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The SDK advantage: How independent adtechs won mobile and are positioned to win AI-native advertising

Ujjwal Chaudhry, Shreshth Virmani, Ashwinder Sethi

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Analysys Mason India Private Limited
1st Floor, Tower 'C', Building No. 10
DLF Cyber City, Phase II
Gurgaon 122002
Haryana
India
Tel: +91 124 4501860
enquiries@analysysmason.com
www.analysysmason.com
Registered in New Delhi:
Registration No. 157725
Subsidiary of Analysys Mason Limited, 5th Floor, 22 Upper Ground, London, SE1 9PD, UK, No. 5177472

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Executive summary

In-app advertising has become one of the largest segments of the global advertising market, worth around USD400 billion in 2025, or close to half of all online advertising spend. The market has grown with a shift in consumer behaviour. People now spend more than 90% of their mobile time inside apps rather than on the web, and advertising budgets have followed them there.

The advertising technology (adtech) built for the web is dysfunctional in the app economy. Apps hold no cookies and sit isolated from one another, so the tracking and delivery methods that served the browser cannot carry users, data or budgets across. Reaching audiences inside apps requires a different architecture. This is the USD400 billion problem in adtech.

The adtech industry answered by building an advertising value chain made for apps. Advertisers and agencies purchase inventory through demand-side platforms (DSPs), while exchanges auction the publisher's inventory and select the winning advertisement in real time. Holding this ecosystem together is the software development kit (SDK) where the adtech platform's own code is embedded inside the publisher app. SDK provides the channel through which most in-app advertising is now bought, delivered and measured.

The in-app adtech market runs on two different models. The first model runs through the *walled gardens*, namely Amazon, Google and Meta. They own the platforms people use to reach the internet, and they sell advertising inside their own apps. The second model runs through *independent adtech players* such as AppLovin, InMobi and Liftoff. They help app publishers and advertisers buy, sell, measure and improve advertising across third-party apps. They are paid on verifiable results.

The position of independent players is shaped by the SDK choices made by app publishers. An app earns most of its advertising revenue from SDK-enabled advertising formats. The decision to use an independent SDK is based on its monetisation potential, quality of the demand and the level of control it provides to the publisher. Independent platforms compete directly with the walled gardens and are paid only on results the publisher and the advertiser can verify.

SDK-first platforms usually perform better on key advertiser requirements. These platforms provide better reach, delivery, business outcomes, measurement confidence, brand safety and fraud protection than other architectures. Each of these depends on first-party data collected inside the app. An SDK sits at the single point where the audience, the delivery, the outcome and the risk can all be measured.

The new market shifts favour independent players further. Consumer attention is moving onto new surfaces such as lockscreens, assistants and agentic surfaces, and AI-native products. Each of these new publishers monetises through an embedded SDK. The loss of cookies and cross-app identifiers has left the first-party signal an SDK collects as the most dependable basis for advertisement targeting. The

independent SDK platforms that already hold scaled footprints are the ones positioned to capture this new supply.

SDK-first platforms are the control point of in-app advertising, and their advantage compounds. Each new publisher feeds more first-party data into the SDK platform's models. Better models sharpen targeting. Richer formats hold user attention for longer and create superior results for advertisers. Those results attract more advertising spend and raise earnings for app publishers. Higher earnings win the next publisher integration.

The cycle is anchored in render control. Because the SDK sits inside the render path, it is the vehicle that carries intelligence onto the device and into every touchpoint the SDK reaches – not simply a channel for collecting data under the app's own consent framework. Without an SDK, a platform cannot power intelligence-led experiences such as conversational advertisements, which have to interpret and respond to a consumer's requests in real time on the device itself. Nor can it place on-device intelligence more broadly, short of asking publishers' own developers to build and render it, which does not scale. This position has also survived the privacy changes that removed the principal alternative sources of tracking. Apple's ATT opt-in rate is only around 35% among users that are shown the prompt, third-party cookies are now blocked by default in Safari and Firefox, and Google retired the Privacy Sandbox in October 2025.

The market investments have already priced this advantage. Major adtech acquisitions bought installed footprints rather than code. AppLovin paid USD1.05 billion for MoPub, and InMobi paid USD90 million for AerServ to deepen its own stack. With costs largely fixed, revenue from each additional impression goes to the bottom line, widening the margins with footprint growth. AppLovin's advertising business has scaled rapidly and become highly profitable as its SDK footprint has grown, illustrating how the largely fixed cost base of an SDK platform converts footprint growth directly into margin expansion. InMobi has built one of the largest SDK footprints among independent adtech platforms globally, reaching over 2 billion devices across 194 countries through more than 74 000 SDK integrations. Liftoff was assembled the same way, when Blackstone merged it with Vungle in 2021 to combine their SDK footprints.

The structural position of SDK-first independent adtech platforms carries into the next wave of supply because of render control and the power of the code already sitting inside the app, which compounds with each shift rather than resetting. That code is the installed distribution that is the independents' core asset, and what it can do keeps expanding. Code that could once only render a simple display advertisement grew sophisticated enough to render playables and short-form video, and can now make real-time decisions about what to show users and how to respond to prompts. AI-native products are turning to advertising to cover inference costs, and this new supply sits at the application and operating-system layer, reachable only through that same on-device code. A platform without it in place cannot add the next capability without building the position from zero. Each shift widens the SDK moat. The SDK-first players such as AppLovin, InMobi and Liftoff that lead in-app advertising today with their wide footprint are also best positioned to win the supply that comes next.

In-app advertising now accounts for around USD400 billion annually, yet the technologies that powered web advertising do not work effectively within mobile apps. SDKs have become the critical control point in the mobile advertising ecosystem because they give platforms superior access to user signals, measurement and monetisation. As advertising moves onto new app-based and AI-native surfaces, SDK footprints are becoming harder to replicate and more valuable. This leaves scaled independent SDK platforms best placed to capture the next wave of supply.

2

Introduction

Digital advertising is one of the largest sectors of the global digital economy. Over the last three decades, consumer attention has moved from television, print and the desktop web into mobile apps, and advertising budgets have followed. In-app advertising now carries around USD400 billion of annual spend, and it has become the main channel through which advertisers reach audiences and app publishers fund their content.

Each of these moves has been a structural change, not a passing cycle. When attention moved to a new surface, the advertising technology (adtech) tools that monetised the old one did not follow, and a different set of platforms rebuilt monetisation around the new surface. Television buying did not carry over to the web, and web buying did not carry over to apps. That pattern is beginning again as attention moves onto surfaces built after the app, and it will reset the monetisation layer once more.

This shift created a structural challenge for the adtech industry. Mobile apps are closed environments. They do not support the cookies and third-party tags that targeted and measured advertising on the open web, and privacy rules have reduced access to third-party user data at the same time. The techniques that made web advertising accountable do not work inside apps, so the industry had to rebuild targeting, measurement and optimisation for the app environment around software development kits (SDKs).

This report examines how that rebuilding reshaped the adtech value chain in the independent app ecosystem – that is, apps that no single company owns. It argues that the SDK has become the dominant integration model because it provides superior access to user signals, measurement and monetisation outcomes.

The following sections explain why publishers and advertisers have converged on SDK-native platforms, how their advantages compound with scale, and why the resulting positions are difficult for competitors to replicate. It then turns to the shift now under way, as advertising supply moves onto AI-native products and new attention surfaces, and shows why the same SDK position is set to capture it.

3

In-app advertising market and its next shift

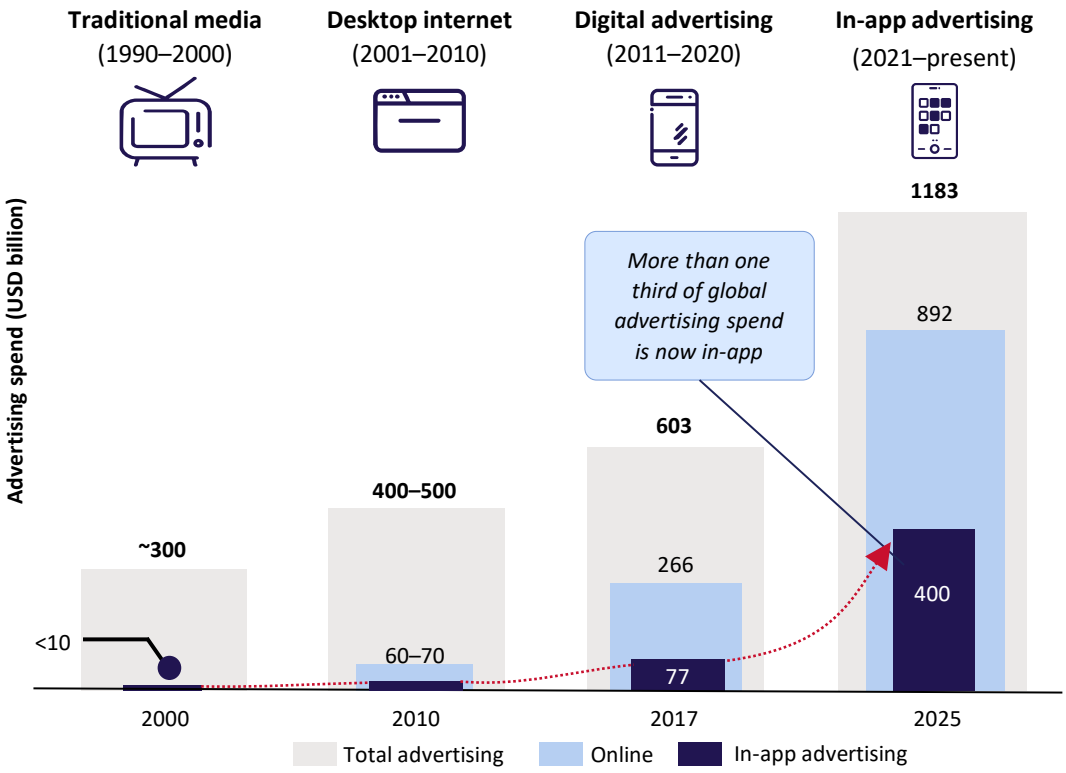
3.1 Market context

Global advertising spend reached USD1.18 trillion in 2025, with online advertising accounting for roughly three-quarters of the total.[1] Advertising spend has shifted across different platforms every decade, depending on changes in consumer preferences.

In the 1990s, advertising meant television and print. The first online banner advertisement ran in 1994. By 2000, the total global advertising market was around USD300 billion, but online advertising accounted for less than USD10 billion of that total.[2] Advertising budgets moved to the desktop web through the 2000s, and by 2017 online advertising had passed television as the world's largest advertising medium. In 2017, out of a global advertising market of around USD603 billion and digital advertisement spending of USD517 billion, online digital advertising reached USD266 billion compared with ~USD251 billion for non-internet-based digital advertising such as linear TV, FM radio, etc.

In 2025, the online advertising market stood at roughly USD892 billion, led by search advertising (USD355 billion), digital video advertising (USD227 billion) and other online media. Within online advertising, in-app advertising was worth around USD400 billion.

Figure 3.1: Evolution of advertising spend, worldwide, 2000–2025 **[Source: Analysys Mason, 2026]**[3]



[1] Statista (2025), *Advertising: Worldwide* [Data set], Statista Market Insights. Analysys Mason analysis, 2026.

[2] Analysys Mason analysis, based on Zenith (2000), *Ad Expenditure*, and Interactive Advertising Bureau and PricewaterhouseCoopers (2000), *Internet Advertising Revenue Report, Full Year 2000.*

[3] Statista (2025), *Advertising: Worldwide* [Data set], Statista Market Insights. Analysys Mason analysis based on secondary sources.

Adtech platforms form the underlying infrastructure of the digital advertising industry. Adtech includes the software and systems through which advertisers and publishers buy, sell, deliver and measure advertisements across the web, mobile apps and other digital channels.

