White paper

Regional and Global Trends shaping the Broadcast and Media Landscape

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November 2025

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Executive Summary

This white paper analyses and discusses some notable observations as reported in the last few months. The insights presented here will assist B&M stakeholders in the Asia-Pacific region (APAC) in navigating the emerging media landscape strategically.

The paper highlights a wide range of approaches, standards, including key issues such as AI, Innovation and the future of broadcasting and media, helping regulators to formulate effective policies.

Creating awareness and knowledge dissemination among broadcast stakeholders is the absolute foundation of the future of broadcasting and media. The white paper explored how the innovations driving Public Service Broadcasting continue to set standards for trust, quality and universality and how new entrants, big tech and global streamers are reshaping the landscape.

The paper explored the technologies, strategies and partnerships shaping the future television experience, including topics on distribution and IP transition, AI, connectivity, and the emergence of new content formats.

These insights will provide broadcast and media leaders from across broadcasting, streaming, manufacturing and technology domains as the paper examines how the television, radio and other complementary media can stay competitive on the world stage while continuing to deliver for audiences at home and anywhere.

1. Role of Broadcasting and Media

Research that was conducted in April 2025 by a strategic communications firm in the US consisted of an online survey that revealed 93% of people believe reliable local news is necessary for democracy. The researchers recommend avoiding the term “democracy” but not the concept.

They also noted a paradox that 93% of people believe reliable local news is necessary for democracy, yet many of these same people react negatively to explicit “democracy” messaging. This happens because of a disconnect between cognitive and emotional responses. People intellectually understand the connection but emotionally resist being told about it. Years of political messaging have created fatigue around the word “democracy,” and it now triggers partisan defences regardless of people’s actual beliefs.

As reported by the researchers, they heard throughout the research that people value the role of local news; the word “journalism” can evoke partisanship or elitism for some audiences, while “media” sounds like entertainment to many people. In their research, “local news and information” consistently tested better than “journalism,” with participants expressing concerns that “journalism” felt too institutional or politically charged.

1.1 Public Service Media - PSM

For Public Service Media (PSM), there are common challenges which are significantly greater to handle by a PSM organisation alone. Hence, PSMs need to work closer together. This shared understanding of an external threat, particularly around the scale and influence of big tech, is a driving force behind any broadcast collective’s collaborative efforts, as it aims to act as a crucial facilitator, opening doors for communication and cooperation that would otherwise be difficult to achieve.

1.2 Service Discovery

The majority of APAC countries are using DVB-Terrestrial technologies for their television broadcasting, while DVB-Satellite standards are being used globally. DVB celebrated its 30 years of service to digital broadcasting with a wide range of technologies for digital terrestrial, satellite, cable and IP-based delivery mechanisms. DVB-I, or the DVB-Internet, together with DVB-NIP (Native IP), will provide a converged broadcast and media environment facilitating service discovery and network-agnostic access to content.

In parallel, the open DVB-I standard facilitates integrated access to linear television via IP streaming. DVB-I serves as an Internet-centric method for signalling and discovering TV services, whether delivered through IP or broadcast networks. This information is then presented to viewers via an Electronic Programme Guide (EPG), eliminating the need to launch separate applications.

The DVB-I service was first piloted in Germany in 2023. Public and private TV broadcasters in Germany are collaborating with stakeholders to create a framework that supports the market launch of the DVB-I standard.

Dr Thorsten Schmiege, President of the Bavarian Regulatory Authority for New Media (BLM), has been overseeing the coordination of the market launch of DVB-I as part of his role in the Innovation and Infrastructure Committee of the Directors' Conference of the State Media Authorities.

During a recent roundtable discussion, he highlighted that DVB-I will further integrate streaming and traditional TV. He emphasised that its unique features, including broadcasting discoverability, user-friendliness, and resource efficiency, are key factors driving BLM's collaboration with market participants and associations for the launch.

The role of Public Service Media (PSM) is to make, arrange, and deliver media content with a social purpose. To continue to fulfil their mission, PSMs must take advantage of the emerging media tools and environment.

The options suggested in a report on DVB-I may help to meet the objectives and capabilities of public service media. They are using the 'collective' technologies DVB-I and HbbTV.

