IP Advertising: Aligning Tech, Experience and Value

A DTG Workshop Report
August 2025

Executive Summary

This report captures insights from the DTG's IPTV Advertising Workshop, held in July 2025. Bringing together stakeholders from across the television and advertising ecosystem including broadcasters, platforms, advertisers, agencies, and technology providers, the sessions aimed to identify current challenges, emerging opportunities, and potential pathways for collaboration.

As IP-delivered television becomes the dominant mode of content distribution, the advertising models that underpin commercial television must evolve. The workshop provided a space to map the key technical, operational and commercial enablers of this transformation and to define the role the DTG can play in shaping a more interoperable, trusted and scalable future for IPTV advertising.

The shift from traditional broadcast to IP-based television is accelerating, transforming not only how viewers consume content, but how advertising is delivered, targeted, and monetised. The current IP advertising landscape is rich with innovation but fragmented in practice. Broadcasters, platforms, and advertisers face a range of operational and technical challenges, from inconsistent measurement and limited interoperability to the uneven availability of addressable advertising infrastructure.

Participants agreed that the future of IP advertising hinges on alignment across the value chain. As technologies such as generative AI, interactive formats, and real-time attribution mature, the ecosystem must coalesce around shared standards, scalable delivery models, and a common measurement framework that serves both traditional TV and digital buyers.

Enabling technologies such as server-side ad insertion (SSAI), dynamic metadata systems, and clean room data environments are critical to realising this vision, but must be made accessible beyond the largest players. Equally, user trust must be maintained through consistent consent mechanisms and inclusive design.

The DTG is uniquely positioned to act as a neutral facilitator and technical authority. It can support the industry by developing a reference framework for IP ad delivery, coordinating standards adoption, providing implementation guidance, and facilitating cross-industry collaboration, particularly around measurement and interoperability.

With targeted action, the DTG can support the creation of a future-facing IP advertising ecosystem that is scalable, accountable, and sustainable for all tiers of the UK market.

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The Current IP Advertising Landscape

There is no shared technical or operational framework to define how IP advertising should function from start to finish. This siloed understanding creates misalignments in execution, limits interoperability, and slows the pace of innovation.

A Fragmented Ecosystem

The television advertising industry is undergoing a fundamental shift as online delivery methods become the dominant means of content distribution and monetisation. Internet-delivered TV, Connected TV (CTV), and streaming services are increasingly supplementing, and in many cases replacing, traditional linear broadcasting. This shift brings with it both opportunity and complexity. While the potential for more personalised, data-driven advertising has long been recognised, the current IP advertising landscape remains fragmented, inconsistent, and challenging to navigate for many industry players.

At present, one of the most significant issues facing the ecosystem is the lack of a unified, end-to-end view of how advertising is delivered, measured, and monetised. The workshop underlined that different stakeholders, whether broadcasters, platforms, agencies, or ad tech providers, tend to operate with a partial understanding of the value chain. Each views the system through the lens of their immediate interests: for example, creative agencies focus on asset generation, platforms on data and targeting, and broadcasters on insertion and monetisation. As a result, there is no shared technical or operational framework to define how IP advertising should function from start to finish. This siloed understanding creates misalignments in execution, limits interoperability, and slows the pace of innovation.

Measurement as a Bottleneck

A particularly prominent challenge is measurement. Measurement is the foundational component of advertising effectiveness, yet it is currently one of the most fragmented areas of the IP advertising landscape. On the one hand, television buyers continue to rely heavily on BARB as the industry's trusted measurement standard for linear and on-demand viewing in the UK. On the other, digital buyers operate within an entirely different ecosystem that prioritises performance metrics such as impressions, click-through rates, and return on investment.

These two paradigms - broadcast and digital - are often maintained by separate sales teams within agencies, leading to disconnects in how campaigns are planned and evaluated. While platforms such as Netflix and Disney have begun integrating BARB into their measurement strategies to attract traditional TV spend, smaller players

and non-broadcaster platforms are left without a clear path forward. The lack of a unified or interoperable measurement framework makes it harder for advertisers to justify spending at scale across multiple environments, particularly when comparing CTV inventory with more established digital or linear channels.

