

Q&A: Digital Advertising Supply Chain

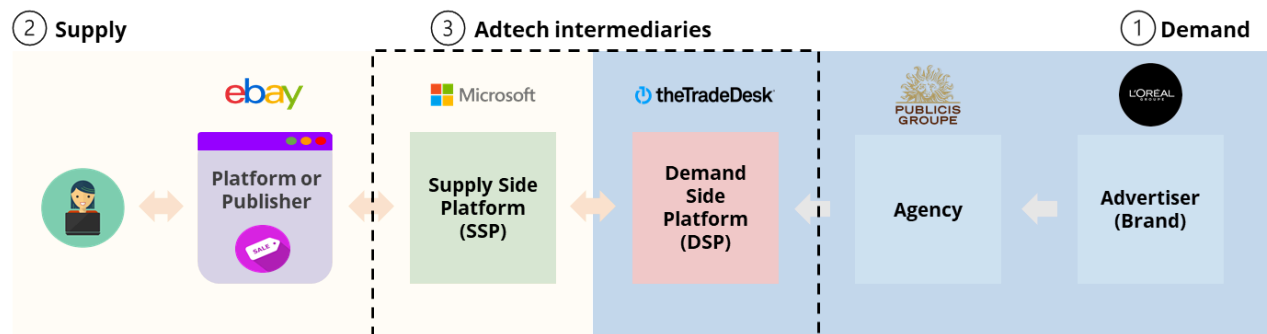
This Q&A document provides a comprehensive overview of the digital advertising supply chain, clarifying the roles of key actors and addressing questions around transparency, accountability, and industry standards. It explains the different players involved and explores why the ecosystem is structured in such a diverse way. The text also outlines how the industry combats rogue actors through technical standards, compliance schemes, and due diligence, while highlighting the importance of transparency initiatives like IAB Tech Lab standards and the Transparency & Consent Framework (TCF). Finally, it discusses current enforcement efforts, adoption trends, and recommendations for stronger collective action to build a healthier digital advertising ecosystem.

1. Who does what in the supply chain?

The digital advertising supply chain involves three key categories of actors (see visual below):

1. Demand-side actors: These are primarily advertisers and the agencies that represent them. They purchase digital advertising space to reach target audiences with relevant ads.
2. Supply-side actors: Primarily composed of publishers, content platforms, and other providers of ad-funded services, these actors monetize their online content and services by making their advertising inventory available for sale.
3. Intermediaries: Players include demand-side platforms (DSPs) or supply-side platforms (SSPs), which are engaged by advertisers and publishers, respectively, and facilitate the connection between the demand and the supply. Other intermediaries may provide services to support supply and/or demand-side actors, including audience measurement, verification, or data management services.

Main actors in the digital advertising supply chain



The table below provides more details about the role of different actors within these three categories.

Player	Who does what?
Demand-side	
Advertiser / Agency	Advertisers can target audiences using their own personal data, and/or can utilise data broking services to acquire additional third-party data to inform campaign delivery.
Intermediaries	
Demand-Side Platform (DSP)	A DSP acts for the buyer (advertiser or agency) to optimise the buying of ad impressions in real-time through ad exchanges.
Data Management Platform (DMP)	Service used by advertisers to collect and organise data, analyse consumer behaviour, and segment audiences. Audience segments are then shared with DSP's through application programme interfaces (API's) to inform campaign targeting.
Supply-Side Platform (SSP)	A SSP is used by publishers (websites, apps, or digital media owners) to manage, sell, and optimise their ad inventory.
Media Sales Agencies or Advertising Concessionaires	They can be used by both publishers and advertisers/agencies in matching their respective first-party data.

Supply-side	
Platform	Source of advertising inventory available to buyers. Collect and hold first-party data from users, which can be used by businesses to facilitate in-platform ad-targeting
Publisher	Publishers create and distribute digital content with associated inventory available to buyers. Publishers may collect first-party data through signed-in environments, which can be used to inform ad-targeting.

2. Why are there so many players in the supply chain?

Diversity in the digital advertising supply chain is key to driving competition and technological innovation. It leads to more choices, more innovative and competitively priced solutions, ultimately leading to higher return on investment for advertisers and increased revenues for publishers.

