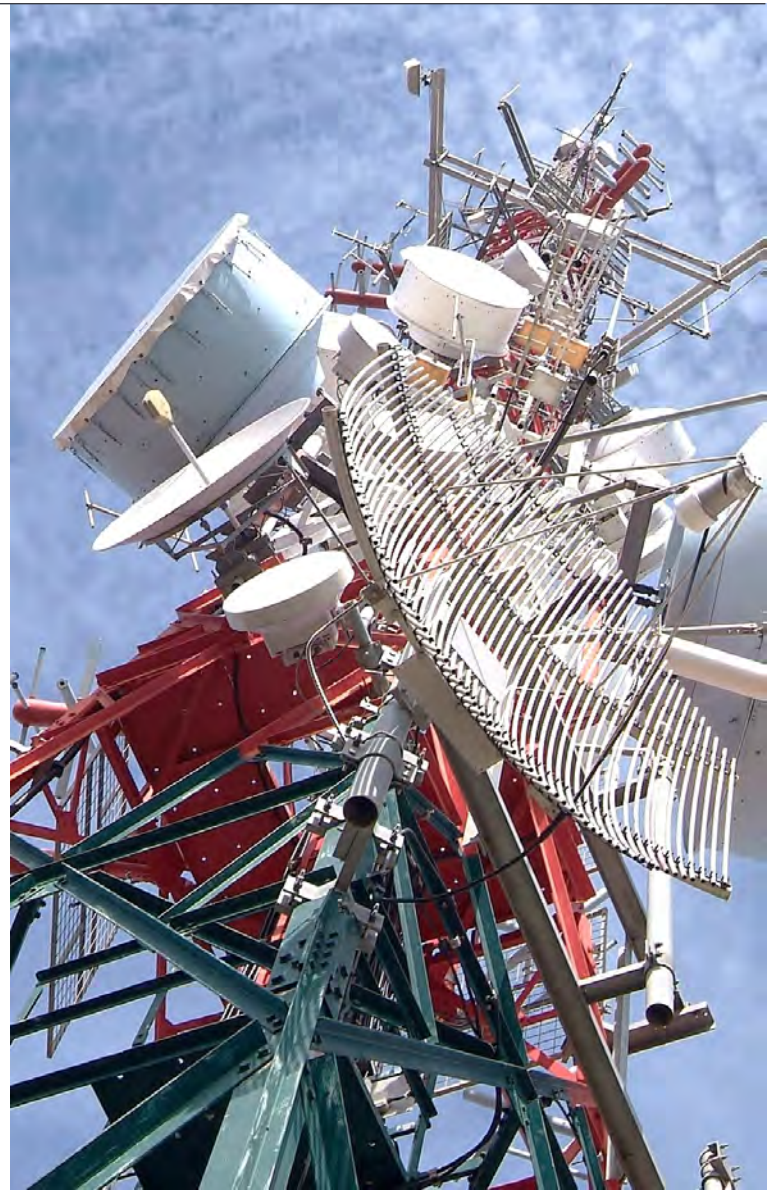
Content



About this report

DAB+ is a solid and well–established technology, currently deployed in more than 30 markets. Moreover, it is an evolving technology, recently updated with features such as Automatic Safety Alert (ASA) and voice command adaptation. It represents the evolution of free to air terrestrial radio, expected to retain its role as the main pipeline for audio delivery in the years to come; it is the only platform that guarantees free access, universal coverage, societal resilience in case of emergency, and national sovereignty.

This report focuses on the regulatory aspects that may condition stakeholders in the digital migration, i.e. the process by which audiences move from analogue to digital listening.

To support countries interested in designing and implementing an effective and efficient migration plan to DAB+, WorldDAB commissioned South 180 to conduct a review of the related public policies that have been utilised across the world.

This report aims **to provide public administrations and regulatory agencies with a toolbox that enriches and accelerates their decision–making and planning processes**. It presents a selection of the most pertinent public policies used to roll out digital terrestrial radio in markets across Europe, Asia–Pacific, Africa and the Middle East.

Nevertheless, this document does not exclusively target those public bodies. All stakeholders within the digital radio ecosystem can benefit from the insights and recommendations included in it and use them to inform their own strategies or boost their advocacy efforts.

The first section provides the rationale supporting the suitability of using public policies to successfully drive and complete the deployment of DAB+.

In the second section, the key practical issues potentially faced by the stakeholders involved in the process are identified.

After that, in the third section, an overview of specific public policy interventions that have supported DAB+ growth is provided. Moreover, as mistakes are essential to learn and progress,

the report also examines how certain policies –or lack of– have hindered digital migration in certain markets.

The report concludes with a set of recommendations that could enhance the effectiveness of the proposed public policies.

It is important to note that each radio market is unique. This means that a 'one size fits all' solution for digital migration is not realistic. In this regard, the reader of this toolbox is invited to be inspired by and select the policies and learnings that may be most relevant to their national case and apply them always considering the need to adapt them to their national reality.

It is also important to understand that this toolbox does not address technical issues. Those tend to have straightforward solutions. WorldDAB already commissioned from Dr. Les Sabel an ebook on *Establishing DAB+, Digital Broadcast Radio*. It extensively examines many of the requirements needed to make DAB+ a reality in any market, with a strong focus on the technical side.

1

PUBLIC POLICY MATTERS

Public policy matters

Public policy exerts a significant influence on market dynamics, partly defining the pace at which new technologies are adopted, determining the participants in the market, shaping risk management strategies, and dictating the distribution of benefits, either widely or to a selection of leading players.

The introduction of new technologies and associated services does not occur in isolation. Markets are shaped by regulatory signals, incentives, and public investment decisions.

In network industries and digital markets in particular, policy choices influence the timing of deployment, the level of competition, and the balance between innovation and consumer protection.

Research into diffusion of innovations indicates that public authorities have a more significant impact than previously thought.

In addition to correcting market failures, they actively create and direct markets by establishing standards, taking risks in early investments, and coordinating various stakeholders.

Regarding their approach, flexible, incentive–oriented instruments such as targeted subsidies tend to encourage lower–cost compliance pathways compared with purely prescriptive regulation, which can lock in outdated technologies.

Shifting the focus of broadcasting policy and regulation

The original reason for broadcasting regulations and licensing was to ensure the efficient use of spectrum and to organise airwaves to avoid interference.

Digital technologies have reduced spectrum scarcity, prompting a shift in focus of the regulatory system towards content delivery issues.

The system now aims to address the question of what content is considered by the legislator as essential for a healthy, democratic, diverse and pluralistic society.

This is done while creating the right conditions for commercially funded players to remain competitive and for public service media to fulfil their remit.

Public policies as market–shapers

Public policies shape emerging technology markets through several interconnected channels:

- Regulatory frameworks that define access conditions, spectrum or infrastructure use, quality and safety requirements, and consumer rights. This provides a playing field of basic rules for incumbents and newcomers alike.
- Economic incentives such as tax credits, grants, and pricing schemes, which can lower adoption costs for early users, accelerate learning curves, and facilitate the scaling and cost parity of new solutions.
- Public investment and procurement. By anchoring demand, supporting shared infrastructure, and reducing capital uncertainty, these measures can stimulate private investment and create a favourable environment for business.
- Internal market and competition rules, which can open markets, prevent foreclosure by dominant firms, and enable new entrants and alternative business models to reach users.

A focused regulatory effort for DAB+

Digital radio policy aims to enable the radio industry to take advantage of the new opportunities provided by technology and deliver a better service to listeners.

This is of paramount importance if radio is to maintain its relevance in the digital age. Given the saturation of the FM spectrum in many countries, digitisation is the only viable option for growth and development.

Policies and regulations can encourage the use of digital radio by providing appropriate incentives for broadcasters, who are highly sensitive to regulatory conditions. This is particularly relevant for DAB+, where upfront investment is only recovered over time.

The radio market comprises a variety of stakeholders and individual interests are not always aligned. In fact, divergent perspectives among these players are not unusual and any uncertainty tends to create additional tensions.

The migration to DAB+ is not an issue that broadcasters can tackle individually. Given the industry–wide impact, coordinated action is essential for success.

Public intervention by governments and regulators can support this coordination and create the right and fair

Public policy matters

incentives for all parties involved. In this regard, the goal must be to create win–win situations in which all players can find incentives to embrace digitisation. To that end, three main actions are necessary:

- Identifying potential benefits for all stakeholders.
- Anticipating potential risks and uncertainties, and how to manage their impact.
- Creating opportunities for all stakeholders.

Public policy as an enabling frame

A well–established DAB+ market is the result of a collaborative effort. The mantra 'Compete on content, collaborate on technology' has been adopted by many players as a high–level framework for this process.

However, this approach is only effective when it is supported by robust public policy.

In some countries, policymakers and regulators have been the driving force behind DAB+ (for example in France, Poland, Spain, Thailand, Ghana or Saudi Arabia). In those territories, the top–down approach has set the scene for the implementation strategies.

However, even in the countries where the transition is led by industry players (for example in the United Kingdom, Switzerland, Ireland, Germany or Australia), the government and the regulator have also carried out decisive interventions in the market to facilitate and support the process.

A more strategic focus on public policies and a deeper understanding of their potential will help countries become more effective and efficient in their transition towards DAB+, thus reducing the inherent uncertainties associated with the migration.

Compete on content, collaborate on technology, frame with public policy

2

Issues to tackle

Issues to tackle

A process such as the digital migration of broadcast radio has a wide impact: it changes listeners' habits, increases the diversity of the offer, alters radio market balances, creates up new business opportunities for commercial players, enriches the public value delivered by public radio, etc.

It is understandable therefore that the multiple stakeholders involved may have questions regarding the outcome. Unanswered questions generate uncertainty, which is detrimental to effective action, commitment, and investment.

This section presents a list of questions for each type of stakeholder and points to the specific policies that could provide an effective answer.

A. POLICY MAKERS AND REGULATORS		
QUESTIONS		**POLICIES**
A.1	How can universal and affordable access to digital terrestrial radio be guaranteed, including vulnerable and rural populations?	7, 9, 14, 15, 16
A.2	What consumer protection measures are required?	16, 17, 18, 19
A.3	How can it be ensured that the planning of spectrum for DAB+ does not create any disadvantages for certain regions, languages, or minority services?	7, 8, 9
A.4	How can it be ensured that small commercial and community stations are not forced off air by the cost and complexity of DAB+?	8, 10
A.5	How will emergency and public warning capabilities be preserved and eventually improved in a DAB+ environment?	19
A.6	Should switching off the FM network be considered as an option, and under what circumstances?	14

B. PUBLIC AND COMMERCIAL BROADCASTERS		
QUESTIONS		**POLICIES**
B.1	Will the available spectrum be sufficient to meet the needs of all interested parties?	1, 3, 7, 8
B.2	Will the transition to DAB+ result in increased competition?	3, 4, 5, 12
B.3	Will there be a level playing field in digital terrestrial radio?	2, 8, 12
B.4	Is the digital migration financially sustainable?	5, 6, 10, 13, 20
B.5	What is the optimal simulcast period between FM and DAB+ before we risk wasting resources or losing listeners?	10, 13, 14

Issues to tackle

C. COMMUNITY AND SMALL–SCALE BROADCASTERS		
QUESTIONS		POLICIES
C.1	Will there be spectrum or multiplex capacity reserved for community and non–profit stations, and under what conditions?	8
C.2	Can we afford the carriage fees on DAB+ multiplexes?	8, 10
C.3	What funding or support schemes are available to avoid exclusion?	10

D. MULTIPLEX AND BROADCAST NETWORK OPERATORS		
QUESTIONS		POLICIES
D.1	What DAB+ network topology is required to match or exceed the current FM service quality?	7, 8, 9, 11
D.2	How can investments be phased to align with the deployment of DAB+ technology in a way that resource utilisation is optimised?	1, 2, 9, 10
D.3	What coverage should be guaranteed before the FM switch off is considered viable?	7, 9, 11

E. RECEIVER AND AUTOMOTIVE INDUSTRY		
QUESTIONS		POLICIES
E.1	What minimum–feature set (DAB+, FM, IP hybrid, emergency alerting, service following) should be mandatory in new receivers and car head units?	16, 17, 18, 19
E.2	What measures should be implemented to ensure that in–car radios can seamlessly switch between DAB+, FM, and IP without causing any confusion among listeners?	16
E.3	How will software and firmware updates be managed to ensure that receivers remain compatible with evolving DAB+ standards and services?	16, 17, 19
E.4	What labelling, certification, or compliance schemes are needed so that consumers can be reassured regarding the lifespan of digital radio devices?	17

Issues to tackle

F. AUDIENCES		
QUESTIONS		POLICIES
F.1	Will I need to replace all my existing radio sets, and how much would this cost?	15, 17
F.2	Will DAB+ coverage and reception be at least as good as that of FM, especially indoors and on the move?	8, 16, 17
F.3	How will access to local and community voices be maintained in the event of a reduction or discontinuation of FM?	8
F.4	What measures could ensure that listeners relying on low–cost analogue receivers will be able to continue to receive radio if FM is switched off?	15

G. OVERALL STRATEGY AND GOVERNANCE		
QUESTIONS		POLICIES
G.1	Who ‘owns’ the transition roadmap and how will responsibilities be shared across government, regulators, broadcasters and industry?	1, 2
G.2	Who will lead the transition?	2, 5, 20
G.3	What criteria should be used to decide whether, when, and how FM can be partially or fully switched off?	14

3

Public policies for DAB+

Public policies for DAB+

This section presents a selection of the most relevant public policy interventions that have been implemented by countries already broadcasting in DAB+. It is the result of a broad international review, including cases from four continents.