Interoperability Challenges

Alongside measurement, interoperability is a major concern. Although many devices, platforms, and service providers claim to support industry standards such as HbbTV, SCTE markers, or MPEG-DASH, the reality is that implementation is inconsistent. Devices may behave differently depending on the operating system, firmware version, or app environment. This leads to an unpredictable user experience and introduces “technical debt” for broadcasters and ad tech vendors who must account for a wide range of possible behaviours.

Even within a single campaign, an advertiser may encounter multiple insertion points, varying ad load times, or inconsistent fallback behaviour when an ad fails to play. These technical limitations reduce confidence in IP delivery and ultimately constrain investment.

Limited Access for Smaller Broadcasters

For smaller broadcasters in particular, the situation is challenging. Many lack the internal infrastructure or technical partnerships required to enable addressable advertising, programmatic sales, or advanced measurement. The cost of content delivery networks (CDNs), consent management platforms, and real-time bidding integrations creates high barriers to entry. Additionally, the audience fragmentation inherent in IP delivery means that without scalable measurement and targeting, smaller players struggle to demonstrate their value to advertisers. There is a real risk that these broadcasters are excluded from the future of television advertising unless practical support mechanisms are put in place.

Consent and Data Governance Complexity

Consent and data governance also present an increasingly complex challenge. With regulations tightening and audience expectations shifting, platforms and publishers are under pressure to manage user consent with greater transparency and consistency. However, current solutions often favour large organisations with the resources to implement enterprise-level consent management tools. Smaller media owners are left navigating complex frameworks, such as the IAB’s Transparency and Consent Framework (TCF), without adequate support. Inconsistencies in how consent signals are collected, interpreted, and acted upon can affect targeting accuracy and risk regulatory non-compliance.

At the same time, agencies and advertisers increasingly require robust consent signals to justify audience targeting, particularly in a programmatic context. This adds yet another layer of pressure on the ecosystem.

A Need for Alignment and Industry Support

Ultimately, while the shift to IP-based advertising is well underway and brings considerable promise, the current state of play is characterised by fragmentation, operational friction, and uneven access to opportunity. The challenges outlined above such as a lack of shared frameworks, fractured measurement, poor interoperability, limited access for mid-tier players, and inconsistent consent practices undermine the potential for growth.

There is a pressing need for industry-wide coordination to develop a common language, establish shared standards, and create practical solutions that support a healthy and scalable advertising market across all tiers of the ecosystem.

Future Direction

The Inevitable Shift Toward IP Delivery

There was broad consensus that the television industry is moving irreversibly toward full IP delivery. Traditional broadcast methods such as DTT and satellite still account for a substantial share of viewing, particularly among older and rural audiences, but the long-term trajectory is clear: streaming and IP-based services will dominate. In some markets, such as the UK, this transition is likely to unfold gradually, depending on government policy, infrastructure readiness, and viewer behaviour. Nevertheless, the shift has already begun, and broadcasters, platforms, and advertisers must prepare now to ensure relevance in a future dominated by IP.

> ***Audiences increasingly expect content to be available on demand, personalised to their interests, and accessible across devices***

The direction of travel also reflects broader changes in consumer behaviour. Audiences increasingly expect content to be available on demand, personalised to their interests, and accessible across devices. This expectation extends to advertising: viewers are less tolerant of repetitive or irrelevant ads and more receptive to formats that are targeted, interactive, or contextually aligned. These trends suggest a need for advertising solutions that are data-driven, dynamically delivered, and consistent across platforms - a scenario that favours IP over linear delivery mechanisms.

From Fragmentation to Standardisation

As the ecosystem evolves, there is growing recognition that the next phase must focus on standardisation and alignment. Without common frameworks, consistent implementation, and shared terminology, the promise of personalised, scalable, and measurable IP advertising will be difficult to fulfil.

Participants called for the development of a reference model, a shared view of the advertising value chain that would include key functional areas such as creative development, metadata and targeting, ad insertion, delivery optimisation, and measurement. Such a model could help clarify roles, align technologies, and reduce the duplication of effort currently seen across the ecosystem. It would also enable clearer communication between media

owners, platforms, and buyers, many of whom operate with different assumptions, systems, and success metrics.

Not only would standardisation improve operational efficiency, it would also support trust and confidence in IP-delivered advertising, particularly among advertisers and agencies who are increasingly seeking reliable, cross-platform solutions.

Personalisation, Interactivity, and Shopability

As the technology matures, IP delivery offers advertising experiences that go beyond traditional spot placements. Among the most promising developments are personalised creative, interactive formats, and shoppable TV. These innovations are not just technically interesting, they represent real opportunities for revenue growth and viewer engagement.