DVB-I facilitates the delivery of rich metadata to connected clients, thus enhancing the user experience of broadcast services. This includes delivery of content-related images and restart and catch-up of programmes within the traditional broadcast EPG. Broadcast Video on Demand (BVOD) applications can be signalled within the EPG, thus enhancing discoverability of non-linear content within the tried and tested linear user interface.

The objective of DVB-I is to allow an experience whereby the viewer can readily, unobtrusively, and rapidly move to either broadcast or Internet-delivered channels or programmes. In this way, if needed, it will serve as a stepping stone from a broadcast to an Internet environment. It can be used as an open-ended transition for a world where communication technology changes at different paces.

DVB-I usage needs a 'Programme List' to be created and delivered to the client. Users need to take steps to create this before launching a DVB-I service. DVB-I can also usefully combine its features with those of HbbTV, which is designed to provide linkages between broadcast content and Internet content.

DVB claims that it continues to evolve to stay relevant in today's fast-changing media landscape. There are several projects happening in Europe deploying DVB-I, and its status in European markets is increasingly promising.

One of the critical questions today is how DTT can stay strong in the IP era. Italy is showing the way with its DVB-I trial, proving how broadcasters and viewers can smoothly navigate a hybrid world. In recent months, more and more countries have followed.

DVB informs that its standards have evolved to stay relevant in shaping this hybrid future, with DVB-I as the essential element to keep television open and interoperable, while enabling innovation.

1.3 Accessibility for media services

DVB has updated its Accessibility Implementation Guidelines. Media services with accessibility can provide feedback on the latest updates made publicly available as a pre-publication on the DVB website.

The updates address the descriptions of accessibility features. The media and public can provide feedback about the usefulness and alignment with understanding. Similarly, stakeholders can comment on barriers to access that are not addressed by the features listed in the document and willingness to collaborate on a global reference set of accessibility features for audio-visual media streams. It also addresses the signalling information in the context of DVB services.

1.4 Broadcast as a Critical National Infrastructure

While the pandemic in 2019 might have revealed, at least in part, how much we all depend on the broadcast industry at certain times, it most definitely had a significant impact on how the industry itself operates. Facing an urgent need to react, broadcasters embraced remote production at scale. Ideas and methodologies that had been talked about for years suddenly became essential, with migration to IP-based systems instantly transformed from being merely nice-to-have to absolutely mission-critical.

1.5 Serving audience needs

In future, TV sets will allow the integration of programmes from various distribution channels, including cable, satellite and antenna, and pure IP streaming. This will provide viewers with direct access to TV content through a unified user interface, enhanced by additional features such as an improved programme guide and effortless transitions to non-linear offerings from broadcasters.

Beyond Germany, several European authorities, including Italy, Ireland, and Spain, are conducting DVB-I trials. The DVB-I pilot in Germany, which was launched in 2022, successfully demonstrated its potential as a viable solution and was showcased to the public. The DVB-I Task Force of the Deutsche TV-Platform worked on creating a technical implementation profile for receivers.

Spanish public broadcaster Radiotelevisión Española and the Association of Regional Public Media Services FORTA have also established a new pilot for DVB-I. This initiative considers the distinctive features of Spain’s broadcasting landscape, where digital terrestrial television (DTT) continues to be the leading platform for linear TV consumption.

The DVB Project and its members are delighted to see interest in DVB-I growing across Europe and beyond. Each market’s unique circumstances provide valuable insights, helping to adapt the standard for broader implementation.

2. Challenges

The critical challenges facing broadcast television are not suggesting that something unpleasant is likely to happen soon, but it is here. Viewership has tipped decisively toward streaming, advertising is shifting to more-targeted digital platforms, and historically reliable revenue streams that have sustained local stations for decades are eroding rapidly. Broadcasters' traditional strategies of consolidating ownership, harvesting sponsorship and advertising opportunities, and lobbying regulators are not enough in the face of huge consumer behaviour. The broadcast industry has been responding to the traditional broadcast TV model, which has prevented television and broadcasting not to becoming obsolete.