These policies have not always been successful when applied. In such cases, the loopholes or problems experienced in their implementation are also explained. These are valuable learnings that policymakers and regulators intending to roll out DAB+ must be aware of in order to avoid the same mistakes.

Each of the 20 policies is presented following this structure:

- The issue at stake is exposed.
- The different policy options to tackle the issue are outlined.
- The primary beneficiaries of each intervention have been clearly defined.
- One or more cases are presented to provide a source of inspiration.

The selection of policies is not comprehensive, as it does not include every single public policy intervention that has been put in place or that could be proposed (e.g., subsidising any expense incurred by stakeholders in this process, including the purchase of a device).

Policies that are a basic requirement for the migration process are excluded. Some examples are frequency planning and its international coordination, minimum quality requirements of DAB+ signals, or the definition of goals in digital radio plans, such as offer diversity or quality of DAB+ streams.

Four key areas of public intervention in the digital radio migration process have been identified:

1. Strategy, which refers to elements that have an overall impact on the process.
2. Licensing, which encompasses aspects that can be influenced through the issuance of a digital radio licence.
3. Transmission, which focuses on distribution aspects, including the definition of transmission areas, coverage obligations, emergency warning systems, use of alternative transmission systems, and funding of distribution operations, among others.
4. Reception, which refers to any intervention that has the purpose of stimulating the uptake of digital radio sets.

It is important to note that these policies are not always independent of one another. For instance, licensing can easily influence transmission issues.

Moreover, these policies rarely work in isolation but complement each other. It is common practice for them to be approved as a sole regulatory package or as part of a broader migration strategy.

The position of each policy in the list does not equates to its importance, which may vary depending on the country.

Public policies for DAB+

PUBLIC POLICY FRAMEWORK TO DRIVE THE IMPLEMENTATION OF DAB+

STRATEGY

- #1 Set a plan
- #2 Involve relevant players in an industry body

LICENSING

- #3 Link analogue and digital licences… and revoke
- #4 Freeze new tenders in analogue
- #5 Stimulate leading analogue groups to embrace DAB+
- #6 Deregulate with caution
- #7 Create business opportunities and reinforce public service
- #8 Make room for local and community stations

TRANSMISSION

- #9 Impose coverage obligations
- #10 Subsidise transmission costs
- #11 Fund coverage in tunnels
- #12 Eradicate unlicensed DAB+ broadcasts
- #13 Foster / dictate MW switch–off
- #14 Plan FM switch–off… if necessary

RECEPTION

- #15 Promote a wide and affordable range of devices
- #16 Mandate digital tuners in vehicles
- #17 Regulate prominence in receivers
- #18 Future–proof devices
- #19 Enhance emergency warning systems
- #20 Subsidise other transition costs

STRATEGY

#1 Set a plan

#2 Involve relevant players in an industry body

Strategy

#1 Set a plan

What is the issue?

The digital migration process may be long and complex. It entails technological, legal, political, financial, market and even sociological aspects.

For broadcasters, the benefits of their investment in the digital migration are realised over time, whereas the initial costs are incurred at the outset. This fact may disincentivise them, notably those operators that have a strong position and are doing well in the analogue market.

Likewise, other stakeholders may find the process difficult to understand and navigate. Consequently, their decision–making, specially regarding investments, as well as their involvement or their adoption may slow down.

How to tackle it?

Detailed planning, based on the vision developed for digital radio, is the most effective response. It is the antidote to the stagnation caused by uncertainty. It also helps prevent risks or mitigate their consequences.

A concrete set of objectives and targets, clear and structured action lines, a balanced distribution of responsibilities, a realistic calendar with milestones, and the identification of potential bottlenecks, risks, drivers and interdependencies are some of the essential components of an effective migration plan.

If properly designed and managed, a migration plan involves the relevant stakeholders at the right moment, creating momentum and engagement. It should also care for efficiency and effectiveness, preventing and avoiding delays. These plans are typically led by governments and/or regulatory agencies.

All this saves time and money and creates the right conditions for the deployment and the adoption of the new technology.

Who benefits?

All stakeholders directly benefit from a clearly defined plan for the migration towards digital radio.

Broadcasters and *local manufacturers* can properly plan their next steps, including their investment and the development of their services and products.

Local retailers can prepare to meet the upcoming demand, including the promotion of the new devices and services.

On their side, *audiences* will feel reassured about the future of the new service, which should ease their expenditure to acquire new devices and their adoption of the new services.

Get inspired

A variety of countries have devised strategies to roll out digital terrestrial radio at different stages of the process.

Some of them may arise at the early stages, even before launch.

In Kenya, the regulatory authority published a *Digital Sound Broadcasting Framework* in 2022, before the launch of DAB+. This framework included options and recommendations, as well as risk mitigation actions.

Similarly, the *Action Plan on the Introduction and Development of Digital Radio Broadcasting in the Territory of the Republic of Azerbaijan* (2023) evaluated the international situation of DAB+, provided a SWOT analysis and pointed out the measures to be taken to ensure a successful implementation.

In the case of Luxembourg, its *DAB+ roadmap* (2023) outlined the objectives of the process, the regulatory framework, and the timeline in a concise manner. The government launched the roadmap following the trials and ahead of the first tender.

In other cases, migration plans have been published after DAB+ has already gone on air. The Norwegian Ministry of Culture published a *Norwegian proposal on the digitization of radio* (2011) to design a clear path for the FM switch–off, just 6 years prior to that moment.

In Switzerland, the Digital Migration Group (Digimig) agreed to a series of recommendations for the migration in its *From FM to DAB+. Final Report of the Digital Migration Working Group* (2014). These recommendations formed the foundation for the subsequent actions taken by the Swiss government.

Strategy

#2 Involve relevant players in an industry body

What is the issue?

The migration towards digital radio cannot be a standalone effort by a single stakeholder. Despite the existence of pioneers, a successful migration requires the involvement and the cooperation of a broad coalition of players.

Moreover, shared goals and the right incentives for each player must be found. This requires a constant and fluent dialogue that enables building a common ground.

How to tackle it?

Depending on the political culture in each country, a bottom–up or a top–down approach may be more appropriate, or even a combination of both:

- A *bottom–up* approach is typical of market–driven migrations, usually crystallising in either a dedicated digital radio formal trade body or an informal working group. Such an organisation tends to have a fluid dialogue with policymakers and regulatory agencies, frequently by means of regular exchanges or consultations, notably when key regulatory decisions are required.
- When a *top–down* approach drives the migration, policymakers and regulators lead the process. Consultations are rarer or channelled individually with each of the involved stakeholders.

Ideally, any consultation mechanism with key stakeholders, particularly those involving broadcasters, should be established during the planning stage. After the launch, commitment needs to be quickly extended to other players, such as retailers and vendors in related industries.

Who benefits?

Creating an industry body that facilitates a coordinated approach to the digital migration favours all stakeholders involved in the process.

It is also a key agent to generate and share evidence that informs and shapes decisions made by policymakers and regulators. Additionally, it can contribute to ensure alignment between the measures adopted and the market capabilities.

Being one of the most affected players by the migration, broadcasters are traditionally very much involved in this type of industry body.

Often, these digital radio fora bring together both public and commercial broadcasters for the first time, as their interests converge around this topic.

Get inspired

Creating an industry body involving key stakeholders has proven to be an effective and broadly used tool to drive radio digitisation. In some cases, such as the Netherlands, the government even provided public support.

Digital Radio UK was one of the earliest examples. Set up by UK broadcasters and the network operator Arqiva, it also included representatives from the automotive industry and radio manufacturers. It was heavily focused on listeners' needs and became the main interlocutor with the government to channel the demands of the broadcasters.

Other cases such as Digital Radio Norge (Norway), Digitalradio Deutschland (Germany) and Ensemble pour le DAB+ (France) also share this approach.

In Switzerland, the Digital Migration working group (DigiMig) was set up to make recommendations to the Swiss government based on the radio industry's views. It comprised public and commercial broadcasters and was chaired by the media authority Ofcom, which acted as a facilitator.

#3 Link analogue and digital licences… and revoke

#4 Freeze new tenders in analogue

#5 Stimulate leading analogue groups to embrace DAB+

#6 Deregulate with caution

#7 Create business opportunities and reinforce public service

#8 Make room for local and community stations

Licensing

#3 Link analogue and digital licences... and revoke

What is the issue?

Building sizeable audiences on DAB+ requires time. This means that DAB+ licences offer a very limited commercial return within the first years.

This is likely to make them unattractive in the eyes of the commercial broadcasters in the short–term, which could potentially lead to an insufficient demand for the available licences.

Due to the multiplexed nature of DAB+ distribution, this may generate additional costs for licensed broadcasters or limit the profitability of broadcast network operators.

How to tackle it?

Although it may seem counterintuitive, some government and media authorities have linked the renewal of analogue licences to the obligation to invest in the development of digital terrestrial radio services.

Licences are a key asset for commercial broadcasters, as there is no business without them. Consequently, broadcasters recognise the advantages of committing long–term investments in DAB+, as it guarantees the continuity of their business and even new opportunities.

Therefore, linking analogue licences to the obligation to simulcast those services on DAB+ guarantees the presence of a strong line–up in the digital multiplexes.

This is a vital policy to encourage the uptake of DAB+ among audiences in the early stages of the process. It is reasonable to assume that listeners will be more willing to switch to digital if their familiar analogue station is already there, instead of just new services.

The benefits of this measure may vary over time. In fact, this policy should be revoked when the market is more mature and then incentivise the cessation of the analogue operations.

This means enabling radio stations that wish to discontinue their FM services to focus on DAB+. This will not only save them dual transmission costs but also enhance the distinctiveness and value of digital terrestrial radio for listeners.

Who benefits?

While this measure imposes mandatory investments on *broadcasters*, it also ensures their business continuity by guaranteeing their licence renewal.

Thanks to this policy, *broadcast network operators* and *equipment manufacturers* get a clearer horizon for their activity and business model around DAB+ distribution.

Get inspired

In the Netherlands, commercial FM and MW licences were renewed with an obligation to digitalise. From that point, broadcasters had to start investing and preparing, in order to start DAB+ broadcasting on a given date. This ensured that the main radio stations, which gathered the bulk of the audience, were available via DAB+ in the early stages of the roll–out.