The emergence of Generative AI is particularly noteworthy. Creative teams can now use AI tools to localise, personalise, or contextualise ads at scale, reducing production costs while maintaining brand consistency. This opens up the possibility for mid-sized and even small advertisers to create targeted campaigns that would previously have been prohibitively expensive. AI can also support compliance by automating elements of pre-clearance and helping to ensure that creative content adheres to local regulatory frameworks.

Interactive and shoppable formats are also increasing in popularity. These allow viewers to engage with ads directly through remote control, mobile devices, or voice commands, and even purchase products without leaving the TV interface. Trials with major retailers and platforms have shown encouraging engagement rates, but also highlight the need for clear standards, accessible metadata, and robust user consent mechanisms. To succeed at scale, these formats must be seamless, unobtrusive, and designed with accessibility in mind.

Expanding Addressability and Attribution

In parallel with the shift toward interactivity and personalisation, there is a growing demand for more granular audience segmentation and more robust attribution models. Advertisers want to understand not just who saw an ad, but how it performed, what action it drove, and whether it delivered a return on investment. This requires a move beyond reach and frequency toward data-rich metrics that can integrate with wider marketing strategies.

Achieving this will involve better integration between first-party data such as user profiles, preferences, and purchase history and advertising systems. However, such integration must be underpinned by clear consent protocols and data governance frameworks that maintain user trust and meet regulatory requirements. In this context, clean room technologies which allow anonymised data sharing between broadcasters, platforms, and advertisers are emerging as an enabling tool. These can facilitate sophisticated targeting and closed-loop attribution without compromising user privacy.

A Broader, More Inclusive Market

The future of IP advertising must be inclusive of the full spectrum of media owners; not just major broadcasters and global platforms, but also regional channels, niche content providers, and emerging services. These players represent an important part of the media landscape, particularly in local and specialist markets. However, they are often excluded from IP advertising opportunities due to cost, technical barriers, or lack of commercial support.

Future developments must therefore account for staged adoption models that support smaller organisations in transitioning to digital delivery. This includes access to shared measurement frameworks, simplified ad insertion solutions, and affordable compliance tools. Only by expanding access to the broader ecosystem can the market as a whole reach its full potential.

A Market Ready for Coordination

The future of IP advertising will be defined by convergence and coordination. The technology exists, and the demand is evident, from audiences seeking relevance and control, to advertisers seeking scale and accountability. What is now required is industry-wide alignment around shared goals, technical standards, and operational best practices.

Enabling Technology

Foundations for a Scalable IP Advertising Ecosystem

As IP-delivered television matures, a robust and interoperable technical foundation is essential to support the complexity and flexibility advertisers and audiences now demand. At present, many enabling technologies exist however their implementation is inconsistent and often inaccessible to mid-sized or emerging players. Enabling technologies must therefore be considered not only as technical components, but as the infrastructure that will determine the success or failure of the next phase of the advertising ecosystem.

At the heart of this enabling layer are five key functional domains:

1. Ad creation and creative technology,
2. Metadata and targeting systems,
3. Insertion and delivery infrastructure,
4. Optimisation tools,
5. Measurement and attribution frameworks.

Each plays a critical role in the delivery of seamless, relevant, and compliant advertising experiences across IP-delivered content.

Creative Technology and Generative AI

The creative process is rapidly evolving through the integration of Generative AI and advanced creative automation tools. These technologies enable advertisers and agencies to produce a wider variety of assets more efficiently, with the ability to localise or personalise creative in post-production. For example, AI can adapt visual scenes, audio elements, and messaging to suit different audience segments without the need for multiple full-scale productions.

This capability is not only cost-effective but strategically powerful. Creative variants can be deployed based on geography, viewer behaviour, time of day, or even contextual signals from the content itself. This opens the door to true one-to-one addressability in creative delivery, an essential component of future-proofed IP advertising.

AI also holds promise in supporting compliance and accessibility. Tools are emerging that can automatically test creatives against regulatory frameworks or generate subtitles and descriptive audio tracks, improving inclusivity and reducing friction in the ad clearance process.

Metadata and Targeting Infrastructure

Metadata is the connective tissue of the IP advertising ecosystem. From describing content genres and audience ratings to signalling ad opportunities and personalisation triggers, metadata enables systems to deliver the right content to the right audience at the right time.