Between the 1990s and the 2010s, manually negotiated media buys gave way to fully automated, real-time auctions, standardised as real-time bidding (RTB) in 2010. Advertising through RTB accounted for less than 5% of display advertising in 2010 but programmatic constitutes more than 80% of worldwide digital display advertising spending in 2026, as advertisers and publishers converged on the same system.[4]

The adtech value chain, however, evolved around the browser. Cookies followed users from site to site, and lightweight tags let any advertising firm plug into a website from the outside. Both mechanisms have weakened. Privacy regulations such as GDPR and CCPA, along with platform policies such as Apple's App Tracking Transparency (ATT),[5] require user consent for in-app tracking, and most users do not opt in. At the same time, browsers such as Safari and Firefox block third-party cookies by default.

Consumer attention has moved from the web to mobile apps. The smartphone app environment moved to a different model. Apps do not carry cookies, and operating systems isolate apps from one another. Therefore, the cross-site tracking that powered two decades of web advertising carries over only in a limited, consent-based form. Users now spend more than 90% of their smartphone time on native apps, beyond the reach of the web's tracking tools.[6]

From 2008 onwards, a new generation of mobile-first companies began building infrastructure around the mobile app ecosystem. The instrument of that pivot is the **advertising SDK model**. This is a ready-made module of the adtech platform's own code. The publisher builds it into its app and ships it to the user's device as part of the app itself. Once installed, it runs on the device with a live connection back to the adtech platform's servers. It requests and renders advertisements, records how users respond and reports what happened. This puts the adtech platform at the exact point of user attention.

The SDK model has spread quickly, with early mobile networks such as AdMob (acquired by Google in 2010) and InMobi (founded in 2007) pioneering it.[7] Gaming networks including AppLovin, Chartboost and Vungle scaled it across their adtech offerings. Operating system (OS)-level identifiers, such as Apple's IDFA and Google's GAID, replaced cookies as the common currency of the app ecosystem.

SDK records user behaviour first-hand, renders formats no outside connection can support, and measures outcomes where they occur. It is now the standard architecture of mobile adtech, and it is not a reversible position. What makes this structural is how the footprint was assembled. Each SDK integration is a negotiated, engineered relationship with an individual publisher, won one at a time over more than a decade, and no competitor can acquire that stock of relationships at once. The installed SDK footprint is therefore the durable asset in mobile adtech, and Section 4.3 explains why it compounds rather than erodes.

[4] Interactive Advertising Bureau Technology Laboratory, *OpenRTB*, IAB Tech Lab; Statista (2025), *Programmatic advertising worldwide* [Data set], Statista Market Insights.

[5] Introduced by Apple in iOS 14.5 (April 2021), ATT requires an app to obtain the user's explicit permission before tracking their activity across other companies' apps and websites, including via the device's advertising identifier (IDFA).

[6] Kemp, S. (2025), *Digital 2025: Device trends*, DataReportal; Sensor Tower (26 February 2026), *State of mobile 2026* (users spend less than 6% of smartphone time on mobile browsers).

[7] Google (9 November 2009), *Google to acquire AdMob* [Press release]; InMobi corporate disclosures.

3.2 Value chain of in-app digital advertising

In-app advertising is delivered by a value chain of specialised companies. The value chain has two sides that meet at an auction. On the demand side, an advertiser wants to reach consumers likely to buy, but those people are scattered across millions of apps. On the supply side, a publisher has advertising slots to sell but no way of knowing which advertiser would pay most for a given impression.

Demand side

- The advertiser and its agency set the budget, campaign goal, and buying strategy.
- A demand-side platform (DSP), the advertiser's bidding software, bids for advertising space across billions of advertisement opportunities at once.

Exchange and supply-side platform

- An advertising exchange auctions each advertising slot the instant it becomes available. This is the meeting point where the demand-side bids arrive, and supply-side inventory is offered.

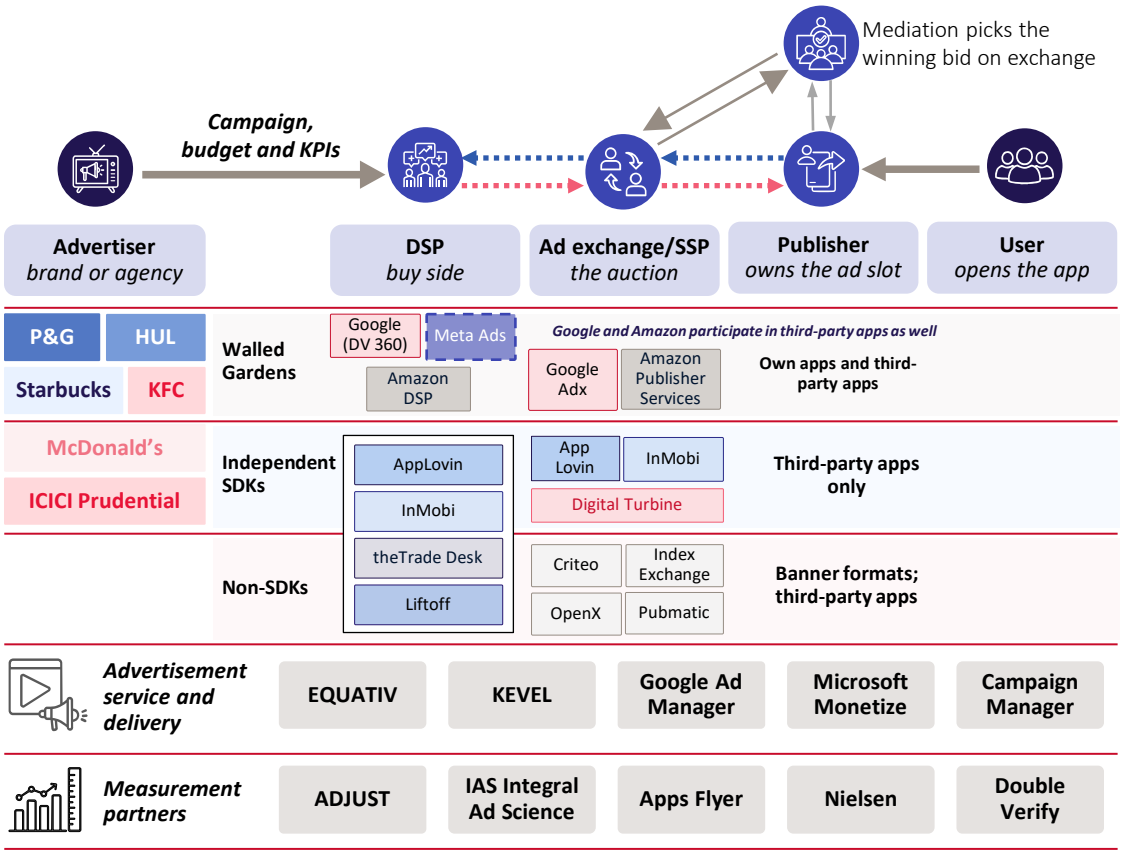
Supply side

- Third-party app publishers operate across a range of categories, including gaming (e.g. Candy Crush), news aggregation (e.g. Flipboard), video streaming (e.g. Netflix) and others, where they capture and retain users' attention. These contrast with first-party apps where the app is owned by the platform (e.g. Google Search, Amazon Shopping, Instagram).

Supporting segments

- Advertising serving and delivery: an advertising server delivers the advertising creative, logs the impression and enforces the creative specifications (e.g. size, format, interaction standards) it must render against.
- Measurement partners: verification firms confirm whether a real person saw the advertisement in a suitable placement. Attribution providers record whether the impression led to a click, install or sale.

Figure 3.2: In-app adtech industry value chain and key players **[Source: Analysys Mason, 2026]**[8]



[8] DSPs do not have an SDK/non-SDK demarcation; all walled-garden components shown are available to open-market buyers, with the exception of Meta Ads, which is available only within Meta's own properties.

The figure above describes the in-app advertising value chain and key participants across different segments.

Take rates vary across the value chain, reflecting the differing value provided at each layer. The advertising agency charges a planning and creative fee. The DSP charges a platform fee, as a percentage of advertising spend. The advertisement exchange charges a transaction fee based on total advertisement spending pass-through. The advertising server charges the advertiser, agency or publisher a fee for serving and delivering advertisements.

Following USD100 of advertiser spend through the value chain, the advertising agency or managed service takes around USD10–15. The DSP keeps roughly USD10–15 as a platform fee, while the advertising exchange keeps another USD10–15. Mediation adds little as a standalone charge, because platforms such as AppLovin MAX have historically offered mediation at no fee and earn instead through their own network and exchange demand. The advertising server charges under USD5. As a result, the publisher receives roughly USD50–USD55, meaning around half of advertiser spend is retained by the intermediaries across the value chain. Exact allocation across intermediaries varies depending on the integrated adtech platforms involved.[9]

There are two types of adtech players, **walled gardens** and **independents.**

- The **walled gardens** include Amazon, Apple, Google, Meta and Microsoft in Western markets, and Alibaba, ByteDance, Tencent and Baidu in China. They own the platforms through which consumers reach the internet, meaning the search engine, the social feed, the marketplace, the operating system, the logged-in account, etc. Because users log in, first-party data is generated as a by-product of ownership, so the platform already knows who is using their app.

Inside their own properties, these walled garden firms play key roles in the value chain at once, as DSP, exchange, mediation, advertising server and publisher. Google goes further by also operating the leading DSP, exchange and advertising server for everyone else's inventory. Together, the walled gardens capture about 70–75% of global online advertising spend.[10]

- **Independent adtech players** include AppLovin, Index Exchange, InMobi and Liftoff. These typically earn access to consumer surfaces through integrations into publisher apps. They fall into two segments:
  - **independents integrated across the value chain** hold several positions at once, spanning the DSP and exchange layers and, in some cases, mediation. This gives them visibility of consumer and publisher signals across multiple steps. AppLovin, InMobi and Liftoff are examples. InMobi extends this position through Glance, an AI-first consumer and agentic commerce platform spun out of InMobi in 2019, in which InMobi holds a significant strategic stake and acts as monetisation partner. This gives InMobi access to first-party consumer surfaces and signal that most independents do not have.
  - **independents in a single segment** operate one position in the chain, such as an exchange or a demand-side platform. Index Exchange and Criteo are examples.

This visibility lets the integrated independents price bids and inventory more precisely. For example, a DSP only needs to bid enough to win, not the full value it places on an impression. If it values a slot at USD10 but wins it for USD9, it can keep the USD1 as surplus.

[9] Analysys Mason estimate, 2026, based on industry expert interactions.

[10] Analysys Mason analysis, 2026, of company filings. The walled gardens' share of global online advertising spend has held broadly stable in recent years, close to this level. Net worldwide digital advertising revenue in 2025 were around USD210 billion for Alphabet Inc., USD196 billion for Meta Platforms, Inc. and USD69 billion for Amazon.com, Inc., measured against global online advertising spend of USD892 billion (Statista. (2025). Advertising: Worldwide [Data set]. Statista Market Insights.). The wider set of walled gardens, including Apple, Microsoft and the major Chinese platforms, takes 70–75%.

Walled gardens and independent players differ in terms of transparency for both advertisers and publishers. A walled garden sells the media, runs the auction and reports the result, and most share only limited performance metrics. An independent's revenue comes almost entirely from inventory it does not own, so it is paid only on results the advertiser and the publisher can each verify for themselves. That dependence is what aligns the incentives. Most independents therefore report performance across the entire funnel and submit that reporting to third-party verification, which lets both sides track performance. As advertisers increasingly demand verifiable evidence of performance, this alignment of incentives makes the independent position more sustainable.

The ability to provide that evidence, however, depends as much on engineering as on intent. A platform can substantiate only what its connection to the app allows it to observe, so an independent provider's trust advantage is ultimately determined at the point of integration. The following section examines the architectures available to independent players (tags, server to server (S2S) and SDKs).

3.3 Integration architectures: tags, S2S and SDK

Before an advertising platform can serve advertisements within a mobile app, it must be integrated into that app. There are three ways to make the connection. This choice decides what signals the platform can access, which formats it can run and, ultimately, what the publisher's inventory is worth. These three architectures are: tags, S2S and SDK.