In a subsequent policy review, interviewees confirmed the effectiveness of the decision to link analogue and digital licences. In fact, they acknowledged that, should that connection not have been established, broadcasters would have most probably not invested in DAB+ or it would have taken them longer.

In later stages of the process, as mentioned, it is important to avoid this link. Otherwise, it would have not permitted the voluntary switch–off of certain FM sites in countries such as Germany, Italy or the Czech Republic.

In Switzerland, this split was an explicit requirement connected to the simulcast subsidies, which aimed to foster an earlier shut down of analogue radio (see #10).

Licensing

#4 Freeze new tenders in analogue

What is the issue?

Demand for access to spectrum grows continuously across the world. While DAB+ is the obvious choice in countries where it has been widely adopted, FM remains the preferred option for radio broadcasting in other markets.

FM provides broadcasters with immediate access to a well–established audience with a high and widespread number of compatible devices.

This makes FM very attractive to broadcasters, and any tender or auction –should frequencies become available– would be highly competitive.

How to tackle it?

Once the digital migration has been initiated, granting FM licences does not contribute at all to its effectiveness, even when mandatory investment in DAB+ is a condition of the FM licence (see #3).

Enriching the FM band hinders the long–term goal of digital migration. Such a move would make DAB+ less competitive and signal limited commitment to investors.

FM broadcasters committed to digitisation must be sure that the relevant authorities will not assign the analogue frequencies which they are relinquishing to new competitors in the FM market. Otherwise, they will retain their analogue licence.

Who benefits?

All the stakeholders involved in the digital migration benefit from freezing the allocation of new analogue licences.

This is particularly true for *broadcasters*, who must be reassured about their long–term investments in DAB+.

For *regulatory authorities*, this decision entails less burden, as fewer resources would be required to manage FM and could, instead, be used to foster the digital migration.

Get inspired

In Switzerland, the migration plan agreed by the industry players recommended freezing any reallocation of FM licences when broadcasters would relinquish them during the digital migration process.

This was intended to encourage an early FM switch–off. If the returned licence were to be tendered, there would be a short–term risk of audiences and advertising expenditure remaining at that frequency.

Connected to this measure, it was also agreed that FM coverage areas should neither increase in number nor extend geographically.

Even without formal notice, many other national regulators have stopped planning and issuing FM licences once DAB+ has been launched. They have chosen to focus on what is expected to become the mainstream broadcast delivery method.

Licensing

#5 Stimulate leading analogue groups to embrace DAB+

What is the issue?

In most countries, radio tends to be an oligopoly. This means that radio audiences and advertising revenues are mostly captured by public broadcasters and a limited number of commercial players: 1 big commercial group in Austri and Iceland, 2 in Portugal and Sweden, 3 in the Netherlands and Spain, etc.

As a result, these successful commercial groups have often become the main obstacle to move forward with digitisation. They fear not only mobilising significant resources to simulcast over a long period but especially opening the market to new players and, as a result, giving them access to their primary revenue stream: advertising.

Opening the digital terrestrial radio market to new entrants may discourage leading analogue radio groups from supporting and adopting DAB+. And without these large networks, the new digital–only players have no chance of appealing to audiences and achieving the critical mass that makes the new digital services commercially viable.

How to tackle it?

Several European experiences show that perpetuating the status quo of analogue players in digital terrestrial radio is a key incentive for them to commit to the new distribution standard and to push the transition of their audiences.

This ensures that no significant new competitors attempt to capture a share of the radio advertising market, which preserves the prospects of profitability for those players well–positioned in the analogue market.

The practical way to do this varies depending on the licensing system in each country:

- In some cases, digital radio licences may be granted together with FM licences.
- In some others, the number of digital licences and/or players is limited and mirrors the analogue market. This benefits players already well positioned in analogue, as their long track–record equips them with a competitive advantage when tendering for the new licences.
- When DAB+ licences are awarded to multiplex operators, these entities are strongly incentivised to include already successful players. This increases the competitiveness of the entire distribution channel and contributes to the success of their business.

Who benefits?

Leading *broadcasters* benefit most from these types of protections. However, this privilege should come with strong obligations that authorities can enforce, such as requirements to invest in new channels, promotion of the services or reaching certain coverage thresholds within a given timeframe.

These types of measures should stimulate the uptake of digital radio and, as such, indirectly benefit other stakeholders, notably *multiplex operators* and/or *broadcast network operators*.

FACT

At launch, Australian incumbents were granted a **6–year** moratorium that protected them from new entrants

Source: Australian Government

Get inspired

This public policy has been widely adopted across Europe.

Norway transitioned to DAB+ by maintaining the same number of radio groups, which then operated a broader portfolio of digital stations, in a bid for internal over external pluralism.

In France, 15 out of the 20 DAB+ nationwide commercial licences were awarded to the five main analogue radio groups, in a balanced exercise that opened the market considering the need for the big radio players to be there to make it work.

The opposite is also true. In Spain, the original DAB tender for commercial radio in early 2000s opened the market to new players without making extra room for the big radio groups. By doing this, the latter were heavily disincentivised to invest in the new services. New players, with less expertise and resources and no well–known radio brands, were unable to drive the migration by themselves.

Licensing

#6 Deregulate with caution

What is the issue?

For commercial broadcasters, DAB+ requires immediate investments in exchange for a promise of future return. The roll–out of DAB+ may generate additional costs in producing new services and distributing them, while it takes time to build audiences that can be monetised.

This can place a financial strain on management, as commercial radio is a business that must generate profit for its shareholders. This burden can potentially hinder the decision to invest on digital terrestrial radio.

How to tackle it?

In order to encourage investment in the transition to digital terrestrial radio, certain administrations have associated deregulatory measures with investments in digital terrestrial radio. Deregulation is only triggered when there is commitment and investment in DAB+.

Reducing the obligations in the broadcasting licences is one of the key benefits of deregulation. The two most common examples are:

- Formats and genres: granting broadcasters greater editorial autonomy in the operation of their services, along with fewer requirements regarding what specific formats or genres must be included within their schedules, or in the scope of the radio format as stipulated in their licence.
- Regional and/or local output: allowing greater use of network programming, thereby reducing local and regional output and its associated costs.

Generally speaking, regulators tend to include fewer programming obligations in digital terrestrial stations.

Furthermore, regulators can reduce the limits on ownership concentration, thus favouring economies of scale.

The rationale behind these measures is that the expanded offer and listener choice brought by digital terrestrial radio allows for such a relaxation of the rules.

Who benefits?

These measures directly benefit *commercial broadcasters* by stimulating their economies of scale and enabling cost savings.

Deregulation has the potential to streamline processes, for instance by replacing complex authorisation procedures with straightforward notifications from broadcasters. This approach not only simplifies the regulatory landscape but also reduces the administrative burden on regulatory authorities and the wider bureaucracy.

Given the social function of radio, ensuring that deregulatory measures do not harm radio *listeners* and the public interest must always be a priority.

Get inspired

The United Kingdom has implemented a significant rather quite unique programme of deregulation. This has included a relaxation of formats described in the licences and a reduction in public service obligations.

Furthermore, obligations regarding the location of studios and requirements regarding local and regional windows have been minimised or deleted. This has enabled broadcasters to optimise resources and reduce original content by broadcasting network content from a central location.

These measures have not been taken in isolation, but rather in conjunction with others, so their effects have often been counterbalanced.

For instance, the increased availability of both nationwide commercial and small–scale multiplexes (see #8) has made it easier for broadcasters to launch a radio station at a more affordable price.

As a result, the expanded choice of stations has resulted in an unprecedented level of diversity for audiences.

#7 Create business opportunities and reinforce public service

What is the issue?

Radio spectrum is a scarce and valuable resource. This is why access to it is heavily regulated and competition to operate its licences is high.

As a result, most FM commercial radio stations face limitations when trying to grow organically and expand their business. Tenders or auctions for new licences are not frequent and often licences cannot be transferred. The only way to obtain a licence is to acquire the company operating it.

In the case of public broadcasters, while their flagship stations tend to enjoy massive population coverage, some of their specialised services use frequencies with a shorter range, not allowing them to fulfil their universal coverage remit.

How to tackle it?

Thanks to digital compression and multiplexing, DAB+ enables the distribution of several radio services in the bandwidth previously used by only one. This significantly reduces the scarcity of radio spectrum.

This creates an opportunity for media authorities to grant new licences that support the business case of commercial stations as well as the fulfilment of public service radio's remit.

With both goals in mind, the allocation of new digital terrestrial radio licences must be carefully planned. First, it must balance the possibility for broadcasters to grow with the opportunity to allow new players to enter the market. Secondly, it should combine the opportunity for commercial radio development with the provision of a stronger public service. The licensing plan for DAB+ is the tool to achieve those goals.

Moreover, as the new licences are a key driver for analogue broadcasters to migrate to DAB+, special attention should be paid to the conditions or requirements included in the licences, as these will determine their attractiveness. An imbalance between demands and benefits could jeopardise the migration.

Additionally, depending on the distribution plan configured in each country, DAB+ can create coverage areas that are geographically bigger than the analogue ones. This enables radio service to reach a larger audience, which is appealing for both commercial and public operators.

Who benefits?

Both *broadcasters* and *audiences* benefit from the increase in the number of radio licences enabled by DAB+ and also from their wider coverage.

Broadcasters can reach a larger population, either because they operate more services or because their coverage is broader. In the case of commercial broadcasters, this strengthens their business. For public broadcasters, DAB+ creates opportunities to improve their universal service.

In the case of *audiences*, DAB+ means having access to a more diverse offer of services, potentially making radio more relevant to them.

Broadcast network operators also benefit from the increase in the number of radio services enabled by DAB+ as the demand for their services grows.

Get inspired

Thanks to DAB+, several countries have witnessed an expansion of radio services.

Germany is one of the clearest cases. The DAB+ technical plan and the licences issued allowed commercial radio to broadcast nationwide for the first time. Previously, all commercial broadcasters operated regionally or locally.

As a result, services like Radio BOB!, sunshine live, Klassik Radio and others that were previously only available regionally can now be heard across Germany via national DAB+ multiplexes, enriching the offer for German audiences and building a strong business case for broadcasters.

Similarly, DAB+ has enabled Swiss commercial stations to expand their original FM coverage and become available in nearly all the linguistic areas of the country for the first time (broadcasting markets in Switzerland are divided according to the language spoken in each area).

In France, some public stations with limited analogue coverage have now nationwide coverage. This is the case of FIP and Mouv' (10 and 12 frequencies in major urban areas). The frequencies of the latter were transferred in early 2026 to the new children's radio station Mon Petit France Inter.

FACT

IN GERMANY

DAB+ has enabled delivering nationwide commercial radio for the first time

Source: Digitalradio Deutschland

Licensing

#8 Make room for local and community stations

What is the issue?

Local and community radio stations represent a valuable resource for local and hyper–local communities. Despite an often–limited audience reach, they contribute to diversity and are firmly rooted in their communities by serving local interests, minorities and underserved social groups.

However, their often–unstable financial situation together with their limited human resources make it challenging for them to switch on DAB+ services.

Furthermore, their inclusion within a DAB+ layer is not straightforward, frequently becoming an afterthought.

How to tackle it?

Media authorities must establish a framework that enables local and community stations to launch their digital radio services. While they are not in the position to lead the migration process, an earlier consideration of their role is strongly recommended.

The initial step is to reserve spectrum for this type of stations. However, this step alone is not sufficient. To avoid or mitigate the risk resulting from the cost of DAB+ distribution, a public intervention may be needed.

The solution is the so–called small–scale DAB. This concept facilitates streamlined transmission infrastructure by transitioning from hardware–based encoding, multiplexing and modulation to software solutions fed by Internet streams.

This process is referred to as Software Defined Radio. The open–source platform Opendigitalradio is the most widely used for this purpose.

Who benefits?

This approach enables a sustainable access to DAB+ for *local and community stations*, thus providing *audiences* with a wider range of listening options.

Small scale also supports the associated IT development ecosystem.