Participants repeatedly highlighted the lack of consistency in how metadata is created, shared, and interpreted. Timeline metadata which provides time-aligned cues for ad insertion, content markers, or user interaction is still poorly implemented across platforms. Meanwhile, creative metadata (such as product tags, brand safety flags, and demographic relevance) is often missing or unstructured, limiting its utility for ad tech systems.

Standardising metadata schemas and ensuring consistent support across devices, platforms, and service providers will be critical to unlocking more effective targeting, contextual alignment, and campaign reporting. In shared home screen environments, metadata also supports content discovery and positioning, vital for maintaining broadcaster visibility alongside global streamers.

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Insertion and Delivery Infrastructure

Modern IP advertising requires flexible and robust infrastructure for ad insertion and delivery, particularly in environments with high variability in devices, formats, and bandwidth conditions. Today, advertisers and broadcasters rely on a range of techniques, including server-side ad insertion (SSAI), client-side switching, and overlay-based formats.

SSAI is becoming increasingly popular for its ability to stitch ads directly into video streams, improving continuity and reducing the risk of ad blockers. It also allows for seamless integration with dynamic decision engines and programmatic bidding platforms. However, SSAI implementations must be carefully managed to maintain quality, avoid latency, and ensure that user consent and tracking are preserved.

Infrastructure optimisation also extends to Content Delivery Networks (CDNs) and multicast strategies. As live IP-delivered viewing becomes more common, especially for sports and event programming, solutions that can scale without excessive cost or latency are essential. Object-based approaches, where creative elements are delivered and assembled dynamically, are gaining attention for their flexibility and scalability.

Measurement and Attribution Tools

Robust, trusted, and flexible measurement frameworks are fundamental to advertiser confidence and effective campaign planning. Yet today's landscape remains divided between traditional broadcast measurement such as BARB and a patchwork of digital performance tools. As advertisers look for integrated cross-platform campaigns, the lack of consistent measurement remains a major obstacle.

Emerging tools seek to close this gap. Hybrid measurement models that combine panel data, ACR (automatic content recognition), first-party platform metrics, and third-party verification offer one path forward. At the same time, clean room environments are enabling more sophisticated attribution models without compromising user privacy.

However, scaling these solutions requires interoperability between systems and buy-in from multiple stakeholders. Without standard formats for impression tracking, user segmentation, and conversion reporting, meaningful cross-platform comparison will remain elusive. There is also a growing need to factor contextual, emotional, and interactive engagement into measurement to better reflect how audiences actually experience advertising in IP environments.

Consent and Data Governance

The rise of addressability and personalisation places new demands on consent management and data governance. Regulatory expectations around data protection are increasing, and viewers themselves are becoming more conscious of how their data is collected and used.

Enabling technologies in this space include Consent Management Platforms (CMPs), user preference dashboards, and frameworks such as the IAB Transparency and Consent Framework (TCF). These systems must operate across multiple platforms and devices, interpreting and honouring consent signals in real-time, and adapting content and ad delivery accordingly.

Unfortunately, many of these tools remain expensive or overly complex for smaller media owners, leading to uneven adoption. A more scalable, accessible approach to consent management will be vital in ensuring equitable participation in the IP advertising economy and in maintaining trust with audiences.

Toward a Connected Infrastructure

Taken together, the technologies outlined above represent the building blocks of a more dynamic, efficient, and audience-centric advertising model. Yet the full value of these tools will only be realised through interoperability, standardisation, and shared governance.

Next Steps and DTG's Role

To unlock the full potential of IP-delivered advertising, the industry must move beyond exploratory pilots and parallel initiatives toward a coordinated, standards-based model.

Aligning the Industry Around Shared Objectives

The workshop highlighted a consistent and pressing need for greater alignment across the IP advertising ecosystem. While there is no shortage of innovation or ambition, the current environment is marked by duplication of effort, mismatched expectations, and fragmented infrastructure. To unlock the full potential of IP-delivered advertising, the industry must move beyond exploratory pilots and parallel initiatives toward a coordinated, standards-based model. This means agreeing on a shared framework for how IP advertising should work, from creative development and targeting to delivery, measurement, and monetisation.