- **A tag** is a small piece of code, inherited from the desktop web, that runs inside a browser-style window within the app. Web-first platforms such as Criteo and Google Campaign Manager rely on tags to achieve broad coverage.
- **S2S** connection links the publisher's servers to the platform's servers over the internet. This is how The Trade Desk and Index Exchange access mobile app inventory, and how Amazon Publisher Services connects publishers at scale.
- **SDK** is the deepest connection. It is a ready-made module of the adtech platform's code that the publisher embeds in the app and ships to the user's device with the app. This is the route taken by AppLovin, Google's AdMob and InMobi.

Figure 3.3: Comparison of tag, S2S and SDK architectures **[Source: Analysys Mason, 2026]**

Dimension	Tag	S2S	SDK
Where it runs	Browser-style window inside the app	Between servers	On the device, inside the app itself
Signal depth	○ Surface-level – what a website sees	◑ Only what the app chooses to send	● Device-level signals and observed behaviour
Ad formats	○ Basic display only	◑ Standard non-interactive formats only	● Range: rewarded video, playable, interstitial
Measurement	○ Inferred	◑ Second-hand reporting	● First-hand, recorded at source
Fraud protection	○ Weak	◑ Limited	● Strong – direct device access
Inventory value	○ Banner-level pricing	◑ Better pricing, discounted where unverified	● Premium formats clear at several times banner prices
Ease of integration	● Easiest – drop-in code; updates without an app release	◑ Moderate – server engineering, no code in the app	○ Hardest – adds app weight; needs work at each OS update
Typical role	Quick tests, web-first campaigns	Data exchange without on-device code	Core monetisation for app publishers

Key: ● *Strong* ◕ *Good* ◑ *Moderate* ◔ *Weak* ○ *Minimal*

To understand the value of different adtech-architecture choices, consider a mobile game with around 500 000 daily active users. Through a tag, a slot shows a small banner that trades at roughly USD0.20–0.80 per thousand impressions. An S2S link fills the same slot at a somewhat better price. With an SDK in the app, the same slot can run a full-screen rewarded video the user chooses to watch. That inventory trades at roughly USD8–18 per thousand impressions. The premium reflects both the format and the proof, because advertisers can verify that the advertisement was displayed and viewed. The app, the user and the advertising opportunity are the same, and the choice of architecture alone sets the price.

On almost every measure that matters for advertising presented in Figure 3.3, the SDK is the stronger option. It has access to device-level signals and real behaviour. Rendering on the device is what makes the richer formats possible, and recording outcomes at the source is what makes the measurement trustworthy and catches the fraud that lighter integration routes may miss.

Nevertheless, an SDK does carry real upfront costs for the publisher: it adds to app size and takes engineering effort to install. The key difference is who carries the ongoing work afterwards. With an SDK, the provider maintains the integration as new OS versions, device types and other external changes arrive, doing so on the publisher's behalf. A tag or S2S integration avoids that upfront cost but leaves the developer to handle each of those updates alone. However, an SDK is dynamically updated without any effort from publishers.

Once an SDK holds a slot inside the app, it can carry whatever the market needs next. That can be richer advertising formats, on-device intelligence or new ways to measure a campaign. It does not have to negotiate its way back into the app each time.

The slot itself is scarce, as a developer will only allow a handful of SDKs before app size, stability and testing start to suffer. That scarcity is what turns a technical integration into a position rivals cannot easily copy.

Advertising SDKs come in three types.

- Advertising network SDKs carry a single platform's advertiser demand into the app and render its advertisements, with AdMob, InMobi and Meta Audience Network each providing their own.
- Exchange and bidding SDKs open the slot to programmatic demand from outside buyers.
- Mediation SDKs co-ordinate the two and award each slot to the highest bid.

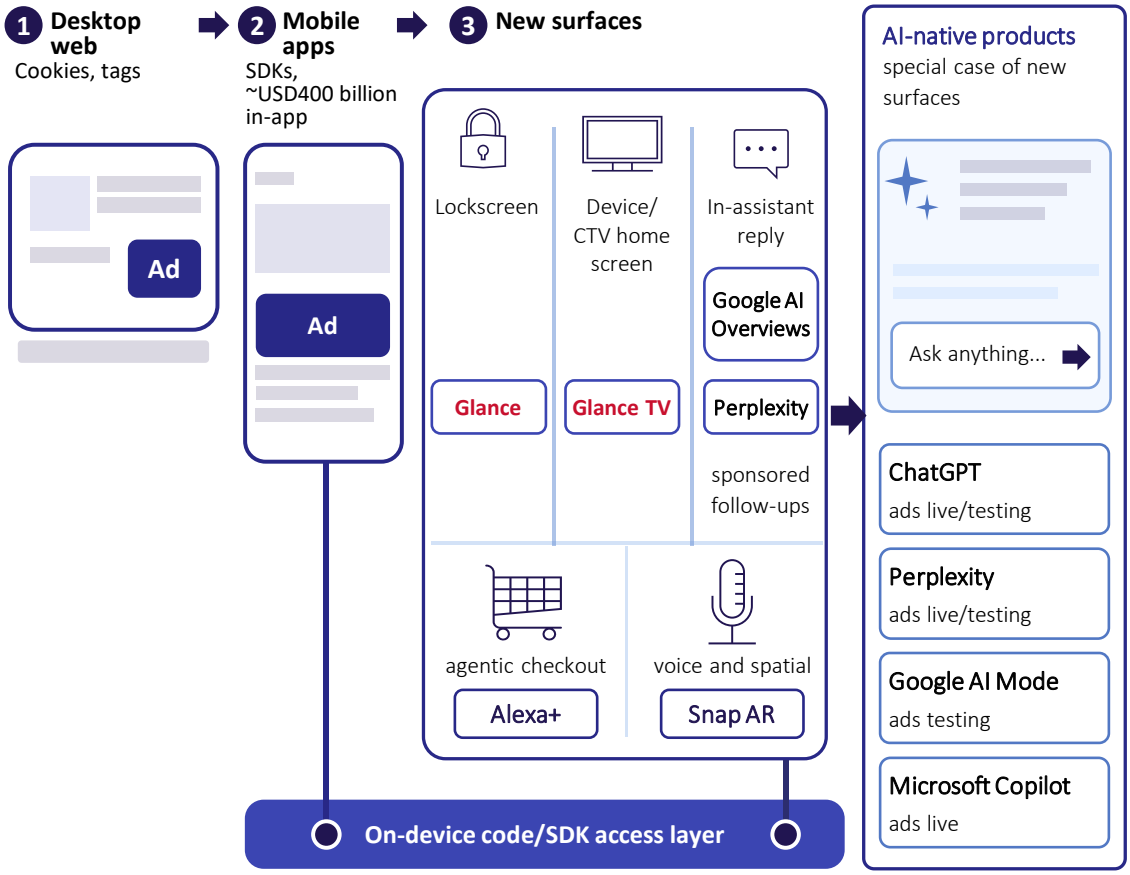
In a live app the three run as one system. Bids are called across the connected networks and the exchange connection, and the winning network's SDK renders the advertisement in the time it takes the app to load its next screen.

Around these three sit measurement partners: attribution modules such as AppsFlyer and Adjust, verification modules such as DoubleVerify and IAS, and consent managers that record the user's privacy choices. They verify and record the transaction rather than participate in it.

3.4 The next shift in consumer attention

Consumer attention is continuously evolving. A decade after it moved into apps, it is moving again, onto new surfaces. These new surfaces include lockscreens, AI assistants, agentic checkout and voice and spatial interfaces. None of them can carry a banner format serviceable through non-SDK formats. Advertising on these surfaces has to be delivered by SDK code running inside the app.

Figure 3.4: Evolution of advertising to new surfaces **[Source: Analysys Mason, 2026]**



Furthermore, with the emerging AI-native products, consumer attention is moving towards these products. These platforms carry a compute cost. Every request to an assistant or agent runs inference, and that cost recurs with use. Subscription revenue for the long tail of platforms may not be able to sustainably cover these costs. Hence, advertising may emerge as the default way to fund these products, similar to search and social media.

The shift is already under way. OpenAI began showing advertising in ChatGPT in February 2026, as labelled sponsored cards placed below the response, on its free tiers.[11] Google places advertising within its AI Overviews.[12] Microsoft Copilot carries advertising and has added in-conversation checkout.[13] Advertising is becoming the common route even for mainstream AI-native platforms, because subscription revenue alone does not cover inference cost at consumer scale.

This shift reflects a broader economic change. As large language models (LLMs) reach mass adoption, advertising can convert free engagement into recurring revenue while helping to subsidise the compute costs associated with each request.

[11] OpenAI (16 January 2026), *Testing ads in ChatGPT*.

[12] Google (3 October 2024), *Google Lens and AI Overviews: new ways for marketers to reach customers*, The Keyword.

[13] Microsoft Advertising (8 January 2026), *Conversations that convert: Copilot Checkout and Brand Agents*.

The economics are also becoming more favourable. Published pricing data indicates that inference cost has fallen by more than 99% since 2023[14] for leading models and open-model alternatives, while public AI benchmarks such as LMArena suggest that the performance gap between frontier models has narrowed into a low-single-digit band.[15]

Differentiation is therefore moving from model quality alone towards distribution and proprietary data. Reach is becoming the new competitive battleground, and the on-device SDK is the control point that captures and monetises this next pool of advertising supply.

This is a durable transition. The platforms attracting user attention are increasingly becoming the primary interface to computing itself. AI assistants are becoming the interface for information-seeking and decision-making, AI agents for transactions, and voice and spatial interfaces for everyday inputs. Advertising has always followed attention, and attention is settling on surfaces the display stack cannot reach.

Advertising is emerging as the monetisation layer of the AI-native consumer stack. Frontier models are converging and inference cost has fallen sharply, so free, ad-supported AI is now viable at scale. The supply this creates sits on new surfaces reachable only by on-device code, which places scaled SDK platforms at the control point of what comes next.

[14] OpenAI (14 March 2023), GPT-4; OpenAI (2026), API pricing. GPT-4 launched at USD30 per million input tokens and the open-weight gpt-oss-20b is listed at about USD0.03 per million input tokens. Comparability varies by model, but published prices imply a decline of more than 99% in input-token cost since 2023.

[15] Arena (LMArena) (2026), Leaderboard dataset [Data set], Hugging Face. The leading frontier models sit within a narrow band.

4

The independent SDK moat

In-app advertising connects two parties. App publishers sell access to their users' attention, and advertisers buy it to reach those users. Between these two parties sit the adtech platforms that carry the money and the advertising.

4.1 App publishers and adtech integrations

4.1.1 Monetisation for apps

The app economy is now one of the largest markets for consumer attention. In 2025, consumers spent 5.3 trillion hours within mobile apps – roughly 3.6 hours per day per user – and app downloads reached nearly 150 billion across iOS and Google Play.[16] The audience spends more than 90% of their mobile time in apps, and browsers now carry only a small share of that time. Consumers spend around 60% of their online time on the open internet, while the walled gardens capture 70–75% of global online advertising spend. That gap between where attention sits and where budgets flow is the headroom available to independent adtech platforms on the open internet.[17]

App publishers convert the consumer attention inside the app into revenue through two engines:

- The first is **in-app purchases (IAP),** where consumers pay for digital goods, subscriptions and premium features. Global IAP revenue reached USD167 billion in 2025, up 10.6% year on year, with non-gaming apps overtaking games for the first time.
- The second is **in-app advertising (IAA),** in which publishers sell their users' attention to advertisers. Global in-app advertising spending reached approximately USD400 billion in 2025, up 10.8% year on year, and has grown fivefold since 2017, when it stood at roughly USD77 billion, compounding at over 20% annually across the period (2017–2025).[18]

Advertising generates more than twice the revenue of in-app purchases globally and is the dominant model in the app economy. Almost any app can carry advertising, while only a subset can monetise through purchases.