Get inspired

The original concept of small–scale DAB+ was developed by Opendigitalradio.org in Switzerland, building on previous Canadian experiences.

In 2013, was granted a licence by the Federal Office of Communications (Ofcom) to develop the so called local/regional DAB+ islands based on the Opendigitalradio.org transmission solution.

Nowadays, these ‘DAB+ islands’ are operational in 18 Swiss conurbations, and each of them offers between 7 and 18 programmes. The total number of distributed stations is 236 and most of them are community–based.

In 2020, the regulator decided to grant a privileged access to the islands for each complementary radio station with an FM radio licence in the same area.

FACT

In the last 6 years, the UK has launched

100 small–scale multiplexes that carry **~1,000** radio stations

Source: Ofcom

Small–scale is also a reality in other European countries, including Belgium, France and, notably, the United Kingdom.

The United Kingdom has the largest number of small–scale services in the world. The regulator Office of Communications (Ofcom) opens calls for applications for both the Digital Sound Programme (DSP) licences and the Community Digital Sound Programme (C–DSP) licences. C–DSP licences are awarded against specific statutory criteria. For other stations, including commercial ones, a DSP should suffice.

Overall, the programme has been successful in expanding the DAB+ offer and the listeners’ choice, with few cases of stations returning their licence.

Available services mostly fall within one of these four categories: locally–oriented, specialist/themed music stations, minority ethnic or religious services, and lifestyle/life–stage (e.g., for children, youth, military personnel, LGBTQ, and students).

TRANSMISSION

#9 Impose coverage obligations

#10 Subsidise transmission costs

#11 Fund coverage in tunnels

#12 Eradicate unlicensed DAB+ broadcasts

#13 Foster / dictate MW switch–off

#14 Plan FM switch–off… if necessary

Transmission

#9 Impose coverage obligations

What is the issue?

Most listeners take ubiquitous coverage and good reception for granted. This is largely shaped by their experience with FM, which sets the minimum requirements for most people.

The roll–out of digital radio typically starts in the most densely populated areas and along major roads, mostly using a few transmitters that can provide extensive coverage at a limited cost.

Extending coverage is shaped by the actions of other stakeholders (e.g., new offers by broadcasters) while at the same time it also influences how other stakeholders behave.

Quickly extending coverage speeds up adoption but implies additional distribution costs. Conversely, a slow extension keeps costs low but shows limited commitment and makes public communication more challenging, prolonging the transition period.

In this context, public policies may play a balancing role between coverage extension and cost management.

How to tackle it?

In the long–term, the minimum requirements for DAB+ coverage must be, at least, the same as those for analogue transmissions. This principle is applied in countries such as Denmark and Germany as a long–term goal.

Coverage obligations could consider three dimensions:

- Population: the number of people who live within the DAB+ transmitter's footprint. Typically, this figure distinguishes between indoor and outdoor coverage. The former is typically lower than the latter as additional power is required to penetrate certain building structures, resulting in additional costs.
- Territory: the percentage of the territory — including, in some cases, specific areas (e.g., cities of a certain size) — to be included within the DAB+ footprint.
- Roads: the types of roads that require DAB+ coverage.

Who benefits?

Audiences benefit from the extension of coverage, as DAB+ services are accessible in more places and continuity of broadcast is ensured even when people are on the move.

Broadcast network operators also benefit from mandatory coverage obligations, as they can plan more effectively and, depending on the scope of the plan, generate additional revenue.

Despite bearing the costs, *broadcasters* benefit as the transition accelerates, expanding their potential DAB+ audience and monetisation options.

Get inspired

With a population of 83.5 million (as of 2024), Germany has designed a comprehensive approach to setting DAB+ coverage obligations.

The goal for DAB+ outdoor coverage was reaching a level equivalent to FM outdoor coverage. This equates to >95% of the population, a figure that DAB+ has surpassed as it is now available to >97% by combining the public regional multiplexes and the national commercial multiplex.

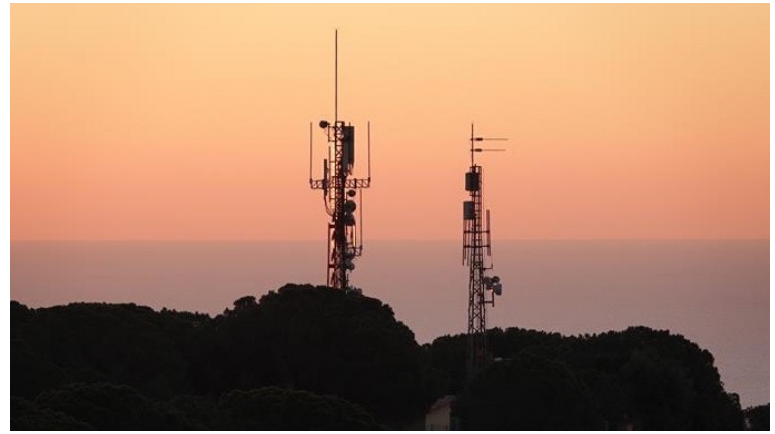
The indoor coverage obligation was set slightly lower, at >90% of the population for key multiplexes. This target has already been exceeded as coverage is at 91%.

Additionally, 98% of the federal highway system (motorways and main roads) has DAB+ coverage, equating to around 12,700 km.

German media authorities wanted to avoid a scenario in which listeners would lose digital broadcast signals. Consequently, they enforced these ambitious obligations on commercial radio services and DAB+ multiplex operators.

FACT

Source: NRK



Transmission

#10 Subsidise transmission costs

What is the issue?

Transitioning from analogue to digital terrestrial requires a simulcast period, during which the same content is distributed over the two networks involved. Many countries have already experienced this with MW and FM for many years.

This double transmission results in additional costs during the transition period. Depending on the characteristics of the licence area and the coverage obligations, these costs can be significantly high, particularly in countries with a complex geography. They can even become a risk factor.

For new digital–only players the issue is different. They must deploy their offer on a network where the potential audiences are still minimal. Consequently, obtaining any return on investment in the short–term is virtually impossible.

How to tackle it?

Public funds to partially or fully cover transmission costs are always welcome by broadcasters.

A strategic approach to designing these subsidies involves implementing a regressive element, whereby the funds provided decrease over time. This incentivises broadcasters to accelerate the deployment of both their network and their digital services, as well as their promotion.

In some cases, the provision of such subsidies is not possible or is severely limited due to existing restrictions to state aid. This is the case in EU countries.

Who benefits?

Broadcasters receive direct financial support from these subsidies, which then flows towards *broadcast network operators* if transmission sites are not directly operated by the broadcasters.

The rest of the digital radio ecosystem indirectly benefits too, as securing the presence of those broadcasters makes the platform more attractive.

Get inspired

The subsidies given by the UK government to community radio and by some regional governments in Germany and Spain are among the examples of this public policy.

In the Netherlands, the subsidies were directed to the roll out of the public broadcaster's DAB+ multiplex. Also the regional public broadcasters received financial support to operate the DAB+ multiplexes in their first years of operation. More recently, the government subsidises part of the costs of public and commercial broadcasters at local level. Also, Australia has supported community radio transition to DAB+.

Switzerland is also a notable case. Between 2016 and 2024, this country invested 79.3 million CHF (approximately 87.5 million EUR) in subsidies for the transmission of DAB+ signals.

The Swiss system was established in 2016 in accordance with the recommendations set out in the migration plan, which was drafted by all the industry stakeholders. The funds were raised from the audiovisual levy paid by all households owning devices capable of receiving radio and television services.

These subsidies were structured with a regressive approach. They covered 80% of the transmission costs for the first 4 years. Beyond that point, the percentage subsidised progressively decreased. This aimed to encourage an early shutdown of FM.

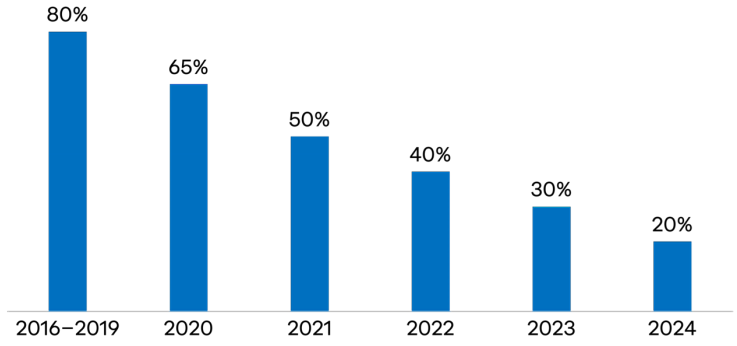
The plan was flexible enough to adapt to the changes in the market. This included a temporary increase of the amount covered during the COVID–19 pandemic.

FACT

From 2016 to 2024, Switzerland spent **87 million EURO** to subsidise DAB+ transmission

Source: Office fédéral de la communication

Coverage of DAB+ transmission costs by public subsidies in Switzerland



Source: Office fédéral de la communication

Transmission

#11 Fund coverage in tunnels

What is the issue?

Broadcast radio signals tend to disappear in road tunnels, as they cannot penetrate their heavy concrete structures often located under natural spaces such as hills, mountains and water masses.

As a result, the listening experience is interrupted and the safety features embedded in radio signals are disabled. This also makes broadcast radio less competitive versus streaming radio, which can buffer content and deliver it when the IP signal is off.

However, while it is technically possible for IP to cover the gaps of broadcast signals in a tunnel, this requires a data subscription, which less than one third of connected car owners purchase (S&P data).

How to tackle it?

There are radio translators that can receive the signal at the entrance of the tunnel and redistribute it inside.

This technical solution ensures that messages providing road information via TMC (Traffic Message Channel) or TPEG (Transport Protocol Experts Group) reach drivers and passengers via DAB+ signals.

Additionally, DAB+ signals allow the police or the public authorities to interrupt radio broadcast to send specific safety messages, for instance about a car broken down, accidents, and other risks inside the tunnel or the weather conditions outside.

In some countries, such as those in the EU, the cost of this infrastructure is covered by road authorities on the grounds of safety. Currently, this is achieved using FM. However, once DAB+ becomes the most widely used radio source, the cost of installing it in tunnels should be covered by the relevant authorities. Including DAB+ prior to this could encourage its adoption and enhance safety.

Costs may vary significantly depending on the country and the situation of each infrastructure. For this reason, priorities must be set. In this regard, two criteria have usually been applied, together or individually:

- Tunnels that are part of the most used roads, such as motorways and main national roads, or have heavy traffic, such as urban tunnels.
- Tunnels that exceed certain length and therefore require more security measures.

Who benefits?

For *broadcasters*, this means that their signals are no longer lost inside the tunnels, making them more competitive against alternative listening options.

For *authorities* in charge of road safety, this solution provides them with an additional channel to fulfil their mission.

Listeners benefit the most, as they can have not only a seamless and more enjoyable listening experience in tunnels but also a safer driving experience, at no additional cost.

FACT

Across the world, **500+** road tunnels are longer than 5 Km

Source: South 180 estimation based on multiple sources

Get inspired

Considering that Switzerland is an Alpine country with more than 1,000 road tunnels, the stakeholders involved quickly identified the need to equip the major national road tunnels with DAB+ as a key element of its plan for digital migration.

As a result, the Swiss Federal Roads Office spent around 30 million Swiss francs in 4 years to equip tunnels of the federal road network longer than 300 metres with DAB+ coverage.

To optimise operations and keep costs down, any tunnel construction or maintenance action conducted during the migration period was required to include the addition of DAB+ coverage. In other cases, specific works were carried out to install the radio repeaters.

At regional/cantonal level, some authorities also funded the coverage of tunnels of their regional road network.

Transmission

#12 Eradicate unlicensed DAB+ broadcasts

What is the issue?

Unlicensed broadcasts are part of the history of radio. Due to the multiplexed nature of DAB+, broadcasting without a licence in digital is more challenging than in analogue. However, it has already happened in several countries.