Participants across the sessions repeatedly emphasised that the time is right for pragmatic collaboration. Many of the building blocks are already in place, such as addressable infrastructure, measurement pilots, consent frameworks, and shoppable experiences. However, without consistent technical execution and commercial understanding, their impact remains limited. There is now a need for an organisation to facilitate this alignment, drive interoperability, and support both major players and smaller broadcasters in accessing scalable advertising solutions.

Key Priorities for Industry Action

Several priority areas emerged across the workshops where collective focus could deliver tangible progress:

Measurement remains the most urgent and influential issue. Advertisers want consistent, cross-platform reporting that blends the credibility of established systems such as BARB with the precision of digital attribution. Without this, media spend will continue to favour walled gardens or more measurable environments. Developing an interoperable, trusted measurement framework should be a top priority.

Interoperability and implementation guidance are also critical. While many technical standards already exist, there is a clear gap between theoretical support and real-world application. Devices often implement standards inconsistently, and broadcasters struggle with cost and complexity when integrating multiple technologies. A programme of conformance testing, reference implementations, and practical guidance could go a long way in resolving this.

Metadata standardisation is an enabling layer that supports almost every function in the IP ad value chain, from targeting and personalisation to compliance and discoverability. Harmonising

how metadata is structured, shared, and interpreted will help unlock more dynamic and scalable advertising opportunities.

Consent management and data governance require a scalable and inclusive approach. Without accessible tools and common frameworks, smaller broadcasters risk exclusion from the programmatic ecosystem. Equally, consumer trust must be preserved by ensuring that data usage is transparent, secure, and accountable.

Commercial model alignment is necessary to ensure the sustainability of any technical or operational developments. Broadcasters, platforms, and OEMs need clear incentives to invest in new capabilities, whether through revenue share, operational efficiencies, or regulatory support. Encouraging conversations around shared value will help prevent fragmentation and accelerate adoption.

Collective knowledge sharing and understanding of the next generation of IPTV advertising technologies, such as generative AI, is critical. Stakeholders must ensure a collective knowledge of the latest technologies and understand their route to deployment. This will ensure potential interoperability and implementation challenges are identified and addressed.

DTG's Strategic Role

As a neutral, technically-trusted convenor, the DTG is well positioned to play a leading role in shaping the UK's IP advertising future. Unlike individual platforms, broadcasters, or technology providers, the DTG is uniquely capable of bridging technical, commercial, and regulatory conversations, ensuring that progress is inclusive, coordinated, and in the long-term interest of the industry. Specifically, DTG could support the following activities:

Developing and maintaining a high-level reference framework for IP advertising, mapping the end-to-end value chain across five core functions: creative, metadata and targeting, insertion, delivery optimisation, and measurement. This framework could serve as a shared language for stakeholders and a foundation for technical and operational alignment.

Coordinating standards adoption and technical guidance by working with relevant bodies such as BARB, HbbTV, SCTE, and the IAB. This includes producing implementation blueprints, convening working groups to resolve technical barriers, and maintaining a living repository of compatible solutions and tools.

Facilitating a measurement interoperability initiative that brings together media owners, advertisers, and measurement providers to define a hybrid model that works for both traditional and digital buyers.

Championing accessibility and user experience by ensuring that new ad formats, particularly interactive and shoppable ones, adhere to inclusive design principles and respect the integrity of the TV viewing experience.

Providing support for mid-tier and emerging broadcasters, including access to shared infrastructure, best practice resources, and simplified compliance tools. A more level playing field ensures that innovation and monetisation are not limited to the largest players.

Representing the UK industry internationally, aligning local initiatives with broader European and global standards where appropriate, and helping ensure that UK broadcasters and platforms are not disadvantaged in the global programmatic landscape.

Next steps:

To accelerate progress on the most pressing barriers to scalable IP advertising, attendees recommended that the DTG coordinate a focused six-month sprint, bringing together key stakeholders from across the ecosystem. This initiative would begin with developing the high-level reference framework diagram, building on models and concepts presented during the workshop. The group will also define the specific areas of focus, ensuring DTG's efforts complement, rather than duplicate, ongoing work by international standards bodies.

A series of targeted focus groups would address each priority area in turn, with the goal of producing one practical guidance document each. These outputs ultimately form the chapters of a comprehensive implementation guide for IP advertising. Alongside this, the groups would work toward establishing a shared terminology for the sector, helping to create consistency across technical, commercial, and operational contexts.

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