The publisher base itself is widening. Consumer attention is spreading beyond the phone screen onto lockscreens, wearables, connected TV, in-car systems and AI assistants, and publishers are building for each. None of these carries a traditional advertising slot, so monetising them needs advertising delivered by code on the device, not a tag on a page.

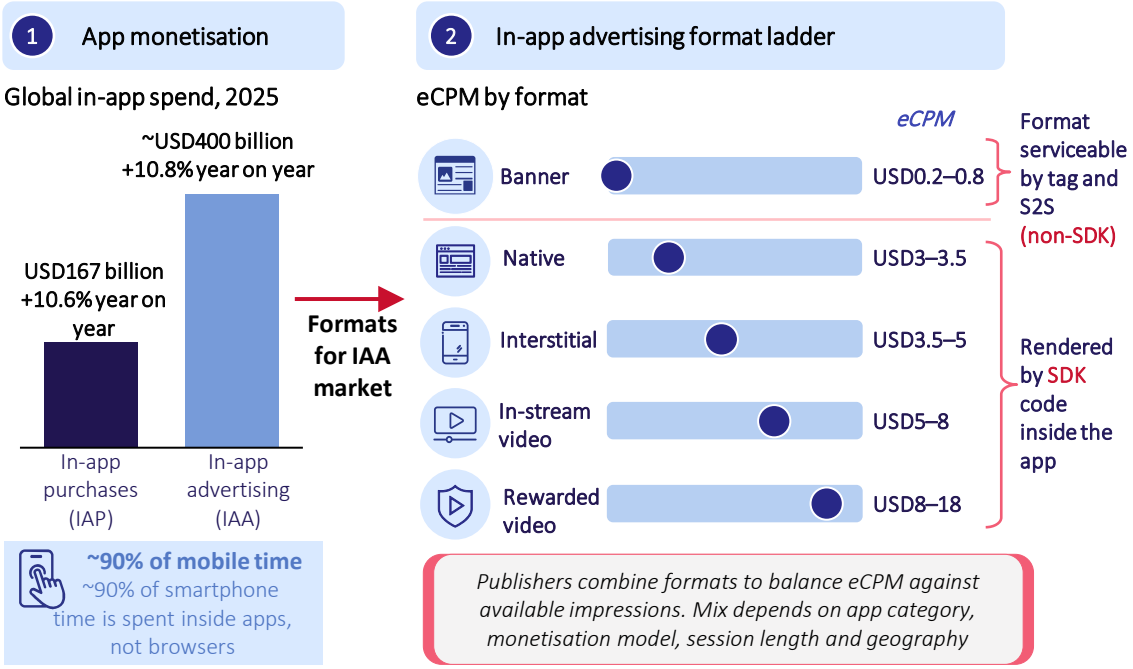
The number of apps is rising just as fast. AI coding tools such as Replit, Lovable and Cursor have cut the time to build an app from months to days, and a wave of AI-native apps is arriving with them. Each new app is a new publisher with attention to sell, and each earns from it the same way, through an embedded SDK.

[16] Sensor Tower (26 February 2026), *State of mobile 2026.*

[17] Consumers spend 59 to 61% of online time on the open internet. The Trade Desk and GlobalWebIndex (May 2024), *The rise of the premium internet: The sellers and publishers report.*

[18] Statista (2025), *In-app advertising – Worldwide* [Data set], Statista Market Insights.

Figure 4.1: In-app advertising: market size and SDK delivery **[Source: Analysys Mason, 2026]**[19]



In-app advertising reaches users through a ladder of formats that runs from rewarded video and in-stream video to interstitial, playable, native and banner advertisements. Basic banner display is the only format that can be served from outside the app through tag or S2S connections, while every richer, higher-yielding format is rendered by SDK code inside the app. As Figure 4.1 shows, higher value, higher engagement in-app advertising formats are SDK-delivered. These SDK-rendered formats are what let in-app inventory clear at a premium to mobile web.

4.1.2 Routes to in-app advertising monetisation

A publisher's advertising slots are its sellable inventory. Plugging into the SDK means deciding which advertiser fills those slots, on what terms and with what visibility. Publishers have three broad routes for in-app advertising monetisation:

- **Walled garden SDK.** These are the SDKs of big tech platforms that own consumer surfaces. Google AdMob and Meta Audience Network carry the industry's largest advertiser pools. The trade-off is that the walled garden may monetise its own properties first, report on its own terms and keep the behavioural data the publisher's app generates.
- **Independent SDK.** These are the SDKs of independent platforms that operate across third-party apps and include players such as AppLovin, InMobi and Liftoff. An independent depends entirely on how well it monetises the publisher's inventory, while third-party measurement firms can verify its results.
- **Tags and S2S.** This route reaches the app externally, adding no app weight and requiring no release cycle, but it supports only basic display formats rather than the premium formats, and outcomes are inferred rather than directly measured. Buyers pay less for inventory they cannot verify, which is why this route persists only as a supplement.

[19] Market sizing per Statista (2025), *In-app advertising: Worldwide* [Data set], Statista Market Insights, and Analysys Mason analysis, 2026. eCPM values are approximate global averages derived from secondary references from adtech players and industry experts. While eCPMs vary by region, platform and vertical, the overall pattern is consistent: rewarded video commands the highest eCPMs and banners the lowest, with a substantial gap between them.

Figure 4.2: Monetisation routes for in-app advertising **[Source: Analysys Mason, 2026]**

Dimension	Walled garden SDK	Independent SDK stack	Tags/S2S
Audience and advertiser demand	● Deepest pools, from the parent ecosystem	◕ Strong; stacking networks matches the gardens' depth	◔ Limited; buyers discount inventory they see less clearly
Monetisation potential	● High; deep demand and premium formats	● High; real competition for every impression	○ Lowest; basic display and a measurement ceiling
Transparency	◔ Garden keeps the signal and verifies itself	● Declared collection; third-party verification both sides accept	◔ Little signal owned; second-hand reporting only
Publisher's leverage	◔ Low; terms set by the garden	● High; competition keeps sources replaceable	◐ High flexibility, low value
Access to premium formats	● Full format ladder, rewarded to banner	● Full format ladder, rewarded to banner	○ Basic banner display only

Key: ● *Strong* ◕ *Good* ◐ *Moderate* ◔ *Weak* ○ *Minimal*

The independent SDK stack is comparable to walled gardens on monetisation potential while leaving signal ownership, verification and leverage with the publisher. Its data collection is declared and store-reviewed, results are independently measured, and mediation keeps every network competing and replaceable. That mix of earning power and accountability makes the independent SDK stack the default choice for in-app monetisation.

4.1.3 Choosing an independent SDK partner

Each SDK adds code to the app, creates work for engineering teams and introduces potential risk to the user experience. Publishers decide on an independent SDK partner based on the following criteria:

- **Monetisation performance.** This includes the earning potential of each impression, tested live in the auction, and the depth and quality of advertiser demand behind it.
- **Technical performance.** This includes the SDK's weight in the app and its stability. These concerns are easing as AI moves targeting and auction logic to the platform's servers, leaving a light client in the app.
- **Compliance.** This includes privacy declarations and audit history with Apple and Google, and non-compliance puts the app's own distribution at risk.
- **Transparency and reliability.** This covers auditable reporting, verified results, and responsive support, the qualities that decide which SDK stays for the longer term.

Figure 4.3: Competitive positioning of leading independent SDK platforms **[Source: Analysys Mason, 2026]**[20]

Criteria	AppLovin	InMobi	Liftoff
Monetisation performance	● Strongest demand outside Meta and Google; disciplined partner selection with minimum buyer spends; MAX is backed by AppLovin's own user-acquisition (UA) demand	◕ Historically the most valuable independent built outside the USA and China. Offers superior monetisation performance on commerce apps	◐ Historically strong in UA and video formats; complementary partner in a publisher's monetisation stack; 5–10% share of wallet
Technical performance[21]	◕ Lightweight; server-side auction logic keeps the in-app footprint small	◕ Long-established, widely deployed, stable integration	◕ Mature, widely deployed SDK; established video and playable rendering
Compliance	● GDPR, CCPA, COPPA and ATT support; IAB TCF consent framework	● TCF v2.3 via its own consent management platform (CMP) (former Quantcast Choice), Google-certified;[22] CCPA and COPPA controls	● GDPR, CCPA, COPPA and ATT support; IAB TCF consent framework
Transparency and reliability	◐ Auction logic is undisclosed; publishers get few ad-quality or creative-blocking controls; strong on results, thin on visibility	◕ Operating its own full-stack exchange lets publishers trace the supply path end to end, rather than relying on SDK-level certification alone	◐ Moderate dashboard and reporting capabilities for publishers

Key: ● *Strong* ◕ *Good* ◐ *Moderate* ◔ *Weak* ○ *Minimal*

The three companies in Figure 4.3 above are often described as competitors, but each has specialised in a different part of the market.

- **AppLovin specialised in aggregating demand.** It bought MoPub and folded it into its MAX stack, acquired the Adjust attribution platform to add measurement, and trained its AXON engine on the traffic that flows through the stack. In 2025 it reported an adjusted EBITDA margin of around 82% in its advertising business.[23]
- **InMobi operates at the exchange layer,** running one of the largest independent mobile advertising exchanges and clearing open-market programmatic demand for the publishers integrated with it. InMobi monetises a growing share of its revenue in North America, while keeping deep publisher reach across India and South-East Asia.
- **Liftoff specialises across the full growth cycle rather than a single layer.** Its Vungle unit monetises publisher inventory through an in-app advertising network and exchange on the supply side, while the Liftoff platform runs performance-based user acquisition on the demand side.

Positioning shows how each platform competes. Presence shows how widely each platform is installed. Figure 4.4 describes the presence of the leading independent advertising SDKs across Android and iOS apps based on app downloads.

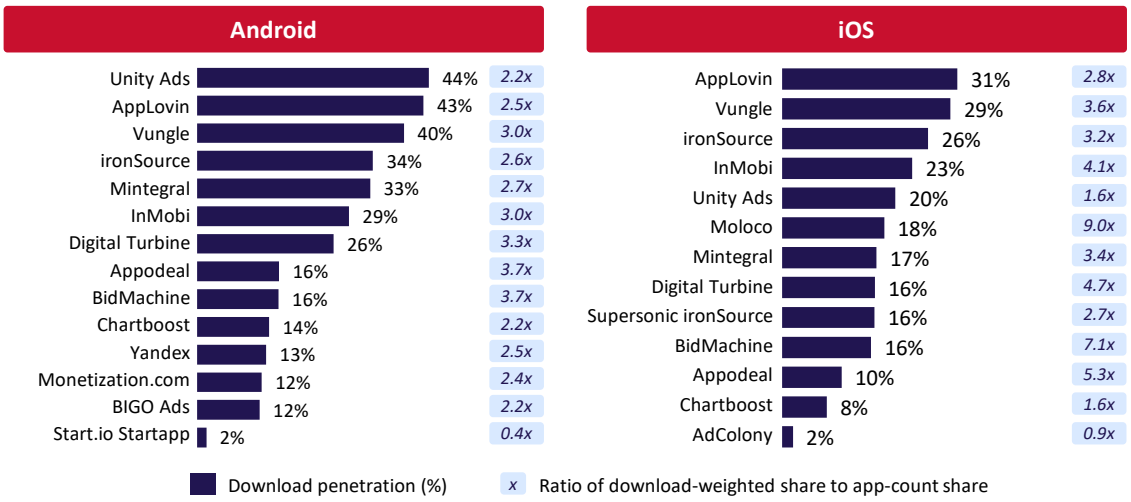
[20] Company websites; Analysys Mason analysis, 2026.

[21] Technical performance is a requirement, not a differentiator. Independent SDKs are lightweight and stable. Each is rated Good but not Strong because in-app SDK adds footprint & carries residual stability considerations on low-end devices, so none is frictionless.