The presence of unlicensed broadcasts on DAB+ creates an unfair playing field, as these broadcasters are not bound by the same regulatory framework and financial obligations as licensed stations.

Furthermore, they capture advertising revenue that could otherwise flow to licensed stations.

It has also been reported that some of these unlicensed stations use the 'service following' feature built + to link their service to legitimate FM stations, thus redirecting listeners from them to their own service.

In some cases, they can also cause interferences to licensed radio services.

How to tackle it?

The administration should guarantee that only licensees broadcast on DAB+. This is essential to safeguard competition and fair market conditions for licensed broadcasters.

Depending on the legal framework in each country, specific protocols should be followed, with or without judicial review. Typically, the spectrum regulator acts on their own initiative or in response to a complaint.

Initially, a cease–and–desist order is sent to the unlicensed broadcaster. Should this order not be followed, enforcement is frequently secured by the police by means of the closure of the site or confiscating the equipment, including transmitters, masts and antennas.

Who benefits?

Commercial broadcasters are the primary beneficiaries of this intervention, as it ensures better commercial prospects for them.

This also has a positive impact on other *public and community broadcasters*, as they face less competition to serve their audiences.

From a broader standpoint, addressing unregulated activities supports the overall migration process, demonstrating the administration's commitment to a fair market.

Get inspired

DAB+ services from unlicensed stations can be tuned in various areas across Spain, including the Mediterranean coast and the Canary Islands. As DAB+ is at the early stages of its roll–out in the country, those non–legal stations are frequently the only offer in the digital band.

In fact, launching an unlicensed DAB+ service in Spain is a relatively straightforward process. Some commercial services on the Internet offer slots in different DAB+ multiplexes across the country, even promising up to 95% population coverage in the future at competitive prices.

The issue is a persistent challenge for FM in Spain, which has now transferred to DAB+ due to the spectrum regulator's inaction.

This situation contrasts with that of Ireland, where the spectrum regulator, the Commission for Communications Regulation (ComReg) raided the premises of the unlicensed multiplex operator FreeDAB in 2020 together with members of the Irish police. The seizure of the equipment resulted in the cessation of the broadcasts.

Transmission

#13 Foster / dictate MW switch–off

What is the issue?

Deploying a new DAB+ distribution network brings additional operational costs for broadcasters. As DAB+ may not reach a sizeable audience during its first years of operation, it is seen as an investment to build the audiences of the future.

On the other hand, several broadcasters continue to operate medium wave (MW) services. These services result in significant operational costs and generate a substantial carbon footprint. Moreover, their audience is in a downward trend. In many cases, the size of the MW audience is unclear, since it is not measured in most markets.

It appears that the most logical step would be to switch off MW and transfer the associated costs to fund DAB+ transmission. However, as this is a legacy operation for those broadcasters, achieving the return of those licences may not be straightforward.

How to tackle it?

The shutdown of MW transmission represents a timely opportunity to reduce costs and reallocate resources towards DAB+ broadcasts.

Depending on the regulations in each country, this step could be taken by the licence holder at its own discretion or by requesting government or regulatory agency authorisation to cease operations.

The most effective incentive to achieve this would be to refrain from tendering those licences again. As of today, twenty–seven European markets have ceased MW broadcasts.

Who benefits?

This measure allows *broadcasters* to utilise their financial resources in a more effective and sustainable way.

Switching off MW has the added benefit of reducing the broadcasters' carbon footprint, given the difference in energy consumption between MW and DAB+ (BBC, 2020).

Get inspired

In Spain, MW is still active and operated by commercial broadcasters.

The public broadcaster Radio Nacional de España (RNE) ceased its MW transmissions at the end of 2025 to transfer the associated resources to the deployment of DAB+.

RNE based this decision on the network's limited audience, the growing difficulty in finding radio devices enabling its reception, the high operating cost, and its high energy consumption (Delgado, 2026).

In fact, the official radio measurement system in Spain stated that, at the time of the service discontinuation, around 350,000 people were using MW to listen to radio (approximately 1% of all listeners).

FACT

27 out of **48** European countries do NOT have MW broadcasts

Source: South 180 based on multiple sources

RNE's assumption was that, in most cases, MW was not their primary or exclusive access point to radio. It also considered the existence of alternative free–to–air ways to listen to radio, including FM, digital terrestrial television (covering 98% of the population), and Internet (used by 89.5% of Spanish radio listeners).

#14 Plan FM switch–off... if necessary

What is the issue?

Any technology migration inevitably results in resistance. Consequently, withdrawing from FM to adopt DAB+ is likely to encounter resistance from various stakeholders, particularly commercial broadcasters.

Some stakeholders view the analogue switch–off as the ultimate objective of digital migration. It is considered a logical step in the process of reducing broadcasters' distribution costs.

However, other stakeholders view FM and DAB+ as complementary, in the same way that MW and FM have operated for years.

These differing perspectives make both the consideration of an FM switch–off particularly complex and challenging.

How to tackle it?

It is not compulsory to set a date for analogue switch–off. In fact, several markets were DAB+ es well–established to not even consider it, for example the or Australia. To avoid unnecessary conflict, this issue must be addressed only when the market is prepared to do so. Setting a date too early could generate an unnecessary conflict.

Several viability criteria must be considered. These include territory and population coverage, the percentage of households owning at least one DAB+ receiver, and the percentage of daily users of DAB+ services, among others.

If the minimum thresholds for these criteria are not met and the market as well as the population are not prepared, the analogue switch–off could lead to confusion and backlash from some stakeholders. This could jeopardise the entire migration process towards digital radio.

A key issue to consider is the scope of application of these indicators: should they be applied to DAB+ only, or to digital radio in general, including Internet delivery? The experience tells that the transition to digital broadcasting leads to a notable increase in the use of both DAB+ and other digital formats, including Internet radio.

The general view is that FM should not be switched off until most listeners have adopted DAB+ (either on its own or in combination with Internet radio) in their homes and vehicles. This approach would ensure a smooth alignment of interests among all stakeholders.

Countries such as Germany and the Czech Republic have approached this from an individual site perspective, switching off small sites when audiences in a given area were already well equipped with digital devices.

Who benefits?

Setting a switch–off date based on viability criteria provides certainty for all stakeholders.

First and foremost, this is a key indicator prompting *audiences* to migrate to digital radio if they have not already done so. *Retailers* can therefore expect increased demand for devices and prepare accordingly in conjunction with *device manufacturers* and *importers*, not to mention *vehicle manufacturers*, in case they are still selling cars without digital tuners.

Broadcasters and *industry bodies* can also start planning for this, with a particular focus on public communications.

FACT

NORWAY

has been the first country in the world to switch off FM radio

Source: WorldDAB

Get inspired

Norway is currently the only country to have switched off FM, except for a few local stations.

The Norwegian government established several indicators that had to be met before FM could be switched off.

These included high population coverage (99.5% for the public broadcaster NRK and 90% for commercial radio stations), more than half of daily listening via digital networks, and the availability of reliable and affordable adapters for vehicles (relevant at a time when few cars were sold with a digital tuner). Digital terrestrial radio also had to provide added value for listeners, understood as an increased and more diverse offer.

RECEPTION

#15 Promote a wide and affordable range of devices

#16 Mandate digital tuners in vehicles

#17 Regulate prominence in receivers

#18 Future–proof devices

#19 Enhance emergency warning systems

#20 Subsidise other transition costs

Reception

#15 Promote a wide and affordable range of devices

What is the issue?

At the beginning of the DAB+ rollout, it might be difficult for listeners to find a wide range of reception devices at local retailers, specially at affordable prices.

This hinders the adoption of the service in its early stages and can delay the entire implementation calendar.

How to tackle it?

There are two ways to deal with scarcity of affordable radio sets: lower–cost imports and local production.

The short–term solution is to reduce or eliminate customs fees for the import of digital radio receivers.

More than 150 million digital radio receivers have been sold since the technology was first introduced. This means that manufacturing is well established and devices are available at a wide range of prices and functionalities.

Reducing the cost of imports will increase availability and affordability, stimulating adoption among listeners. Azerbaijan included this measure in its Digital Radio Plan and Ghana is discussing it.

Following the same rationale, the reduction or elimination of any other tax on DAB+ radio receivers, such as the value added tax, would positively impact the final price for consumers and boost the purchase of receivers.

A more long–term approach is to build a national DAB+ manufacturing industry. Chipsets and modules are available from several suppliers so any manufacturer can create a radio device without needing to design complex chips or electronic PCB boards. This goal will be more attainable in those markets that already have an installed manufacturing base. These sets might be cheaper if labour costs are competitive. However, this measure is unlikely to work or become less effective if low–cost imports are also promoted.

Who benefits?

Listeners are the direct beneficiaries of the availability of lower–cost radio sets.

Depending on the chosen approach, *local manufacturers and/or importers* may also benefit.

As a result of the broader adoption of DAB+, other stakeholders also benefit, notably digital *radio stations*, as their potential audience grows and, as such, the value of their ad inventory.

Get inspired

Thailand's DAB+ trial was used to test, among other things, receiver availability.

In this regard, the regulatory agency NBTC (National Broadcasting and Telecommunication Commission) organised workshops on how to build DAB+ receivers.

Engineers were trained on how to design, prototype, and build DAB+ receivers. This enhanced their technical skills.

FACT

In Germany, DAB+ radios start at **16€** with 50+ brands in the market

Source: Amazon Deutschland, April 2026

The NBTC hoped that this would contribute to create a local manufacturing industry.

The trial and the workshops showed that the price of radio receivers can be lowered to around 350 baht (ca. 10€), if produced locally.

By enhancing technical knowledge and hands–on experience, Thailand aims to build domestic innovation and production capacity in DAB+ equipment, which can support both domestic broadcasting needs and potentially export opportunities in the longer term.

Reception

#16 Mandate digital tuners in vehicles

What is the issue?

Vehicles are a key location for radio listening. On average, around 25% of radio listening time in Europe takes place in vehicles. Additionally, it increases reach as the car is the only radio touch point for many listeners.

Moreover, recent research continues to confirm that radio remains a key part of the in-car infotainment experience (Edison Research, 2021, 2023).

However, not all new vehicles in markets with DAB+ broadcasts are equipped with the right tuner to receive these services. This creates a competitive disadvantage for digital terrestrial radio and removes an extra layer of protection for drivers and passengers in case of emergencies (see #19).

How to tackle it?

Governments can mandate the inclusion of digital terrestrial radio tuners in vehicles.

This is justified by two reasons:

- The emergency warning systems built into DAB+, including the Automatic Safety Alert in the future.
- Radio is the most resilient network through which information can be provided in emergency situations.

When considering the potential impact of such a requirement on vehicle manufacturers, it seems proportionate.

Given their manufacturing scale and their bargaining power, the cost of including a DAB+ chip is negligible compared to the total price of the vehicles.

Who benefits?

Equipping all vehicles with digital terrestrial radio receivers would benefit *audiences*, who would be able to listen to DAB+ in the car and would be safer in case of emergencies.

This requirement would also benefit *broadcasters*, ensuring they are present in a key listening environment.

Get inspired

In 2018, the European Union approved the European Electronic Communications Code. This regulation requires all new passenger vehicles equipped with radio to have a digital terrestrial radio tuner. The mandate came into effect two years later.

This has undoubtedly contributed to the ubiquitous adoption of DAB+ radio, which is the only digital terrestrial radio standard with significant penetration across the continent.

Consequently, almost all new cars registered in Europe in 2025 — more than 12 million — had a DAB+ tuner.

Despite the success of that implementation process, several radio stakeholders are still lobbying to close loopholes in that European regulation through the negotiations for the Digital Networks Act.

FACT

Without the related EU regulation,
30+ million vehicles would not be equipped with DAB+

Source: South 180 estimation based on JATO Dynamics and ACEA

First, it does not apply to commercial vehicles, such as vans and trucks, and minicars. Secondly, it only applies to passenger vehicles that are equipped with a radio. Models not offering broadcast radio, such as the entry-level Tesla recently announced, are not subject to this obligation.