In the US, streaming has officially overtaken traditional TV. In May 2025, streaming services captured 44.8% of all U.S. viewing, edging past broadcast (20.1%) and cable (24.1%) combined at 44.2%. According to this reported study, YouTube alone now commands more screen time than any single broadcast network. Free ad-supported streaming services already draw bigger audiences than some of the legacy networks that once defined American culture. This transformation is not slow erosion. It is a realignment of consumer habits in general. Comparing May 2021 to May 2025, streaming usage surged 71%, while broadcast fell 21% and cable dropped 39%. Audiences now expect content on-demand, personalised, and mobile-first. Local TV, rooted in linear distribution and decades-old day parts, struggles to keep pace.

It has been observed that severe competition from high-tech companies, particularly those that have launched streaming services that is now bidding for lucrative professional sports rights.

2.1 Ownership

Mergers and acquisitions have been a common occurrence in recent times. Technology companies have been acquiring various start-ups and niche high-tech companies to augment their existing products and services, and also to create a competitive advantage.

Federal Communications Commission of the USA - FCC – recently adopted a Notice of Proposed Rulemaking (NPRM) to look at local television rules that limit the number of television stations a single entity can own in a local market, as well as the dual network rule that prohibits a merger between any of the top four national broadcast networks (ABC, CBS, Fox, and NBC). Also up for review is the local radio ownership rule that imposes caps on the number of radio stations one entity can own in a local market.

In the USA, TV broadcast ownership rules currently restrict one station group from owning TV stations that reach more than 39% of U.S. TV households (the so-called "UHF discount" and duopoly rules allow for higher thresholds).

2.2 Content Provenance and Authenticity

In combating fake news and threats from the misuse of AI, it is required to establish the authenticity and origin of the content. Society of Motion Picture and Television Engineers, SMPTE, has announced that its Media Study Group has opened its first public survey on Content Provenance and Authenticity.

Initially unveiled in July 2025, the Group, which includes representatives of the SMPTE Standards Community from Ross Video, Sony, Adobe, European Broadcasting Union, and Metaglue, aims to gather insights from across the media and entertainment industry into the use of authenticity and provenance metadata in real-world media environments.

2.3 Challenges in transition to IP in Production

One of the mistakes or misunderstandings of IP for Broadcasting (or IP Networking for Broadcast Services) is the assumption that it is just Information Technology (IT) with video and audio.

Broadcast networks have fundamentally different requirements than enterprise IT, which supports other vital operational and business areas. While IT often favours wireless access and shared bandwidth, broadcast demands deterministic performance, low latency, and precise synchronisation, especially in live workflows. Because features such as Precision Time Protocol (PTP) timing and multicast routing are not typical IT concerns, standard switch configurations may fall short. Treating media transport like general IT traffic can lead to instability. Broadcast IP networks should be designed and managed with real-time media behaviour in mind.

Another important aspect to ensure is interoperability. A successful IP-based workflow depends on interoperability between many of the system components, viz., cameras, intercoms, routers, playout systems, timing sources, encoders, and more. Without prior testing, either by the broadcaster, the vendor, or an integrator, systems can quickly run into performance issues or outright failure. Mutual certification, whether formal or informal, can significantly reduce time-to-air and ensure reliability when it matters most.

2.3.1 Connectivity

When talking about streaming and reception of B&M via IP requires adequate connectivity is required. This connectivity should be available, affordable and adequate for B&M services that are meaningful connectivity as described by the International Telecommunication Union (ITU). This is a challenging requirement to have an online-only distribution system. We can understand the magnitude of this challenge even by considering the UK as a country among developed countries.

As an analogy to switching off terrestrial TV, we can see a similar challenge faced by the UK while switching off landlines (Copper network) and operating only the broadband connection for communication. By January 2027, every landline in the UK will run on a digital network. For most

households, the change will happen seamlessly. But for others, particularly people without broadband, older residents, or those using telecare devices, it raises important questions about cost, safety and how to stay connected.

2.3.2 Infrastructure

In broadcast and media innovation, containerisation has emerged as a critical enabler of modern, scalable, and efficient broadcast workflows. For broadcast system developers, a common challenge can be ensuring that an application runs reliably and consistently across different environments, from a local laptop to staging servers and production infrastructure. Containerisation is a form of operating system virtualisation that directly solves this problem. It is a method of packaging an application and all its dependencies, such as libraries and configuration files, into a single, isolated, and executable unit called a container. This approach provides a consistent environment, helping to ensure that what works in development will also work in production.