[22] InMobi (2026), *What is InMobi CMP?*, InMobi Support; InMobi (15 August 2023), *InMobi acquires Quantcast Choice to enhance frictionless consent management for publishers* [Press release].

[23] AppLovin Corporation (11 February 2026), *AppLovin announces fourth quarter and full year 2025 financial results* [Press release], AppLovin Investor Relations.

Figure 4.4: Download-weighted penetration of independent network SDKs **[Source: Analysys Mason, Similarweb (42matters), 2026]**[24]



Weighted by downloads, on Android the 756 000 apps carrying at least one advertising network SDK are led among independents by Unity Ads (44%), AppLovin (43%) and Vungle (40%). ironSource (34%) and Mintegral (33%) follow. InMobi reaches 29% and DT Exchange by Digital Turbine 26%.

On iOS, no single independent SDK dominates download-weighted reach. AppLovin leads at 31%, ahead of Vungle (29%) and ironSource (26%). InMobi reaches 23%, Unity Ads 20% and Moloco 18%, with Mintegral, Digital Turbine, Supersonic ironSource and BidMachine clustered at 16–17%. The iOS base is 590 000 apps.

A second measure in Figure 4.4 is the ratio of download-weighted share to app-count share. A ratio above 1.0 places an SDK in apps with above-average download volume. On iOS the ratio reaches 4.1 for InMobi, 4.7 for DT Exchange, 5.3 for Appodeal, 7.1 for BidMachine and 9.0 for Moloco. On Android it runs between roughly 2.0 and 3.7 for most independents, from 2.2 for Unity Ads to 3.7 for Appodeal and BidMachine. Independent SDKs concentrate in apps with higher download volumes.

Beneath these positioning choices, the independents that win the same slot repeatedly do so via four capabilities:

- **Fraud filtering.** An exchange that reliably screens out invalid traffic protects the buyer's most wasteful spend and earns repeat demand.
- **Identity definition.** The ability to recognise a user across requests, even without a stable device identifier, so an impression can be valued accurately.
- **Intelligence.** The extra signal the platform adds to each bid request, which helps a buyer judge what a user is worth.
- **Control of the rendered experience.** Because the SDK owns the slot, it decides the format and the mechanics enabling premium, high-engagement formats that a relayed integration cannot render and that clear at several times the price of passively served formats.

Fraud, identity, intelligence and rendering control are what separate a durable exchange from a commodity one.

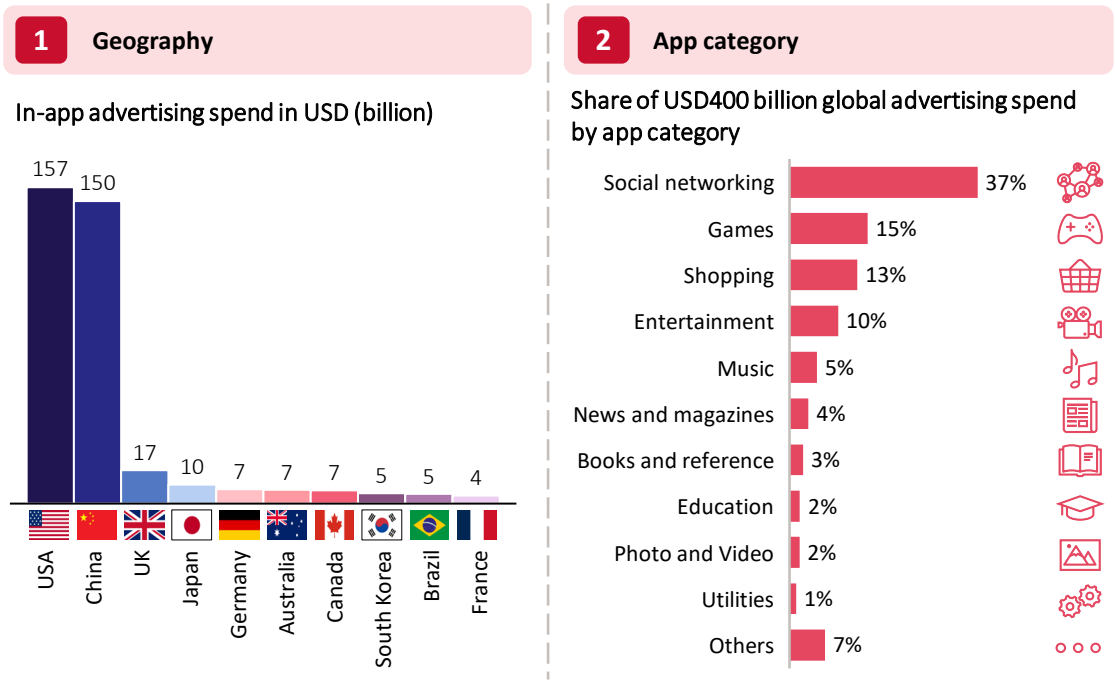
[24] Similarweb (42matters); Analysys Mason analysis, 2026 (data extracted 10 September 2026), covering approximately 756 000 Android apps and 590 000 iOS apps carrying at least one advertising network SDK.

4.2 Advertisers' considerations on adtech integrations

4.2.1 Advertiser spending

The advertiser side of the market is where the money originates, and it is the advertiser's requirements that ultimately decide which infrastructure wins. As discussed in Section 3.1, advertisers directed roughly USD400 billion[25] into in-app advertising during 2025. Figure 4.5 shows how in-app advertiser spending is segmented across different geographies, and app categories.

Figure 4.5: Overview of in-app advertiser spending **[Source: Analysys Mason, 2026]**



By geography, in-app advertising spending is concentrated in a small number of markets. The USA is the largest at USD157 billion, with China close behind at USD150 billion; the remaining markets are far smaller, led by the UK at USD17 billion, Japan at USD10 billion, and Australia, Canada and Germany at roughly USD7 billion each. By app category, social networking is the largest at 37% of global spend, ahead of games (15%), shopping (13%) and entertainment (10%).

Advertiser spend has migrated decisively towards channels and campaigns that deliver measurable, demonstrable results. Programmatic trading has grown from under 5% of display advertising in 2010 to roughly 90% of worldwide digital display today, and in-app inventory is bought almost entirely this way.[26]

Nevertheless, what an advertiser can measure from an advertisement depends on the technical route through which an advertisement is delivered. This technical architecture determines whether the advertisement can influence consumer behaviour or not.

The next section examines these routes, showing how the integration architecture and its formats move a user toward action, and how the same route proves the outcome the advertiser pays for.

[25] Statista (2025), In-app advertising: Worldwide [Data set], Statista Market Insights.

[26] Interactive Advertising Bureau Technology Laboratory (n.d.), *OpenRTB*, IAB Tech Lab; eMarketer (19 March 2025), *Programmatic is driving growth in worldwide display advertising spending*, EMARKETER.

4.2.2 Choice of adtech architecture

Before committing advertisement budget to any partner, an advertiser implicitly weighs the adtech architecture against a set of spending criteria. These criteria determine whether spending through that architecture can be justified, scaled and defended in the next budget review. Across industries and markets these criteria are consistent.

Figure 4.6: Advertiser's key considerations on adtech architecture **[Source: Analysys Mason, 2026]**

Buying criterion	Description	SDK	Tag	S2S
Audience access	Reach to the intended users at scale, including premium formats such as rewarded video	● Reaches users inside apps, all formats render natively	◔ Basic display only, no premium formats	◑ Reach exists but format ceiling applies
Technical effectiveness	Ads that render correctly, load fast, and reach real users	● Platform's own code controls rendering and verifies the view	◑ Rendering depends on webview behaviour	◑ Delivery confirmed by the publisher's server, not observed
Business outcomes	Spend that converts, tracked by conversion rate, cost per action (CPA) and return on advertising spend (ROAS)	● Purchases and installs recorded on the device where they occur	◔ Outcomes inferred from click-throughs	◑ Outcomes reported second-hand by the publisher
Measurement confidence	Trustworthy results, ideally verified by an independent third party	● Independent measurement partners verify the full chain	◔ Pixel-based, degraded by tracking restrictions	◑ Auditable in principle, but no independent view inside the app
Brand safety	Control over the content, and the tools to keep placements off unsafe inventory	● App context and placement controls keep ads on vetted surfaces	◔ Webview placements give little visibility into surrounding content	◑ Publisher declares the placement, but the buyer cannot verify it
Quality, risk and execution	Inventory that is fraud-protected, and reliable at scale	● Placement-level knowledge and device-level fraud detection	◔ Exposed to made-for-advertising sites and bot traffic	◑ Fraud screening possible, placement visibility poor

Key: ● *Strong* ◕ *Good* ◑ *Moderate* ◔ *Weak* ○ *Minimal*

The comparison points to the SDK as the strongest fit against the advertiser's spending criteria. The tag route fails on the two that decide budgets. It cannot reliably record whether an advertisement led to a purchase or an install, and it cannot prove the result to an independent verifier. The S2S route is serviceable but capped, because everything it reports is relayed rather than observed. Only the SDK route scores strongly on all six criteria because the SDK is present where the audience, the delivery, the outcome and the risk all actually occur.

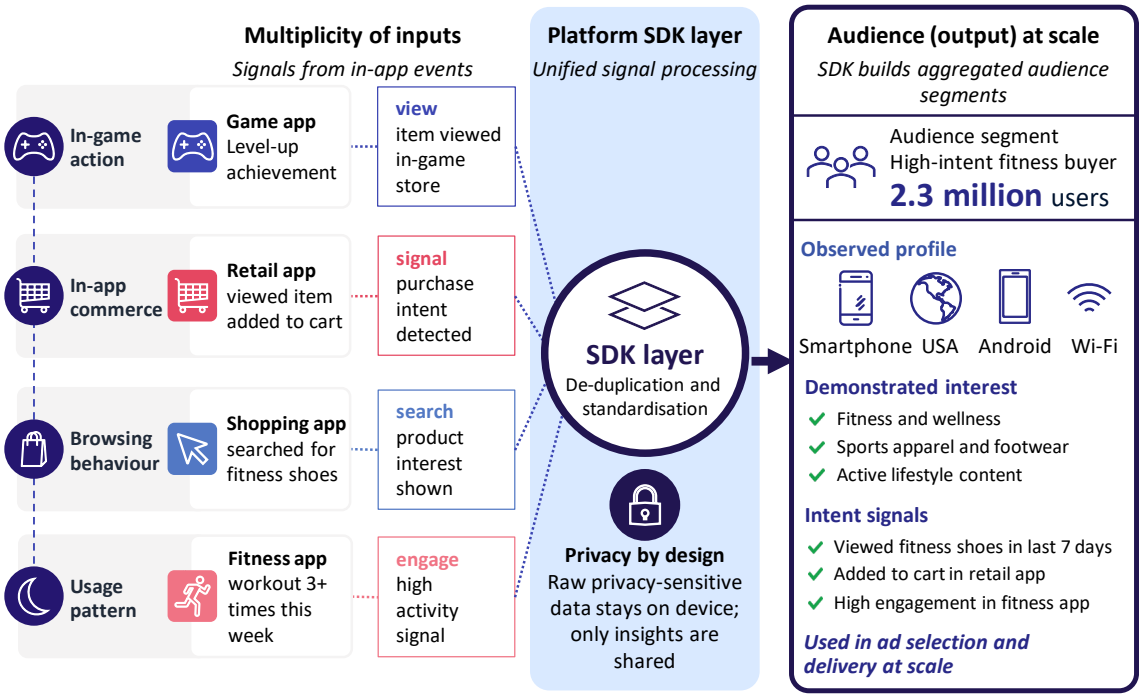
4.2.3 Superior consumer personas for advertising targeting

The same in-app position that wins on most buying criteria also gives the SDK access to a rich set of first-party signals, collected with the user's consent. An SDK is code running inside the app, so it can record in-app events such as which screens are opened, which content is engaged with, session length and in-app purchases.