It is possible to apply this regulation to second-hand cars although no country has ever mandated something like this. However, its impact would be high, considering the average age of the European car fleet stands at over 10 years. Another option might be to implement specific training for mechanics to retrofit old vehicles, as has already been successfully done in Germany and Switzerland. Another possibility would be to provide direct subsidies to retrofit old cars.

#17 Regulate prominence in receivers

What is the issue?

Radio listening is increasingly moving from dedicated radio sets to multi–purpose devices such as smart speakers, phones, and connected TV sets. Many of these use online streams instead of broadcast signals to access radio services.

Competition for attention also intensifies in the car, as its dashboard now grants access to both broadcast and online radio services.

This change poses a risk to radio stations, as listeners can easily switch to alternative offers available on the same device. Consequently, broadcasters may doubt whether to invest in broadcast technologies and services or to solely rely on IP distribution.

How to tackle it?

The enforcement of prominence for broadcast radio services has the potential to address this issue and mitigate the broadcasters' uncertainty.

This involves not only requiring that devices include a radio tuner but also ensuring that the broadcast radio services are visible, findable, and straightforward to use.

Prominence can be secured by imposing the prioritization of digital terrestrial radio signals over other broadcast and IP signals on devices capable of receiving all of them. This is particularly relevant in vehicles, where the ability to seamlessly switch between DAB+, FM and IP radio services is becoming a standard feature.

In practice, this means that the manufacturers of these devices must ensure that radio is easy to find, via a dedicated button (physical button or a digital one easily accessible, for instance on the home screen) and by voice activation.

Even a minimum degree of usability could be mandated, such as station selection by name/service list rather than frequency only, clear differentiation of FM from DAB+, and simple rescan functions.

Who benefits?

This policy would make it easier for *audiences* to find the radio services operated by *broadcasters*.

Moreover, in the event of an emergency, *audiences* would be better positioned to receive warning messages and critical information.

Additionally, this policy would increase the value of broadcasting licences from a commercial as well as public service perspective.

Such an approach would also reinforce the role of the *media authorities* in charge of granting them. They would expand their scope to regulating how radio services are presented and discoverable on digital platforms and user interfaces.

FACT

In 2025, the cross–industry initiative *Radio Ready for Connected Cars* was launched to advocate for radio's prominence

Source: Radio Ready for Connected Cars

Get inspired

German regulators have been keen to protect access to broadcast radio in vehicles. Their position is supported by a legal study that concludes that modern integrated car entertainment systems are a 'user interface for linear radio' (Müller–Terpitz, 2022).

Consequently, vehicle manufacturers must comply with regulations that guarantee the availability and ease of use of linear radio. In practice, these manufacturers cannot, for instance, hide FM/DAB+ radio behind multiple menu layers or give priority to streaming music services over broadcast as a result of a commercial agreement with a non–broadcast third party.

Overall, the debate is about how to prevent gatekeepers (tech platforms, car makers) from sidelining traditional radio. This policy is seen as complementary to the compulsory presence of DAB+ tuners.

The UK's Media Act (2024) stipulates that voice–activated connected audio devices must include and make easily accessible UK–licensed radio services.

The legislation targets simultaneous transmissions of radio stations that have a broadcast licence. Manufacturers are required to make these radio services available on their devices, preventing them from charging any costs to broadcasters and prohibiting the interruption of broadcasts, for example to insert their own advertising.

In 2024, an Australian Senate committee also recommended enforcing radio's prominence in devices such as smart speakers.

Reception

#18 Future–proof devices

What is the issue?

A poor or frustrating user experience can create a negative image for digital radio

Listeners do not want to buy a radio set and, only a few years after, feel that they wasted their money because it has become obsolete.

Likewise, a negative experience with digital radio, such as poor reception or limited indoor coverage, is frustrating for them.

How to tackle it?

Consumer interest must be given priority when producing, importing and selling radio receivers. This can be done with two approaches:

- Directly by introducing mandatory digital tuners that guarantee that any receiver will be usable after an eventual switch–off of the FM band.
- Indirectly by means of information and education campaigns and certification marks for tested devices.

Who benefits?

This policy is intended to provide reassurance to *listeners* regarding the purchase of a new device, by ensuring that it will not become obsolete in the close future.

This can also benefit *device manufacturers* and *retailers*, as they can present a more robust product and can generate higher levels of trust among their potential clients.

Get inspired

Four European countries have mandated the use of digital terrestrial radio tuners in radios sold in their markets.

In France, all radios displaying a station name must receive digital signals if they are primarily intended for broadcast radio reception. In Germany, this type of radios are supposed to receive digital radio, either broadcast or online.

In both cases, the measure affected radios with displays, which tend to be on the higher end of the market and, thus, more likely to be already equipped with DAB+. As a result, the measure did not have a significant impact on sales. This failure should be taken into account by countries considering similar policies.

Italy went a step further by making DAB+ tuners mandatory in all receivers sold in the country. As a result, the share of digital radio sets sold in this market is slightly higher than similar countries at the same stage of the digital migration.

In Belgium, progress can be compared between Flanders, with legislation mandating DAB+ tuners, and Wallonia, where there are no such requirements.

FACT

In Arab countries, minimum requirements for DAB+ receivers to display Arabic script are defined since 2021

Source: Arab States Broadcasting Union

Despite both regions being at a very similar stage of development and having a similar audience uptake, devices with a DAB+ tuner are more likely to be sold in Flanders (+15 percentage points).

In these four countries, a loophole in the legislation to be avoided by other countries was the cause for the failure of the policy. As they are part of the EU single market, the legislation was easily bypassed by those purchasing or importing radio sets without DAB+ tuners from other EU countries, including online purchases.

In other countries, efforts are underway to ensure the long–term viability of DAB+ devices through the establishment of minimum specification requirements. This approach was pioneered in the United Kingdom under the Tick Mark scheme. This certification mark is a reliable identifier for radio devices that have successfully met the minimum standards and have been verified through rigorous testing.

Reception

#19 Enhance emergency warning systems

What is the issue?

The world is experiencing a rising number of climate–related disasters. Between 1995 and 2024, over 9,700 extreme weather events resulted in more than 832,000 fatalities and caused direct economic losses of almost 4.5 trillion US dollars (inflation–adjusted) (Germanwatch, 2026).

Most of these events were triggered by storms, floods and heatwaves, with a particular prevalence in the Global South.

Early warnings to the population and reliable information can help minimise the harm caused by these events.

Analogue radio has traditionally played a role in these situations. Digital terrestrial radio must deliver at least the same service.

How to tackle it?

The Automatic Safety Alert (ASA) warning system is one of DAB's latest functionalities. It operates automatically in the background, enabling the transmission of customised emergency messages in local areas.

Mandating ASA as part of the DAB+ roll–out adds value to the service and reinforces the traditional role that radio has played in emergency situations.

Beyond sending spoken alert messages, ASA also incorporates wake–up functionality, enabling radios to be activated by DAB+ signals, and a switch functionality, allowing receivers to detect alerts on other radio stations than the one tuned.

The interviewees for this project were unanimous in highlighting the relevance of ASA and the undisputed need to include it since the beginning for the countries launching DAB+.

The role of the ASA was also highlighted in a wider context, particularly with regard to its potential application in wartime situations.

Who benefits?

Listeners benefit from a system that keeps them informed in life–threatening situations even when mobile phones and Internet connections are down.

Civil protection bodies find in the ASA system another layer of warnings at their disposal to reach the population and improve their effectiveness and service.

Get inspired

Germany has been the primary driving force behind ASA. The initiative was prompted by the devastating floods in Germany's Ahr Valley in 2021, which resulted in 135 fatalities and economic losses amounting to 20 billion €.

In order to design a robust, resilient warning system, WorldDAB provided the technical framework and standardisation support necessary for ASA's integration into the existing DAB+ infrastructure.

Meanwhile, the industry body Digitalradio Deutschland focused on the practical implementation and public engagement aspects within Germany. In this regard, they collaborated with public and commercial broadcasters, receiver manufacturers, and German safety authorities, including the Federal Office of Civil Protection and Disaster Assistance.

In collaboration with WorldDAB, the industry body Digitalradio Deutschland has developed a dedicated international certification scheme for hardware manufacturers, ensuring compliance with ASA warning scenarios through rigorous testing. The first radio chipsets with ASA became available in late 2024, with the first radios with the functionality already certified going on sale half a year later.

Source: Germanwatch

Reception

#20 Subsidise other transition costs

What is the issue?

In addition to the financial resources allocated to content production and signal distribution, deploying DAB+ requires further investment to:

- Align the various stakeholders involved and coordinate efforts.
- Promote the service by means of communications and marketing campaigns.
- Collect data about the rollout, including public awareness of the service, receiver prices, sales and penetration, and actual usage, among others.

Funding of these tasks can become a burden for certain players as well as a source of disputes among them.

How to tackle it?

Public administrations and/or media authorities can provide financial support to ease and accelerate the migration towards digital radio.

One way to do this is reducing the mentioned economic burden. To this end, subsidies for specific tasks such as market research, promotion and marketing, or the creation of industry bodies can be provided.

Moreover, other costs such as the fees paid by licensed broadcasters to access the spectrum can be reduced or suspended temporarily, allowing them to reinvest the savings in DAB+.

However, in certain instances, establishing these subsidies is not feasible or is significantly restricted due to EU's regulations limiting state aids.

Who benefits?

The entire radio ecosystem benefits from public investment in research, communication and coordination aiming to support the digital migration.

Get inspired

In the Netherlands, the National Statistics Office funds research that provides penetration data for digital radio. Alongside this, the government co–funds the industry body DigitalRadioNL with the broadcasters.

In Germany, the regional media authorities (Die Medienanstalten) are responsible for funding the annual *Audio Trends* study, which is used to track the uptake of digital radio.

In France, campaigns promoting digital terrestrial radio are the primary focus of public funds. In late 2025, the Cultural Affairs Committee of the French National Assembly approved a 0.6 million € envelope for the trade body Ensemble pour le DAB+, which coordinates the DAB+ communications and marketing campaigns.

Similarly, the Swiss government has significantly invested in public awareness initiatives, with several million Swiss francs allocated over the years. The funds were scraped from the licence fee paid by households and businesses.

The Danish and Luxembourgish governments, and the Slovenian regulator too, have invested a comparatively modest amount.