As a one who provides strategic advice and leads strategic broadcast and media work in the Asia-Pacific region (APAC), I am delighted to note that the European Broadcasting Union's (EBU's) Strategic Programme on Media Infrastructures and Cybersecurity has published a comprehensive Reference Architecture for vendors aiming to align their systems with the Dynamic Media Facility (DMF) concept.

The Dynamic Media Facility Reference Architecture has defined a layered model for modern, software-defined production infrastructures that builds on existing concepts used in the cloud space, such as OSI (open system interconnection).

Fundamentally, the model allows users to make independent technology and product choices for individual elements of the infrastructure. Functions can be added in the form of stateless containerised media micro-services, which are either deployed on-premise, at a remote location or in the public cloud. Everything is managed by a unified Media Exchange Layer (MXL), which provides high-performance, asynchronous interchange between the media functions.

The Media eXchange Layer (MXL) standardises how media processing functions operating in containerised environments can share and exchange data with each other. MXL is transforming production with open collaboration and shared memory

How best to optimise the use of technology in the containerised media production environments that are now emerging is on the mind of many broadcast vendors and organisations these days. From April 2023, the EBU has been developing an initiative, Dynamic Media Facility (DMF), which aims to explore how future media productions can benefit from highly flexible and dynamic technology approaches.

Key industry stakeholders, including the BBC, CBC/Radio Canada, France TV, Bell Media, SVT, RTÉ, and VRT, are actively participating in the MXL initiative, alongside vendors such as AWS, NVIDIA, Lawo, Grass Valley, Intel, and Riedel. Their collaboration under the Linux Foundation umbrella aims to ensure the protocol becomes a global, vendor-neutral standard for real-time media exchange.

A lot of broadcasters have already invested in Networked Media Open Specifications (NMOS), so there is a logical research stage in looking at NMOS and whether it is a logical path for us. EBU is finding out whether it has to be changed or if it can be used out of the box.

The launch of the MXL project under the Linux Foundation looks to provide a pivotal shift in how media workflows operate, solving fundamental inefficiencies and incompatibilities that have long plagued digital media infrastructure.

The Linux Foundation provides patterns and templates for open source projects, which help us provide governance and safety for contributors.

As modern servers are very powerful, it is possible to run microservices or multiple services on one large server. It is always believed that shared memory caches and Remote Direct Memory Access (RDMA) for pushing memory between machines were the right way to go for next-generation broadcast infrastructure.

Traditional Direct Memory Access (DMA), long used in computing to enable fast data transfer between components without CPU involvement, is inherently local. RDMA extends that model across network boundaries, enabling one server to read and write directly into the memory of another without burdening either server's CPU. This approach not only minimises latency but also enables highly efficient media processing at scale.

MXL is not just about technical purity. It is also practical. It was reported that customers who moved from traditional hardware to software-based deployments saw a 95% reduction in carbon footprint. Instead of having racks of gear, you have a few big servers running RDMA between them.

MXL is not locked into any one deployment model. It is compatible with Kubernetes and Docker, but does not require them. A broadcaster may want to run it on-premises (*on-prem*), on a single server, without the complexity of cloud orchestration.

MXL is a move toward rethinking the entire media pipeline. If we basically commoditise the infrastructure layer, the container layer, and the host platform layer, we can then concentrate on the sort of media functions and the APIs that we need to interoperate.

2.3.2.1 AI infrastructure

The European Broadcasting Union is calling for the development of sovereign, interoperable, resilient, and sustainable cloud and AI infrastructure to support public service media across Europe.

The aim is to include increased operational security, unambiguous regulatory authority, and reduced exposure to geopolitical risk.

Stakeholders, including cloud and AI providers, infrastructure operators, and regulators, are now being invited to collaborate on the creation of open and secure media platforms, as well as innovation in areas such as AI tools in production, enhanced systems for distribution and user interaction, and better integration with third-party platforms.