Usage within a single app covers only a small part of a person's day. A typical user is active across dozens of apps, for example a game before work, the news at lunch, a maps app on the commute, a shopping app at night. When one platform's SDK sits inside many of those apps, the platform can combine the consented signals from each of them. Aggregating signals across these unrelated contexts supports a more complete view of audience behaviour than any single publisher, limited to one app, can assemble.

Aggregated across thousands of apps, these patterns resolve into consumer personas. These personas are audiences defined by what people demonstrably do. They do not rely on inference from browsing history. This difference makes the SDK's data commercially valuable.

Figure 4.7: User signals to consumer persona **[Source: Analysys Mason, 2026]**

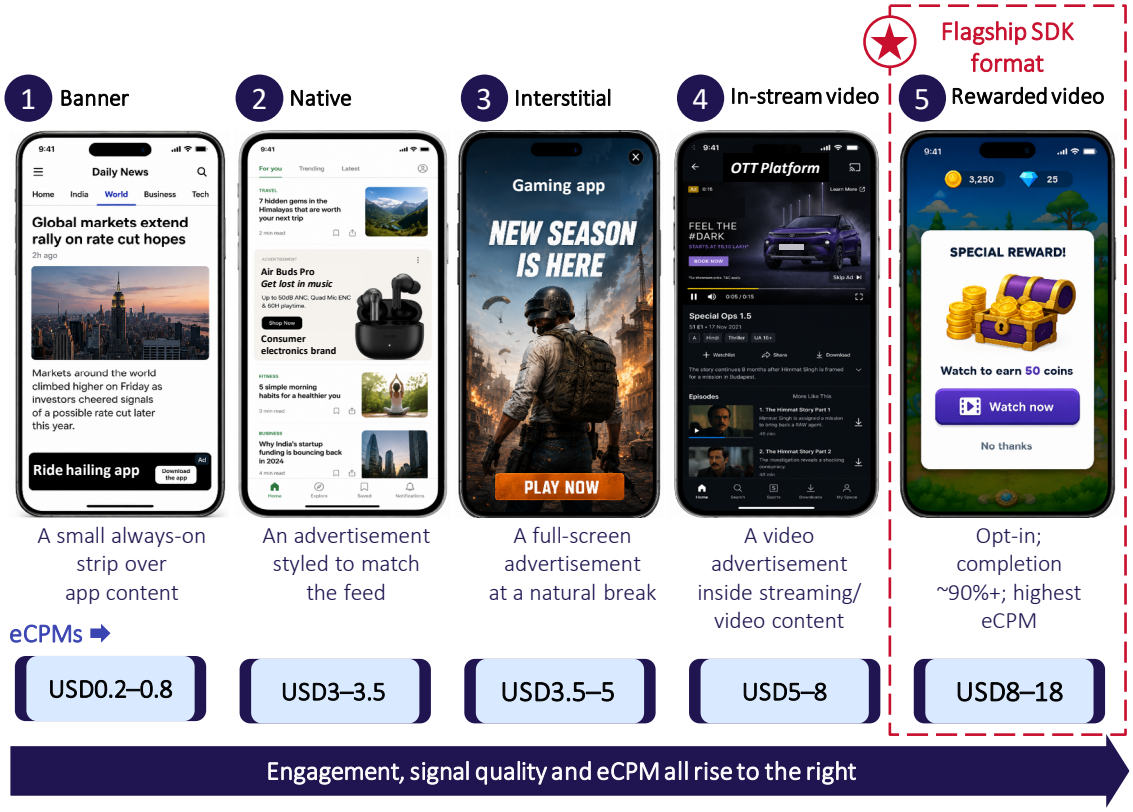


These signals help increase the precision of targeting. A campaign built on these signals reaches the specific audience who have already shown interest in what the advertiser sells, rather than scattering impressions across a broad demographic.

Advertisers value business outcomes, measurement confidence, quality of audience, brand safety and protection from fraud. Every one of these criteria improves with superior consumer personas.

Furthermore, presence inside the app has an additional advantage in terms of the delivery of rich advertising formats. Because the SDK controls a native slot rather than borrowing space through a web view, the SDK can run high-value interactive formats such as rewarded video, playable advertisements and full-screen units.

Figure 4.8: Multiple formats enabled via SDKs **[Source: Analysys Mason, 2026]**[27]



These formats are built for the app experience, so they command attention instead of interrupting it. Rewarded video is the clearest case. The user chooses to watch an advertisement in this format in return for an in-game reward, completion rates run far above forced formats, and the opt-in itself is a clean signal of intent. Each format lifts today's result and feeds back a fresh signal that sharpens the persona for tomorrow.

The capabilities around superior consumer personas and rich advertising formats compound. Better data builds better personas. Better personas sharpen targeting. Better formats deepen engagement. Each turn of that loop makes the next one stronger. **The result is that an advertiser earns more from a dollar spent inside an app than from the same dollar spent almost anywhere else**.

4.2.4 Audience signal in a post-tracking ecosystem

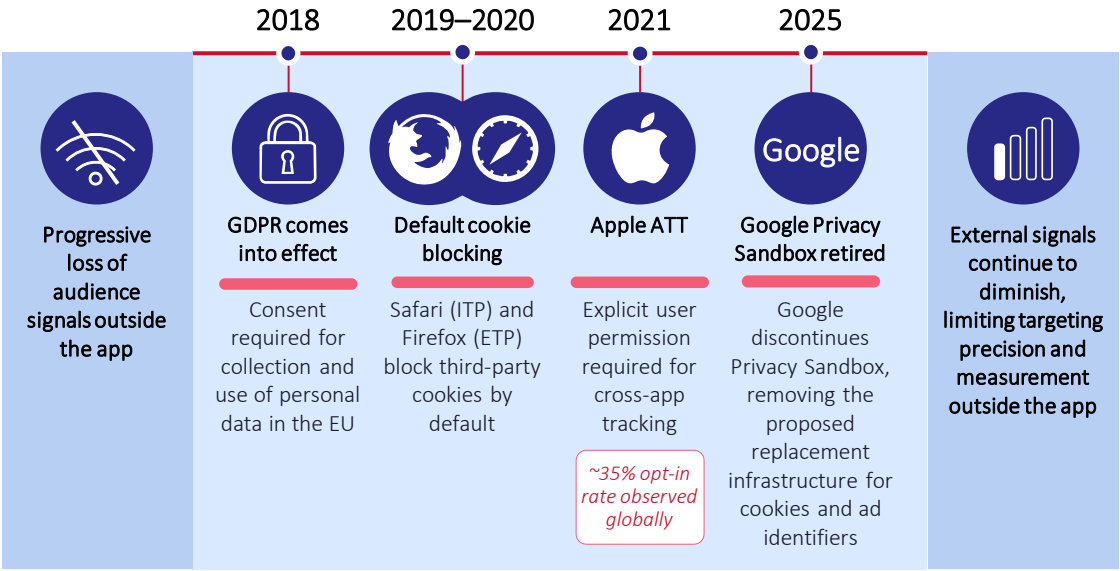
Since 2018, platform owners and regulators have moved deliberately to shut down cross-app and cross-site tracking. Each intervention has eliminated a method the non-SDK architectures (tags and S2S) depended on to build audiences.

Apple's ATT framework requires explicit user permission for cross-app tracking, with only around 35% of users granting consent. Safari and Firefox block third-party cookies by default, while Google's Privacy Sandbox, long positioned as the successor to the cookie, was discontinued in October 2025.[28]

[27] This figure is illustrative. The images were developed by Analysys Mason using automated design tools to visualise the different advertising formats; any brands or creatives shown are indicative only.

[28] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation), 2016 O.J. (L 119) 1; Apple Inc. (2021), *User privacy and data use*, Apple Developer; Adjust (15 July 2025), *ATT opt-in rates: 2025 data and benchmarks;* Chavez, A. (17 October 2025), *Update on plans for Privacy Sandbox technologies,* Google.

Figure 4.9: Developments that restricted signal tracking **[Source: Analysys Mason, 2026]**



Nevertheless, SDK-native architectures, where they are widely distributed, are more resistant to these risks. An SDK records behaviour directly, inside an app the user chose to install, under that app's own consent. The privacy regulations targeted third-party tracking while leaving consent-based first-party in-app data collection largely unaffected. Targeting precision has accordingly consolidated around the platforms that hold this position.

For advertisers, a well-distributed independent SDK is the route that most reliably runs the premium formats, keeps the brand safe, protects the spend from fraud, and proves the outcome at the source without handing that signal to a walled garden. As a result, a dollar spent inside an app has a higher chance of outperforming the same dollar spent elsewhere. The advantage holds as privacy rules restrict every alternative.

Section 4.1, on app publishers, showed publishers converging on SDK integrations because SDKs earn them higher revenue. This section shows advertisers moving in the same direction, as SDK integrations best satisfy most of their buying criteria from within the app. Publishers and advertisers are two independent groups, optimising for different objectives, yet both select the same infrastructure.

When both sides of a market arrive at the same layer by separate routes, that layer is no longer one vendor category among several. It is the controlling layer of the ecosystem, the point through which the market's supply, demand and data all pass.

4.3 The mechanics of the moat

SDK integrations have become a critical competitive advantage for adtech platforms, enabling them to deliver the targeting, measurement and optimisation capabilities that advertisers demand.

Sections 4.1 and 4.2 covered why publishers embed SDKs and why advertisers route spend through them. This section evaluates the defensibility of the installed SDK footprint. The SDK footprint is a compounding asset. It is built on proprietary behavioural signal, embedded publisher relationships and high switching costs. It becomes more valuable as it grows.

The adtech platform builds it through a developmental lifecycle (Section 4.3.1), locks in the supply side (Section 4.3.2) and the demand side (Section 4.3.3) as it scales, and it raises barriers that a competitor cannot clear with capital alone (Section 4.3.4).

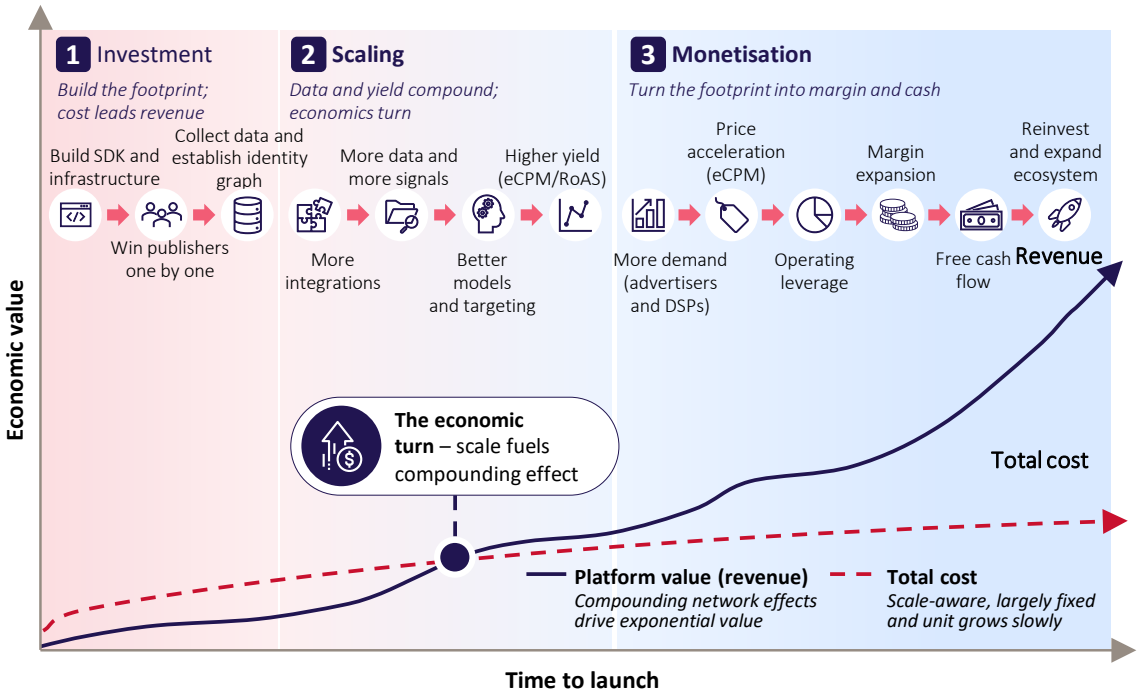
4.3.1 Platform development lifecycle

An SDK-native adtech platform is developed across three phases. It invests to build the footprint, scales to improve its data and yield, and then monetises that footprint. Most of the value comes in the third phase.