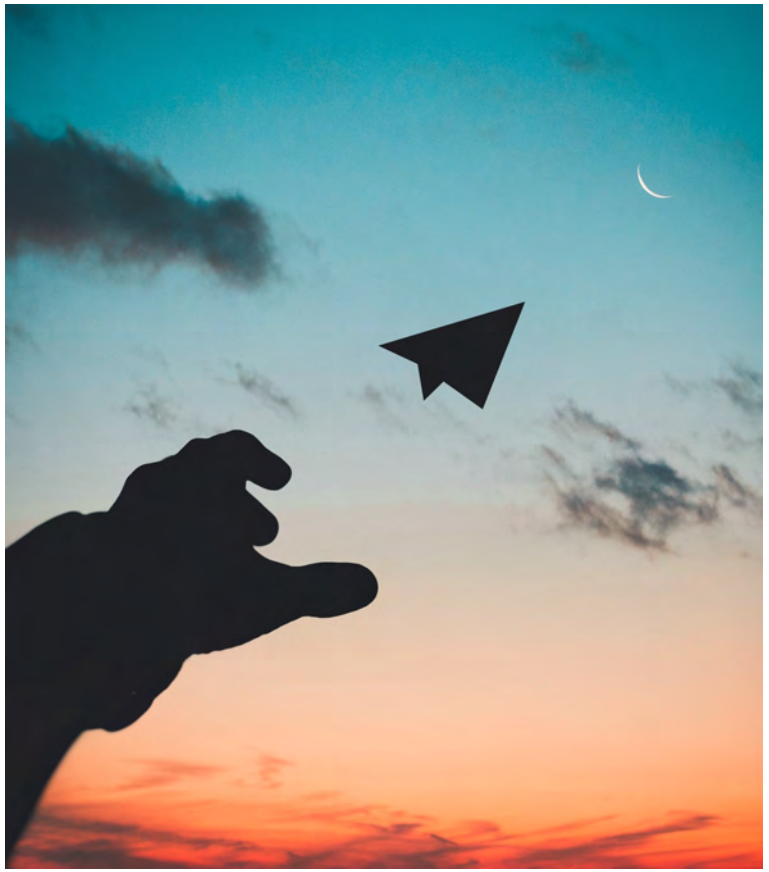
4

STRATEGIC RECOMMENDATIONS

Strategic recommendations

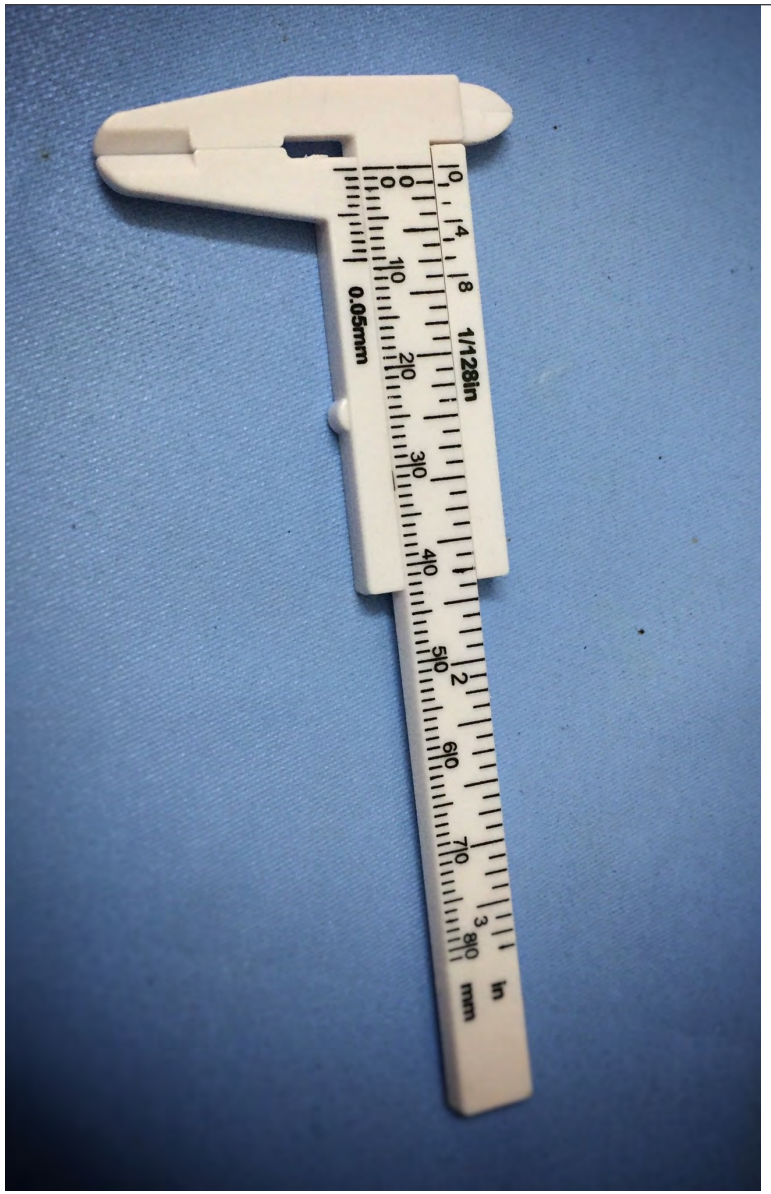
When applying the public policies described in this report, their effectiveness can be boosted if the recommendations outlined below are followed.

These insights result from the in-depth interviews conducted for this project and are also the outcome of the comprehensive analysis of the leading digital radio experiences across the world conducted by South 180.



- **#A** Set clear public interest goals
- **#B** Plan the process
- **#C** Plan for resilience and future-proofing
- **#D** Set a clear and prudent calendar
- **#E** Audiences are primary, not an afterthought
- **#F** Think about the business model, not the technology
- **#G** Protect the most vulnerable stakeholders
- **#H** Use FM as a baseline
- **#I** Correct the imbalances of FM
- **#J** Set realistic criteria for the switch-off
- **#K** Address conflicts through compromise
- **#L** Review your policy approach regularly

Strategic recommendations



#A Set clear public interest goals

Define why listeners and the radio market need to transition from analogue to digital.

Adequately answering why this process is beneficial for society is a key success factor. Although ultimately the rationale would depend on national circumstances, the following arguments are likely to be part of many of the answers:

- Enhancing media choice and diversity.
- Expanding radio coverage more cost–efficiently.
- Increasing infrastructure and social resilience.
- Decarbonising and promoting energy efficiency.
- Increasing spectrum efficiency.
- Ensuring media sovereignty.

#B Plan the process

The digital migration is a long and complex process that requires careful planning. Capitalizing on the lessons learned from other cases, can help define effective strategies and processes and therefore save time and financial resources.

While the level of detail varies, most countries with DAB+ broadcasts have established guidelines or action plans for the transition.

Additionally, outlining and publicly communicating a plan as well as involving the right stakeholders at the right moment also contribute to generate momentum.

#C Plan for resilience and future–proofing

Launching DAB+ does not occur in a vacuum. Think of digital terrestrial radio as a component of a multi platform distribution system in a market where listeners increasingly alternate between broadcast and IP, as well as and linear and on demand content.

In this framework, free to air terrestrial radio should retain its role as the main pipeline for audio delivery, as it is the only platform that guarantees free access, universal coverage, societal resilience in case of emergency, and national sovereignty.

#D Set a clear and prudent calendar

Stakeholders require a clear calendar for the transition process. This is one of the strongest signals to create certainty and generate momentum.

Nevertheless, broadcasters and regulators tend to prefer a cautious approach when setting targets and milestones. This is a way to generate more consensus and ensure that deadlines will be met. Missing a milestone could be perceived as a failure and negatively impact the reputation of digital radio.

Strategic recommendations

Accepting some flexibility, for example by allowing a voluntary switch off for those who decide to do so, is also a good practice.

#E Audiences are primary, not an afterthought

For audiences, digital radio is about the added value that they receive.

This is typically understood in terms of an expanded, more targeted and diverse offer. In that regard, a good measure of this value is the launch of services that relate more directly to certain target groups, such as the elderly, children and ethnic, religious and sexual minorities.

Similarly, a greater diversity of genres and formats, such as those serving more specific music tastes or increasing the coverage of sports, are also essential to encourage audiences to adopt DAB+.

In more developed digital markets, the value of digital radio has emerged organically through market dynamics. In instances where this does not occur naturally, governments and regulators must establish the necessary framework to nurture it through licensing conditions.

#F Think about the business model, not the technology

DAB+ is a mature technology that has already been implemented commercially in more than 30 markets. It is also being tested in over a dozen more.

Its benefits compared to other technologies have been clearly documented and straightforward guidelines on how to technically roll it out are available (Sabel, 2025).

The key challenge lies in ensuring the viability of its business model.

While the value for listeners is evident when broadcasters are engaged and develop dedicated services, concerns about its commercial sustainability can arise, at least in the initial phases of operation.

In such a scenario, public policy incentives are crucial to provide temporary support to the emerging market, which cannot be sustained at a loss by radio stations, notably commercial ones.

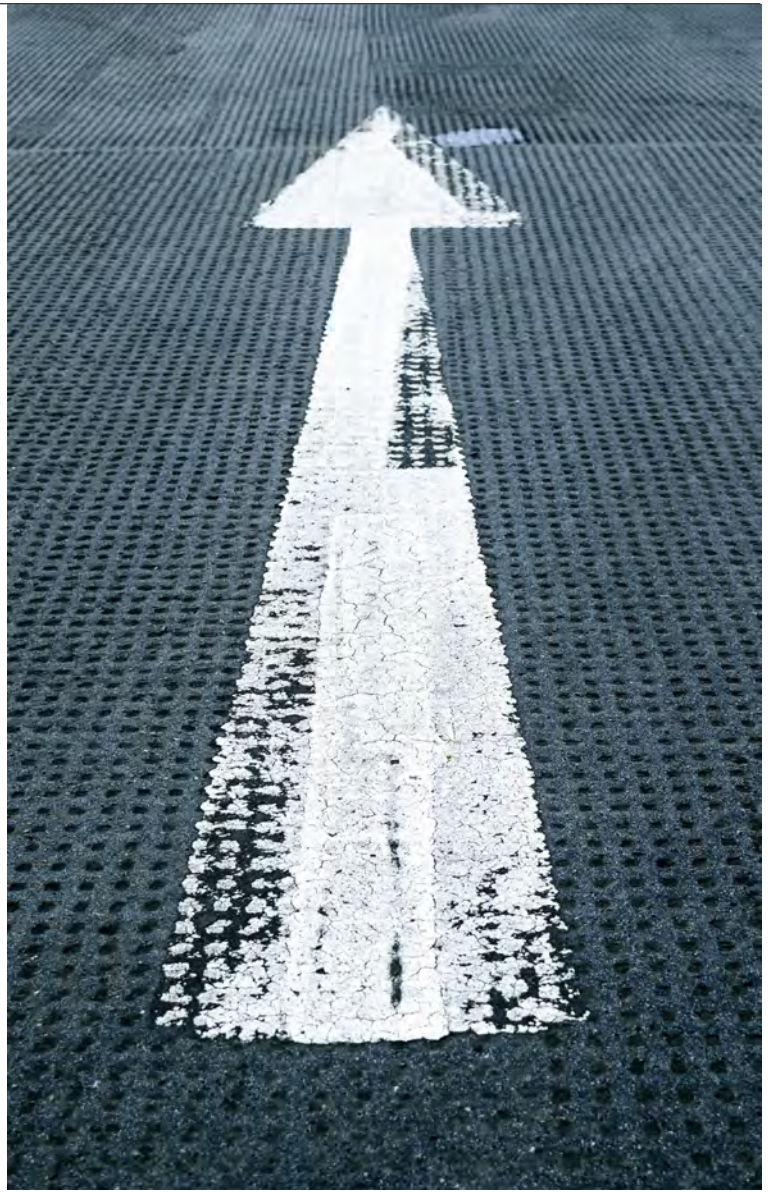
#G Protect the most vulnerable stakeholders

Digital radio stakeholders are diverse, also regarding their resources.

Consequently, it is essential that the bodies regulating and governing the digital migration pay particular attention to the needs of the most vulnerable ones.

Two of them are clearly identifiable in most markets:

- Vulnerable listeners, including those with limited education and on low incomes, may need customised support. This may require liaising with local authorities and dedicated support programmes such as subsidies and vouchers.



Strategic recommendations

- Small local broadcasters, in particular community stations run by volunteers, may also require support in the form of training, turnkey solutions, subsidies, or soft loan schemes for equipment, to name but a few.

#H Use FM as a baseline

Expectations and perception about digital radio by listeners and other stakeholders will be shaped by their current experience of analogue radio, particularly FM.

Consequently, the effort required to transition to digital radio must be justified by a significant increase in value proposition (something 'more') compared to their current experience.

In this regard, several aspects must be considered:

- The offer needs to add value to the current FM offer: move volume more diversity, more appealing, etc.
- Quality and coverage must be at least equivalent to FM.
- User experience should remain as simple as with FM.
- It must be free–to–air.
- The associated emergency warning system must function as well as those available on FM.

The more DAB+ adds compared to the FM baseline, the better it will be perceived and the faster its adoption will occur.

#I Correct the imbalances of FM

Launching DAB+ presents a unique opportunity to correct imbalances in the radio market.

For example, the licensing regime could rebalance the offers of public versus commercial services or nationwide versus regional/local services.

It could also present a valuable opportunity to provide a framework for community radio in countries where such a framework is currently missing. It could be an opportunity to enhance the radio offers in terms of diversity of players and offerings.