In particular, publishers often choose to work with multiple supply-side platforms (SSPs, see question 1) for several key reasons:

- Improved ad revenues for publishers: The presence of multiple SSPs leads to auctions for digital ad space clearing at the highest bid across all partners instead of a single platform, driving up revenue for publishers. The fact that impressions can be sold elsewhere also incentivises SSPs to keep platform fees competitive.
- Access to unique demand: Each SSP may provide access to additional demand it has secured through deals with agencies and advertisers. As buyers of ad space often implement diverse strategies, the presence of additional demand can also increase fill rate for publishers, therefore optimising revenues for their ad space.
- Better and more tailored services: Working with multiple partners enables publishers to test and evaluate innovative services and products. SSPs are encouraged to compete by rolling out features that deliver higher yields, deeper insights, or more accurate targeting, aiming to become the publisher's preferred partner. This competition drives a cycle of continual product improvements, as each SSP strives to outdo rivals with new tools, data capabilities, and optimisation techniques. Many SSPs also specialise in specific advertising

channels; publishers that sell ad space across different types of formats (e.g. display and audio) may work with different partners for each.

3. How does the industry deal with rogue actors?

The best way to deal with rogue actors is to elevate the good actors via industry codes, standards and transparency best practices. This helps ensure the ecosystem comprises reputable and responsible advertisers and publishers and that advertisers and publishers can make informed decisions about who they buy ad services from. Over the long term, this creates a healthy ecosystem where rogue players are not welcome. Enforcement action is often the only effective response to rogue players that willfully breach legal requirements. This approach is similar to other open and complex supply chains like the construction and retail sectors.

Industry initiatives combine policies, processes, technical solutions and standards, and 'compliance' and certification schemes. They help advertisers and publishers select their commercial partners with confidence. Tangible examples include:

Policies:

Numerous policies are in place across the digital advertising supply chain to prevent and mitigate the risks associated with ad misplacement, fraudulent ads, and the spread of illegal content. These policies, which sometimes exceed legal requirements, originate from various players, including:

- Demand-side: Advertisers have created their 'brand safety' and advertising policies.
- Adtech intermediaries: They have also developed policies and processes to ensure their operations and their advertiser and publisher clients meet high ethics standards¹.
- Supply-side: Media outlets have established their editorial and advertising policies, and platforms have developed their own content moderation and advertising policies.

'Compliance' frameworks, such as [Transparency & Consent Framework](#) (TCF, see questions 6 and 7).

Technical standards, such as [Authorized digital sellers \(ads.txt\) file](#), [Sellers.json file](#), [The SupplyChain object](#) (see questions 4.1 and 5.1), [Buyers.json file](#), [The DemandChain Object](#) (see questions 4.2 and 5.2), [IAB Tech Lab's DSA Transparency Extension and](#)

¹ See examples from a European adtech intermediary ([here](#), [here](#) and [here](#))

[Technical Specifications](#), or [EDAA Advanced Advertising Transparency Programme](#).

Certification schemes, such as [IAB Ireland Gold Standard](#), [IAB Sweden Gold Standard](#) or [Digital Ad Trust](#) in France. These certification/labelling schemes² ensure that participating companies, such as adtech intermediaries and publishers, effectively adhere to industry technical standards and best practices, such as TCF, IAB Tech Lab's supply chain transparency standards (see questions 4 and 5).

Due diligence: Adtech intermediaries perform due diligence on a case by case basis, when selecting their business partners. They may also provide technical tools to further assist their advertiser and/or publisher clients to optimise their supply chain or enable them to deploy their preferred third party technology.

Creating a healthy supply chain is a whole ecosystem effort, and advertisers in particular have a role to play as their spend drives the market including the bad actors.

4. What are the supply chain transparency standards? How do they help create a healthy ecosystem?

4.1. Supply-side transparency standards

[IAB Tech Lab](#) has developed supply-side transparency standards, including:

- [Authorized digital sellers \(ads.txt\) file](#).
- [Sellers.json file](#).
- [The SupplyChain object](#).

These standards transmit technical signals through the supply chain from publishers to help buyers (including ad tech intermediaries representing an advertiser or agency) know who is authorised to sell publisher inventory and select legitimate sellers (i.e. ad tech intermediaries representing publishers). These standards also help buyers identify sellers of quality inventory to limit the risk of ad misplacement.

More concretely, these standards serve four practical objectives, including:

- They enable the verification of commercial relationships between publishers and buyers.
- They prevent the monetisation of counterfeit inventory, allowing buyers to reject it before a bid is ever placed.
- They provide information on the composition of the publisher's supply chain to

² These schemes often rely on [TAG certification programmes](#)

buyers.