- **Investment.** The platform builds the SDK, the auction infrastructure and the compliance record, and signs its first publishers one at a time. The technical bar is high from the start. The SDK has to stay compatible across many operating system versions and device types at near-perfect stability. Costs are high, data is limited and yield lags the incumbents, so early revenue understates the asset being built.
- **Scaling.** As integrations multiply, the data pool grows and yield improves, which makes each new publisher cheaper to win. The technical burden compounds in step, because every new operating system release and device type has to be tested and supported across the whole footprint. The economics shift at this point, as most SDK costs are fixed, while the data becomes more valuable with every integration added.
- **Monetisation.** At scale, the footprint is the asset, combining proprietary signal, embedded publisher relationships and control of the auction. Margins expand because each additional impression runs on infrastructure and models that are already paid for.

The three phases also explain why the platform is hard to build. The value appears only at the end, while the cost and the risk come first, and scaling depends on data and yield that accrue only with use. Each phase is a precondition for the next, so a platform that stalls early never reaches monetisation. Once a platform reaches scale, the position is defensible.

Figure 4.10: Independent SDK-led adtech platform lifecycle **[Source: Analysys Mason, 2026]**[29]

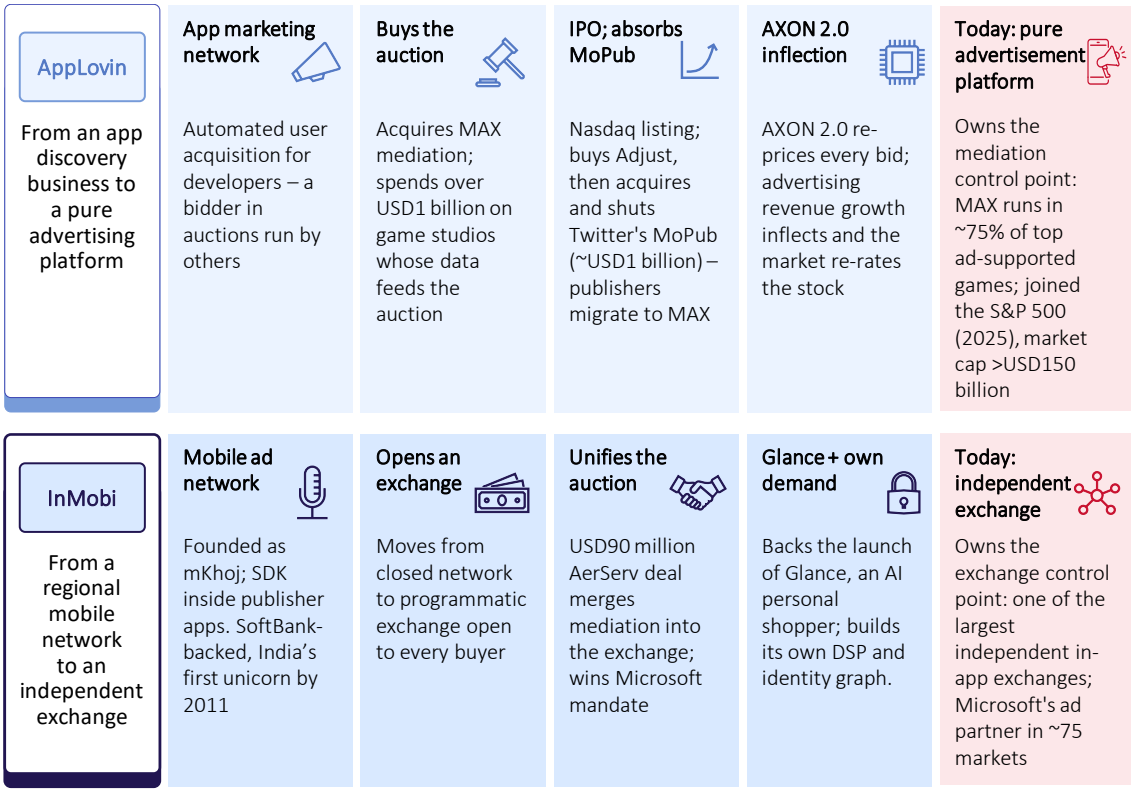


[29] Analysys Mason analysis, 2026, of company filings and press releases.

Two leading independent SDK-led adtech platforms illustrate this developmental lifecycle:

- **AppLovin** entered the market as a mobile marketing start-up in 2012 and spent nearly a decade building SDK distribution through its own apps and the MAX platform. The results show exceptional economic performance, with USD5.48 billion in advertising revenue in 2025, up 70% year on year, at an adjusted EBITDA margin of around 82%.[30]
- **InMobi** was founded in 2007 as an independent advertising network focused on app-first markets and expanded into a global exchange and SDK platform, while also building a first-party consumer surface strategy through platforms such as Glance and 1Weather that it monetises directly. Today, it operates one of the largest SDK footprints among independent platforms globally, reaching over 2 billion devices across 194 countries through more than 74 000 apps integrated with the InMobi SDK[31] – and is one of the few independents of scale built outside the USA and China. It has operated independently for over 18 years, one of the few app-first platforms to reach global scale.[32]

Figure 4.11: Developmental lifecycles of AppLovin and InMobi **[Source: Analysys Mason, 2026]**[33]



Valuations in transactions across the industry confirm where the value sits. Buyers and investors have not paid billions for code, which can be rebuilt. They have paid for the publisher integrations and reach.

- **AppLovin** paid Twitter USD1.05 billion for MoPub in 2021–2022,[34] shut it down, and moved its publishers onto MAX. It paid for the relationships and the impression flow, not the product.

[30] AppLovin Corporation (11 February 2026), *AppLovin announces fourth quarter and full year 2025 financial results* [Press release], AppLovin Investor Relations.

[31] InMobi (29 July 2026), *InMobi Advertising Unveils AI-Powered Cross-Screen and Full-Funnel Solutions* [Press release]; more than two billion devices through 74 000+ apps integrated with the InMobi SDK. Country coverage based on industry expert interactions

[32] Similarweb (42matters) (2026), *Top 20 ad networks SDKs used in iOS apps on the Apple App Store and Top 20 ad networks SDKs used in Android apps on Google Play* (data extracted 10 September 2026); InMobi corporate disclosures.

[33] Analysys Mason analysis, 2026, of press releases, SEC filings and company websites for AppLovin and InMobi.

[34] AppLovin Corporation (3 January 2022), *AppLovin closes acquisition of Twitter's MoPub business* [Press release], Business Wire.

- **Liftoff** was developed by Blackstone by acquiring Vungle for a reported USD750 million in 2019 and merging it with Liftoff in 2021. The value lay in Vungle's 100 000-plus direct SDK integrations, not the code.
- **InMobi,** founded in 2007, built its own platform and acquired AerServ for USD90 million in 2018.[35] The deal added header bidding and an in-app exchange. Glance, an AI personal shopper in which InMobi holds a significant strategic stake and acts as monetisation partner, was spun out in 2019 and drew USD145 million from Google in 2020 and USD200 million from Jio in 2022 at a roughly USD1.7 billion valuation.[36]

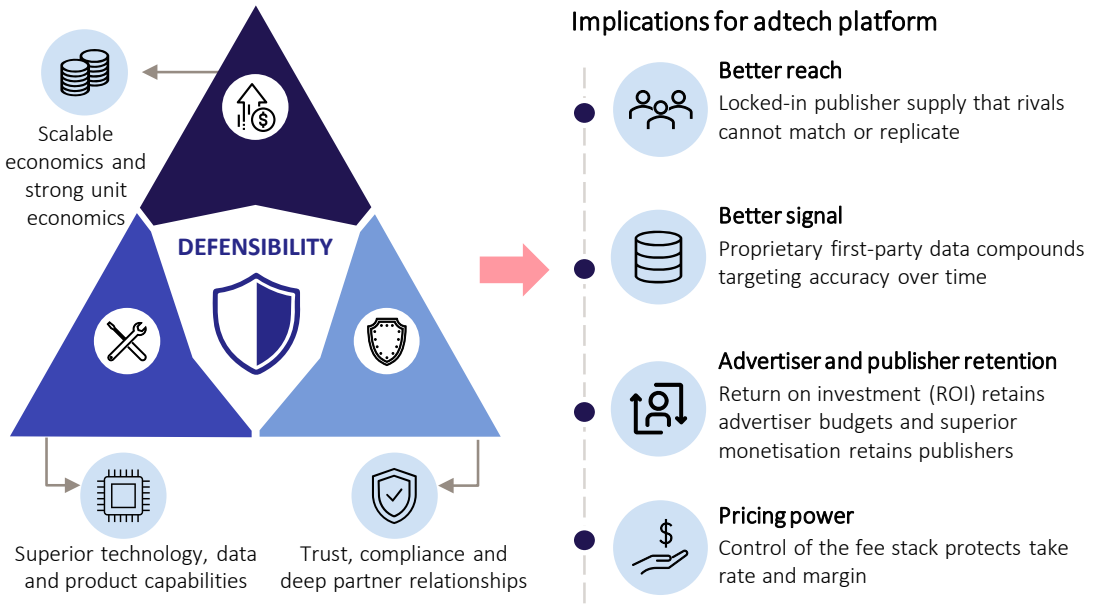
In adtech, distribution may matter more than technology. The industry's largest acquisitions have been driven less by software and more by installed publisher footprints, audience reach and proprietary data assets. Investors evaluating adtech companies should consider SDK distribution and publisher relationships as important indicators of competitive advantage and long-term value creation.

4.3.2 Publisher stickiness

The value of the footprint depends on whether the integrations are long term. Once an SDK is embedded in the publisher's stack, three factors keep the integration sticky:

- **Economic.** The SDK that wins impressions earns the publisher its revenue. Dropping a top-performing demand source cuts revenue, and reporting shows the publisher exactly how much.
- **Technical.** An embedded SDK is built into the app, tested against each release and tuned to its advertising placements. Removing it means an engineering project, a quality assurance cycle and a revenue risk the publisher is unlikely to accept.
- **Trust.** Verified results, a clean compliance record and responsive support build over years. A new entrant cannot match this at any price, because it takes time to accumulate.

Figure 4.12: Publisher-side defensibility for adtech platforms **[Source: Analysys Mason, 2026]**



[35] InMobi (10 January 2018), *InMobi acquires Los Angeles-based AerServ for USD90 million to create world's largest programmatic video platform for mobile publishers* [Press release], PR Newswire.

[36] Glance (22 December 2020), *Glance raises USD145 million from Google and Mithril Capital* [Press release]; Glance (14 February 2022), *Jio Platforms to invest USD200 million in Glance* [Press release].