#J Set realistic criteria for the switch–off

The arrival of DAB+ to a market does not necessarily imply the switch–off of FM radio. However, if stakeholders agree that an analogue switch–off is necessary, determining its date is one of the most sensitive decisions of the transition.

Setting the switch–off date cannot be done arbitrarily but it should be a decision based on realistic and measurable criteria as well as on sound research on the evolution of the migration. This will allow the correction of misalignments and mitigate potential disruption as well as adapting the calendar if necessary.

Strategic recommendations

There have been experiences with unrealistic dates that have only resulted in rush and confusion, not contributing to an effective migration.

The process of establishing milestones and a switch–off date as well as the defining criteria generates interest and creates certainty among all stakeholders involved.

#K Address conflicts through compromise

Diverging views among stakeholders will naturally arise.

The process brings together broadcasters that compete against each other in the same market, stakeholders that may have different interests and goals in the process, and those who prioritise long–term strategy versus those who apply short–term tactics.

The most effective approach to address this issue is to identify win–win outcomes. Industry bodies or multi–stakeholder forums are an excellent tool to achieve this. Regarding public authorities, they can play a mediating role, and their various policy options are key drivers of the process.

Stakeholders require a clear calendar for the transition process. This is one of the strongest signals to create certainty and generate momentum.

Nevertheless, broadcasters and regulators tend to prefer a cautious approach when setting targets and milestones. This is a way to generate more consensus and ensure that deadlines will be met. Missing a milestone could be perceived as a failure and negatively impact the reputation of digital radio.

Accepting some flexibility, for example by allowing a voluntary switch off for those who decide to do so, is also a good practice.

#L Review your policy approach regularly

Regularly reviewing your policy choices and plan is a key success factor, especially in such a long–term process.

As the market evolves and the position of the stakeholders involved is shaped, it is smart and necessary to fine tune the policy approach and the migration plan. But there are tools rather than the goal and must always contribute to an effective migration.

In this regard, some media authorities also review the financial viability of the licences to make decisions about them. For instance, if a DAB+ licence turns out to be unsustainable, changes in the licence conditions could be applied.

5

Annexes

Methodology

This report was developed between November 2025 and March 2026 following a workplan built around extensive desk research and interviews with experts.

The documents consulted included industry sources in the form of trade reports, articles in trade journals and conference presentations, as well as policy documents such as legislation, regulations, plans and consultations.

Additionally, South 180 interviewed 15 experts from 12 organisations in 10 countries (see table). This included countries with different level of implementation across three different world regions: Europe, Africa and Asia–Pacific.

The semi–structured interviews, ranging from 45 to 60 minutes, relied on a set of key questions that were not formulated in predetermined order and allowed for the addition of new questions during the conversation.

The interviewees were selected according to their expertise and included professionals from government departments, regulatory authorities, broadcasters and trade bodies.

Additionally, the preliminary draft of the report was shared with the WorldDAB Project Office and a dedicated subgroup of the WorldDAB Steering Board, as well as Patrick Hannon, former WorldDAB President, and Jaume Pujol, Chairman of the Policy Group of Broadcast Networks Europe. They provided valuable feedback that was processed to write the final version of the report.

Country	Organisation Name	Organisation Type	Expert
Australia	Commercial Radio and Audio	Trade body	Lizzie Young
Croatia	Agency for Electronic Media	Regulatory agency	Davor Maric
Croatia	Croatian Regulatory Authority for Network Industries	Regulatory agency	Danijel Vidakovic
Denmark	DR	Broadcaster	Andreas Sloth Nilausen
Denmark	DR	Broadcaster	Frederik Mens
Denmark	DR	Broadcaster	Mikkel Hvidtfeldt
France	WorldDAB	Trade body	Jean–Marc Dubreuil
Germany	Bavarian Regulatory Authority for New Media	Regulatory agency	Veit Olischlager
Germany	Deutschlandradio	Broadcaster	Carsten Zorger
Ghana	National Communications Authority	Regulatory agency	Rev. Eng. Edmund Fianko
Netherlands	Dutch government	Government	Gijs Hesselinck
Slovenia	Agency for Communication Networks and Services of the Republic of Slovenia	Regulatory agency	Igor Funa
Switzerland	SRG SSR	Broadcaster	Adriano Pitteri
Thailand	National Broadcasting and Telecommunication Commission	Regulatory agency	AM. Dr. Thanapant Raicharoen
Thailand	National Broadcasting and Telecommunication Commission	Regulatory agency	Supatrasit Suansook

Further readings

Alrasheedi, B. (2025) *Implementation Stages of DAB+ Digital Radio Broadcasting in Saudi Arabia*. ABU / ASBU/ WorldDAB Technical workshop. Avaiable from: https://www.worlddab.org/files/document/file/5414/2.5_Bander_M._Alrasheedi_Initial_DAB_steps_-_DAB_rollout_in_Saudi_Arabia.pdf?1752677392

Arab States Broadcasting Union (ASBU) (2021) *The Terrestrial Radio Receiver Specifications for AM/FM/T-DAB+ in the Arab Region*. Available from: https://www.worlddab.org/public_document/file/1408/DAB_receiver_Arab_Region-rev1.pdf?1617902290

Arcom (2024) *Le Livre blanc de la radio*. Available from: https://www.arcom.fr/se-documenter/etudes-et-donnees/etudes-bilans-et-rapports-de-larcom/le-livre-blanc-de-la-radio

Ariiho, A. (2025) *The DAB+ Pilot Project for Greater Kampala.* ABU / ASBU/ WorldDAB Technical workshop. Available from: https://www.worlddab.org/files/document/file/5411/2.4_Arthur_Ariiho_Uganda_case_study.pdf?1752675992

Australian Communications and Media Authority (ACMA) (2020) *The future delivery of radio. Final report*. Available from: https://www.acma.gov.au/publications/2020-03/report/future-delivery-radio

Bayerische Landeszentrale für Neue Medien (BLM) (2025) *Audio-Strategie 2025. Maßnahmen und Handlungsempfehlungen*. Available from: https://www.blm.de/files/pdf2/audiostrategie-2025_massnahmen-und-handlungsempfehlungen-inkl-grafiken-20240611.pdf

Bayerische Landeszentrale für Neue Medien (BLM) (2026) *Förderbedingungen Transformations-Anreiz-Förderung (TAF)*. Available from: https://www.blm.de/files/pdf2/taf.pdf

Communications Authority of Kenya (2022) *Digital Sound Broadcasting Framework*. Available from: https://repository.ca.go.ke/items/19520d7c-590f-413c-878c-23547bc6d69c/full

Delgado, M. (2026). 'Switching off MW and switching on to a digital future for Spanish radio', *tech-i* 67, March, p. 16. Available from: https://tech.ebu.ch/files/live/sites/tech/files/shared/tech-i/tech-i-067.pdf

Die Medienanstalten (2025) *Audio Trends 2025*. Available from: https://www.die-medienanstalten.de/forschung/audio-trends-2025/

DigiMig (2014) *From FM to DAB+. Final Report of the Digital Migration Working Group*. Biel/Bienne: Federal Office of Communications. Available from: https://www.bakom.admin.ch/dam/en/sd-web/-to9dfkDKZ7o/schlussbericht_derarbeitsgruppedigitalemigration.pdf

Edison Research (2021) *Car Buyers Survey*. Report for WorldDAB in partnership with Radioplayer. Available from: https://www.worlddab.org/public_document/file/1467/2021_Car_buyers_survey_WorldDAB_Nov_21.pdf?1636478567

Edison Research (2023) *Dashboard Dialogue*. Report for WorldDAB. Available from: https://www.worlddab.org/public_document/file/1621/Dashboard_Dialogue_full_report.pdf?1695998132

Federal Office of Communications (OFCOM) (2022) *DAB+ transmitter networks for digital broadcasting by radio stations*. Available from: https://www.bakom.admin.ch/en/dab-transmitter-networks-for-digital-broadcasting-by-radio-stations

Fletcher, C. & Chandaria, J. (2020). The energy footprint of BBC radio services: now and in the future, White Paper 393, October. London: BBC R&D. Available from: https://downloads.bbc.co.uk/rd/pubs/whp/whp-pdf-files/WHP393.pdf

Germanwatch (2026) *Climate Risk. Index 2026. Who suffers most from extreme weather events?* Germanwatch. Available from: https://www.germanwatch.org/sites/default/files/2025-11/CRI%2026%20full%20report.pdf

GfK (2026). *World DAB Reporting – Q4 2025*. London: GfK. Available to WorldDAB Members.

Further readings

Gouvernement du Grand–Duché de Luxembourg (2023) *Feuille de route DAB+ pour le pluralisme et la modernisation de la radiodiffusion sonore au Luxembour*g. Available from: https://smc.gouvernement.lu/dam-assets/feuille-de-route-dab.pdf

Hallet, L. (2024) *New approaches to DAB: Developments in DAB+ Delivery Technology and Techniques*. Luton: University of Bedfordshire. Available from: https://www.worlddab.org/public_document/file/1748/240530_New_approaches_to_DAB.pdf

JATO Dynamics (2026). *DAB Report FY 2025*. Available to WorldDAB Members.

Kwink (2016) *Onderzoek naar digitale etherradio (DAB+)*. Available from: https://www.kwinkgroep.nl/wp-content/uploads/2016/04/Eindrapport-Onderzoek-naar-digitale-etherradio-DAB.pdf

Müller–Terpitz, R. (2022) *Rechtliche Einordnung Von Audiosystemen Und Sprachassistenten Mit Dem Fokus Auto*. Düsseldorf: Landesanstalt für Medien NRW. Available from: https://www.medienanstalt-nrw.de/fileadmin/user_upload/NeueWebsite_0120/Presse/Pressemitteilung/Rechtsgutachten_Mueller-Terpitz_23112022.pdf

National Communications Authority (NCA) (2023) *Digital Audio Broadcasting (DAB).* Available from: https://nca.org.gh/wp-content/uploads/2023/08/DAB-Brochure-v10s-1.pdf

National Communications Authority (NCA) (2023) *Digital Audio Broadcasting (DAB). Trial in Ghana.* Available from: https://www.worlddab.org/files/document/file/4910/2023-09-08_IBC2023_Edmund_Fianko_DAB_trial_Ghana_rev7.pdf

National Communications Authority (NCA) (2024) *Digital Audio Broadcasting (DAB). Multiplex operator authorisation. Selection and procedure*. Available from: https://nca.org.gh/wp-content/uploads/2024/10/Selection-and-Award-Procedure-for-DAB-Multiplex-Authoisation-rev-161024v2.pdf

Norwegian Ministry of Culture (2011) *Norwegian proposal on the digitization of radio. Summary of Report No. 8 (2010 – 2011) to the Storting*. Available from: https://www.regjeringen.no/globalassets/upload/kud/medier/rapporter/v-0951e-summaryreportno8_2010-11.pdf

Ofcom (2024) *DAB licensing. Progress Report*. Available from: https://www.ofcom.org.uk/siteassets/resources/documents/manage-your-licence/digital-radio/small-scale-dab/ssdab-progress-report-2024.pdf?v=383726

Office fédéral des routes (OFROU) (2025) *Directive systèmes de radiocommunication dans les tunnels routiers*. Available from: https://www.astra.admin.ch/dam/astra/fr/dokumente/standards_fuer_nationalstrassen/astra%2013006%20funksysteme%20in%20strassentunneln.pdf.download.pdf

Olischläger, Veit (2025) *How Bavaria is boosting DAB+ through partnerships*. Available from: https://www.worlddab.org/files/document/file/5570/3.2_Veit_Olischl%25C3%25A4ger_Bavaria_boosting_DAB__20251119.pdf

Sabel, L. (2025) *Establishing DAB+. Digital Broadcast Radio*. Second Edition. Available from: https://www.worlddab.org/public_document/file/1763/Establishing_DAB__Digital_Broadcast_Radio_2025.pdf?1763544309

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