2.3.2.2 Software in Media and Broadcast

Although custom hardware will have uses for some years to come, the industry is on an inevitable path towards software, adding the software's real advantage is its scalability and adaptability to the range of live content that is created today.

A recent DPP (DPP is an international association for media and technology) report lays out four key findings:

I. Cloud live production still struggles to reach the top tier: Cloud production is now used for live news, entertainment, and sports. But some high-end capabilities remain difficult, expensive and risky – too risky for much of the top tier.
II. Listen to the needs of audio: Live audio mixing and production communications remain the least mature aspects of cloud production. Some issues are inherent; others could be fixed.
III. We cannot change physics, but we can work around it: Latency remains the biggest challenge, and there will always be physical limits. But workflow changes can bridge the gap.
IV. Next-gen media sharing is coming: Multi-vendor collaborations are already making cloud production more efficient. Whole new ways of sharing media will continue to drive change.

2.3.2.3 Work Spaces

Distributed workforces have become standard, yet many teams still rely on outdated systems like Virtual Private Networks (VPNs) and file-sync delays that turn working from anywhere into a logistical headache. Freelancers and agencies promise flexibility, but clunky onboarding and access delays turn them into bottlenecks, not solutions.

Cloud storage, meant to simplify workflows, often adds hidden costs, from duplicate buckets and re-uploaded renders to unpredictable egress fees that eat away at margins.

3. Funding

It was reported that Public TV stations in the US are beginning to shut down operations and reduce services, particularly in rural areas, after federal funding was cut earlier this year.

All local stations will be negatively impacted by this, and communities across the country, especially in rural areas, are now losing essential services that only local public television stations can provide, from critical public safety services to proven education resources and essential local community connections and information.

Without federal funding, local stations are eliminating or reducing local educational resources for their communities.

3.1 Piracy and Digital Rights Management (DRM)

Due to piracy, M&E lose a lot of revenue. It was reported that the Thailand Ministry of Justice's Department of Special Investigation (DSI) has shut down INWIPTV, one of the country's most notorious illegal streaming services, with support from antipiracy coalition the Alliance for Creativity and Entertainment (ACE) and Thailand-based ACE member True Visions.

The Swedish government is preparing legislation that would make it an offence for consumers to use illegal IPTV services, extending current rules that primarily target distributors.

According to Swedish press reports, an inquiry commissioned by the Ministry of Culture recommends fines for private individuals who stream unlicensed content, alongside tougher penalties of up to six years' imprisonment for operators of pirate services. The law could enter into force on 1 July 2026.

4. Viewership

According to the latest ARD/ZDF media usage study, Germany's public broadcasters have taken the lead over commercial streaming rivals. The survey shows that the streaming platforms of ARD, ZDF, ARTE and 3sat now reach more than 60% of the German population aged 14 and above, putting them ahead of Netflix and Amazon Prime Video. YouTube, however, remains the single largest video platform, with a reach of 72%.

The popularity of U.S. content from three major streaming services with foreign viewers has declined over the past five years, while those same viewers have increased their time spent watching non-U.S.-produced content, according to new research from global streaming media measurement company Digital i.

Viewers are increasing their consumption of local TV content, according to TiVo's latest report on video trends. The results of TiVo's Q2 2025 Video Trends Report show that the importance of local content has increased over the past year, with 61% of respondents in the US and Canada noting that it is somewhat or very important compared to 54.8% in Q2 2024. More so, 29.8% of all time spent watching video is spent watching local content, compared to 21% in Q2 2024 and 22.6% in Q2 2023.

5. Artificial Intelligence - AI

Productivity savings by deploying AI are often hard to quantify, unless organisations let go of legacy resources. Therefore, in response, a media network has reportedly begun experimenting with the AI's potential to categorise old content into rich and searchable archives of metadata. The executive even went on to suggest the potential for this reliable and fully licensed content to be used as the basis to generate new content.

While the expectations for AI deployment were high, people's trust in it appears low. News teams among broadcasters are reluctant to let AI in, because once the audience finds out it is fake, they drop it.