- They provide information that uniquely identifies intermediaries that are certified under industry schemes³ relating to issues such as fraud or brand safety.

4.2. Demand-side transparency standards

[IAB Tech Lab](#) has developed demand-side transparency standards, including:

- [Buyers.json file](#)
- [The DemandChain Object](#)

These standards transmit technical signals through the supply chain from advertisers to help publishers identify legitimate buyers, reducing the risk of fraudulent ads and more broadly the malicious use of adtech services.

More concretely, these standards serve four practical objectives, including:

- They enable the verification of commercial relationships between advertisers (or their agencies) and the demand-side intermediaries that bid on their behalf.
- They allow publishers and supply-side platforms (see question 1) to identify malicious or fraudulent buyers early and reject their bids before the auction clears, reducing the risk of fraudulent ads.
- They provide publishers and supply-side platforms with visibility into the composition of an advertiser's demand chain.
- They provide information that uniquely identifies intermediaries that are certified under industry schemes⁴ relating to issues such as fraud or brand safety.

5. Are these transparency standards widely adopted?

5.1. Supply-side transparency standards

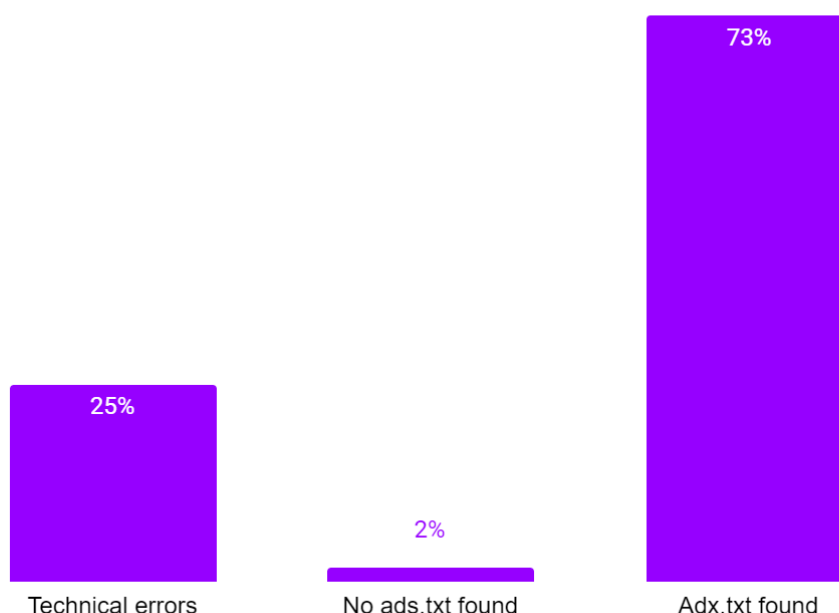
³ See [TAG certification programmes](#)

⁴ See [TAG certification programmes](#)

IAB Europe evaluated⁵ a sample of over 2,000 European online news publishers to assess the level of adoption of supply chain transparency standards (see question 4.1).

Ads.txt is a mature standard and widely adopted across the ecosystem. Overall, it was found that at least 73% of European web publishers in the sample hosted ads.txt files, which allow publishers to declare which ad tech companies can legitimately monetise their inventory (see chart below).

Level of adoption of sell-side transparency standards



Size of the sample: 2,054 European online news publishers

IAB Europe assessed whether the web publishers from the sample have properly implemented the ads.txt file, in line with the standard developed by the industry.

In total, over 99% of ads.txt lines were found to be valid.

IAB Europe also looked into Sellers.json - a newer standard - which includes information provided by adtech intermediaries (e.g., SSP) about every publisher they represent. We compared this information with that declared by publishers in the ads.txt file. This analysis shows that this information successfully matched in around 79% of cases, confirming the commercial relationship between the publisher and the ad tech intermediary.

⁵ See further details about the methodology in IAB Europe paper on [“Adoption of supply chain transparency standards in Europe”](#)

This initial analysis confirms that many publishers and their adtech partners have invested in implementing transparency standards, with a view to limiting the risk of ad misplacement.

5.2. Demand-side transparency standards

Demand-side transparency standards (see further details about these standards in question 4.2) are more nascent, developed in 2021 and formally launched in 2024. There is broad support for these standards across the ecosystem, and their adoption is growing. However, their implementation needs to be carefully coordinated and sequenced across the supply chain before they can be effective. Industry bodies are targeting efforts to address areas of low adoption. This is key to further increase transparency and ultimately confidence, which is essential to incentivise investment throughout the supply chain.