AI works differently from traditional software because it learns patterns from data, can adapt its behaviours, and can make decisions without predefined, explicit instructions. It can quickly and easily analyse huge volumes of complex data to provide useful insights, which can, for example, be used to power recommendation engines. Gen AI, which adds yet another layer, provides the ability to create new content based on a user request. Crucially, it also allows users to interact with software using natural language and is context-aware.

Agentic AI moves beyond all of this. Instead of prescribing every step and specifying which action to take with each eventuality, as is the case with traditional software, or generating a response based on a request, as is the case with Gen AI, in Agentic AI, individual AI agents are given a mission to detect, analyse and act, enabling humans to design, govern and create. Developers decide how best to achieve their mission, can adapt based on feedback, and can improve over time. And crucially, they are not just reactive; they are proactive collaborators within a system and can communicate with one another directly. This creates a flexible ecosystem where multiple agents pursue interconnected goals, each optimising performance toward outcomes rather than just following instructions.

Agentic AI will give video providers the ability to take on challenges that were previously beyond reach. Many frustrations in streaming have less to do with a lack of ambition and more to do with human bandwidth. Personalisation, optimisation, and audience engagement all involve too many moving parts for individuals or teams to manage in real time. Agentic systems offer a way to extend this capacity because they open the door to adaptive, collaborative systems capable of reshaping how video services operate and innovate.

In May 2025, Google unveiled the latest evolution of its AI video generation technology, which includes audio, including background sounds, sound effects, and spoken dialogue. The model is initially only available in the United States within the Gemini app and for enterprise users on Vertex AI. It's also available in Flow, Google's new AI filmmaking tool. Content creators have taken to social media to showcase its capabilities.

Google also announced updates to Veo 2, including a feature that lets users give the model images of characters, scenes, objects, and styles for better consistency.

Music TV channel ROXi is introducing what it says are the first AI-generated TV music presenters in the UK and the United States. The presenters will appear on the ROXi TV music channel on Sky in the UK and Ireland, and in the US on broadcast TV in 31 US TV markets on NEXTGEN TV. ROXi's innovative new virtual TV presenters bring a new level of entertainment to interactive TV, delivering far more engaging viewer experiences than would be possible if we were using normal TV production facilities and actors.

5.1 Accessibility

According to the World Health Organisation, one in 10 people struggles with hearing loss or deafness, so captions definitely help a lot of people and have a purpose.

Closed captioning (CC) is a text display on video content that helps deaf and hearing-impaired audiences understand speech. In the United States, the Federal Communications Commission requires TV producers to supply on-screen text of spoken words, sounds, and music on their video programs. Other countries require CC and demand accurate, synchronous, timely, complete, and properly placed closed captions similar to the U.S.

TV producers must comply with FCC regulations, so they are currently the responsible party for providing CC in their programming.

The demand for CC is valid and inclusive to hearing-impaired people, and I even find CC helpful to understand what I am watching when I need to keep the volume low for any reason or the environment is a bit noisy.

Newer technology always disrupts the market. Industries endure creative destruction all the time, which is what occurs when innovation disrupts the market and causes some businesses to rise and others to fall. Voice recognition software is currently disrupting the marketplace and influencing consumer behaviour.

Now, with so much AI technology and automated captioners on the market, it begs the question as to whether or not broadcasters and content providers should still be responsible for producing captions in the first place. Automated captioning still costs money to acquire and maintain, as well as the fact that most vendors only license so many hours per unit. If the burden of providing.

AI software and automated captioners may offer more affordable means to generate captions. Captioning typists could shift into roles assisting automated caption developers to improve their recognition software. Instead of charging to type, they could charge to consult.

5.2 Gaming

According to Omdia, players' spending on game accessories surged 44.3% since 2020, while game content spending grew just 1.8%. There is a dramatic transformation of the handheld gaming landscape, which is rapidly expanding beyond traditional consoles.

6. Conclusion

The white paper analysed some of the developments and topics that are taking place in the broadcast industry. The paper explored the evolution of the broadcast and media business, highlighting its mission to inform, educate and entertain the world, and with booth holders to showcase the latest innovations, from production, distribution, to consumption. Discover how global

trends such as dynamic and open systems with interoperability are creating new opportunities for broadcasters and media operators to engage passionate audiences, plus what's ahead for the industry in 2026 and beyond.