6. How does TCF help the supply chain comply with data protection and cookie rules?

The TCF is an accountability tool that relies on the standardised sharing of consent information to facilitate compliance with the ePrivacy Directive and the GDPR. Through a combination of clearly defined policy requirements, technical specifications, and robust accountability mechanisms, the [Transparency & Consent Framework](#) (TCF) ensures that participating organisations, including publishers, advertisers, broadcasters, Consent Management Platforms (CMPs), and adtech intermediaries, implement practices to respect consent within the EU data protection framework. The key pillars supporting this compliance infrastructure include:

- Standardised user choice signaling, which enables consistent transmission of consent preferences within the supply chain.
- Strict registration and verification processes for participating organisations, ensuring only eligible actors participate.
- Ongoing monitoring and enforcement via sanctions, including the suspension of non-compliant organisations.

7. What steps is IAB Europe taking to improve the enforcement of TCF?

IAB Europe has made substantial investments in the development of [dedicated Compliance Programmes](#) that leverage automated tools to audit and monitor market participants at scale across the web. These programmes are critical to fostering self-regulatory discipline: they help to elevate the overall level of compliance in the ecosystem, isolate bad actors that fail to meet the established standards, and build user confidence over time.

In 2024 alone, over 400 enforcement procedures were initiated against participating organisations for non-compliance, resulting in the temporary suspension of more than 20 entities until they remedied the identified issues⁶. Suspended organisations face tangible consequences — most notably, the inability to seek user consent — which directly impacts their ability to operate and generate revenue.

Alongside this enforcement effort, IAB Europe continues to regularly iterate on the TCF to align it with the most recent case law as well as guidelines from Data Protection Authorities.

8. What other technology partners help advertisers control where their ads appear?

Advertisers carefully plan advertising campaigns and can include or exclude certain websites or digital services from the outset. Once the objectives and parameters of a campaign are set, partners are selected and supply chain optimised accordingly, advertisers can choose to use a wide array of additional technical tools from third party vendors, such as fraud detection tools, site scoring to block or allow the placement of ads or assess sites in real time, audience measurement tools and cutting edge AI technologies to identify and fight abusive practices by rogue actors in the supply chain.

9. How do publishers ensure that their ad supply chain meets their expectations and requirements?

Publishers can choose to exclude certain advertisers or categories (e.g., gambling or alcohol ads) from the outset and make other decisions about how to engage with the open programmatic supply chain, including selecting their supply side intermediaries. They have a similar range of choices as advertisers to use additional technical tools from third party vendors.

10. How can the digital advertising industry act better collectively to fight against rogue players?

The most effective way to fight against rogue players is for the whole ecosystem to work together to establish and raise standards, and proactively choose partners that share this vision. To this end, IAB Europe recommends policy-makers:

- Recognise the value of industry-led initiatives: These efforts to isolate and combat rogue players are key to creating a healthy ecosystem. These should be

⁶ See [IAB Europe TCF compliance report](#)

led by the private sector, with support from good actors committed to raising standards in the supply chain and building a healthy ad ecosystem.

- Adopt a 'follow the money' strategy: These efforts should acknowledge that ad spend is the primary driver of the market and shapes the wider supply chain. Advertisers should be encouraged to select partners that adopt standards and codes, targeting in particular large advertisers whose expenditure has particular impact.
- Appropriately separate rogue actors from those acting in good faith: Egregious and repeated violations of the law must be punished by the relevant regulatory authorities to distinguish responsible actors from rogue actors. In addition, organisations that are not yet engaged in industry efforts should be encouraged to join relevant schemes.
- Encourage risk-based and targeted enforcement: Enforcement by regulatory authorities should be risk-based and proportionate. They should prioritise and treat differently repeated egregious breaches from one-off unintentional breaches in order to act as an effective deterrent.
- Consider regulatory incentives for industry-led initiatives and foster engagement with data protection authorities: Regulatory authorities and policy-makers should support industry schemes by incentivising adoption through clear pathways to compliance, helping to build a healthier advertising ecosystem. This includes fostering constructive engagement with data protection authorities, particularly in the context of developing a GDPR code of conduct. Such a process would offer an opportunity to jointly clarify the application of the GDPR in the ad tech sector, and formal recognition should be considered for initiatives like the TCF, which offers a solid foundation for such a code.