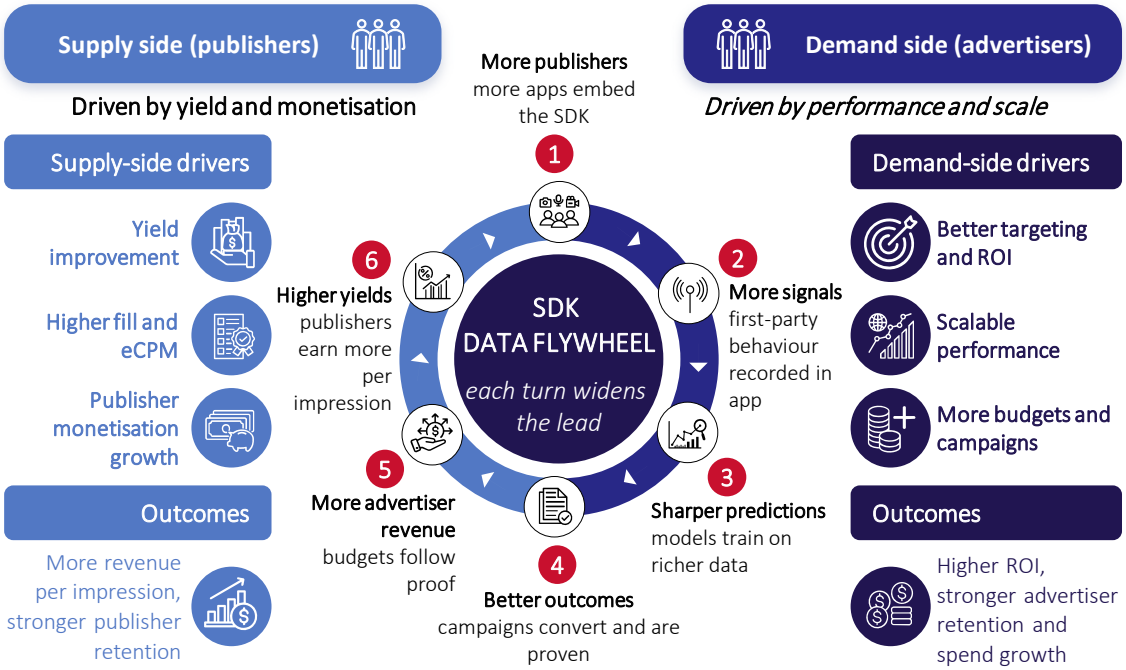
Mediation works the other way. It lowers switching costs at the margin, because a publisher can move demand away from a weak source without removing the integration. Publishers want every credible bidder in the auction, so the incumbent SDK provider keeps its seat. Holding that seat keeps the signal flowing, which supports the second form of defensibility.

4.3.3 Advertiser stickiness

Retained publisher integrations supply the platform's data. Each app sends behavioural signal back through the platform's own code. One app gives a narrow view, but the same code across thousands of apps builds a pool of first-party data that a new entrant cannot assemble without the same distribution.

This pool drives a self-reinforcing loop in which more publishers mean more signal, stronger predictions and better campaign results. Better results attract more advertiser spend, and higher spend raises yields, which brings in the next publisher. The loop runs on both sides of the market and tightens with each turn.

Figure 4.13: Self-reinforcing loop for advertiser stickiness **[Source: Analysys Mason, 2026]**



From an advertiser- and demand-side standpoint, this loop creates durable stickiness for the adtech platform. As per Section 4.2, advertisers concentrate spend where they can prove outcomes, and proof depends on signal. A platform present in thousands of apps can prove performance. Once budgets are tied to that performance, they do not move to a cheaper option that measures less.

The advertiser and demand-side platforms are not contractually locked the way a publisher is, but they are tied to the adtech platform by performance that only the accumulated signal can produce.

[37] Similarweb (42matters) (2026), *Top 20 ad networks SDKs used in Android apps on Google Play* (Google Play snapshot of 10 September 2026, covering approximately 756 000 apps carrying at least one advertising network SDK and 1.11 trillion cumulative downloads); *Top 20 ad networks SDKs used in iOS apps on the Apple App Store* (Apple App Store snapshot of 10 September 2026, covering approximately 590 000 apps and 421 billion cumulative downloads).

The adtech industry's financials show the impact. AppLovin, the furthest through the lifecycle, generated USD5.48 billion in advertising revenue in 2025, up 70% year on year, at an adjusted EBITDA margin of around 82%. InMobi's footprint, measured by the share of app downloads incorporating its SDK, reaches 29% on Android and 23% on iOS.[37] Liftoff, formed from Blackstone's 2021 merger of Liftoff and Vungle, is a further independent of scale. It is privately held, so revenue is not disclosed, but the combined platform carries more than 100 000 direct SDK integrations across publisher apps.

The companies differ in size and model, but the underlying asset is the same across the board, an owned SDK footprint whose signal holds advertiser demand.

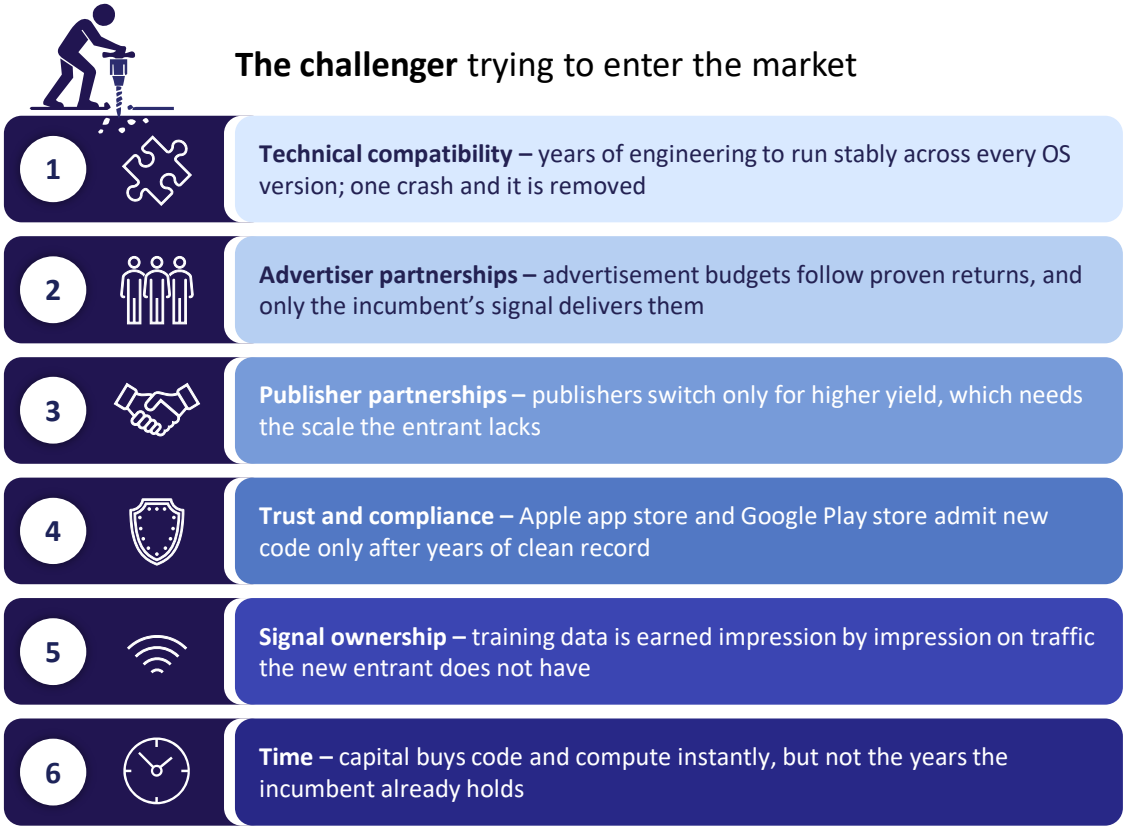
4.3.4 Barriers to replication

The preceding sub-sections described three assets: a maturing footprint, a locked supply side and a performance-locked demand side. A new entrant would have to build all three at the same time to be successful in the market. The following barriers restrict such entry, with each barrier reinforcing the others:

- **Signal ownership:** The signal training data has to be generated in-house. It is generated only by running an SDK on live traffic. A rival has to earn it impression by impression, on traffic it does not have.
- **Publisher partnerships:** Every publisher the incumbent has integrated with is one the new entrant must win, but a publisher swaps SDKs only for higher yield. The new entrant's yield is low until it has scale, and it cannot offer what it needs scale to produce.
- **Advertiser partnerships:** Advertisers follow the source that provides measured return, and the best return comes from the signal only the incumbent owns. A new entrant can win a test budget but may not keep it if advertisers see the weaker numbers in its own reports.
- T**echnical compatibility:** An SDK has to run on every version of every operating system a publisher supports, which in practice means the actively used Android and iOS versions at once. It has to do this while adding almost no weight to the app and holding stability of more than 99%. One crash traced to the SDK and the publisher removes it. Matching this takes years of engineering that a new entrant cannot shortcut.
- **Trust and compliance:** Publishers ship third-party code only after a verifiable track record, and Apple and Google gate it behind store review and audit rules that take years of clean operation to clear. The incumbent has already paid this cost. For the rival, it is the price of entry.
- **Time:** Signal accrues as traffic runs, trust builds through delivered results and compliance clears only over years. Capital can buy code and compute at once, but not the years the incumbent has accumulated, which is why acquirers buy footprints instead of building them.

These barriers form one loop. Distribution generates signal. Signal holds advertisers. Advertiser spend pays publishers. Paid publishers extend distribution. Trust and time gate every step. An entrant that clears one barrier still faces the others. Capital cannot buy the position. It has to be built step by step, over years.

Figure 4.14: Barriers to replication for adtech platforms **[Source: Analysys Mason, 2026]**



The moat is the installed SDK footprint. Publishers use it for higher yield and more control, and advertisers use it for measured returns. Each new integration adds signal that improves results for both sides. The footprint takes years to build and cannot be bought, so scaled independents stay ahead and new entrants struggle to catch up.

5

SDK-first players win

5.1 Control point of in-app advertising

Within in-app advertising, the platforms that embed their own SDK in the publisher's app hold the control point. That position is a structural right to win, built into the architecture of the market.

Advertising spend followed consumers into mobile apps, and by 2025 in-app spend reached roughly USD400 billion, most of it routed through SDKs. The spend moved to the SDK-native players, which embed code at the source and own the signal. Non-SDK independents connect from outside, through S2S links and tags, and gather far less.

5.2 Structural preference

Publishers and advertisers both prefer SDK-native architectures. Publishers keep advertising SDKs because embedded code runs the premium formats, earns more from every slot and keeps signal ownership and verification in their own hands rather than in those of a walled garden. Advertisers back the same route because the SDK measures delivery and outcomes, enforces brand safety and blocks fraud.

Privacy change turned this SDK preference into a structural divide. The non-SDK model depends on observing users from outside the app, and that view has been narrowing. Apple's ATT cut cross-app tracking to the minority who opt in, third-party cookies are blocked by default in Firefox and Safari browsers, and Google's Privacy Sandbox initiative to replace cookies was shelved in October 2025. Each of these changes severed an outside-in signal while leaving first-party, in-app signal untouched, benefiting the SDK-native platforms.

5.3 A moat that compounds

The advantages of SDK-native adtech platforms compound. Each publisher integration feeds more first-party signal into the platform's models. Better models produce better outcomes. The outcomes attract more spend. The spend raises yields. Higher yields win the next publisher. A new entrant must break into that loop from zero. Capital alone cannot act as a shortcut into a dominant position.

The adtech industry's transaction record demonstrates the durability of scaled platforms. AppLovin paid USD1.05 billion for MoPub, and InMobi built its own stack and paid only to deepen it, USD90 million for AerServ. Liftoff took the same route through consolidation, when Blackstone merged it with Vungle in 2021 to combine their SDK footprints. In every case the buyer paid for an installed footprint and not for the code, because the code was never the scarce asset.

The financials show the magnitude of a scaled SDK footprint. Costs are largely fixed, so each additional impression runs on infrastructure already paid for and margins widen as the footprint grows. AppLovin, the most mature of the group, generated advertising revenue of USD5.48 billion in 2025, up 70%, at an adjusted EBITDA margin near 82%. InMobi ranks among the top five independent advertising SDKs on iOS by download-weighted penetration, present in 23% of iOS app downloads and 29% on Android.

The SDK footprint compounds with use, survived the privacy shocks that undercut every outside-in alternative and grows harder to replicate every year the incumbents keep integrating. The market has priced this into every major transaction, and the independents that still own a footprint outright are few. On this evidence, SDK-native platforms are the structural winners in adtech.

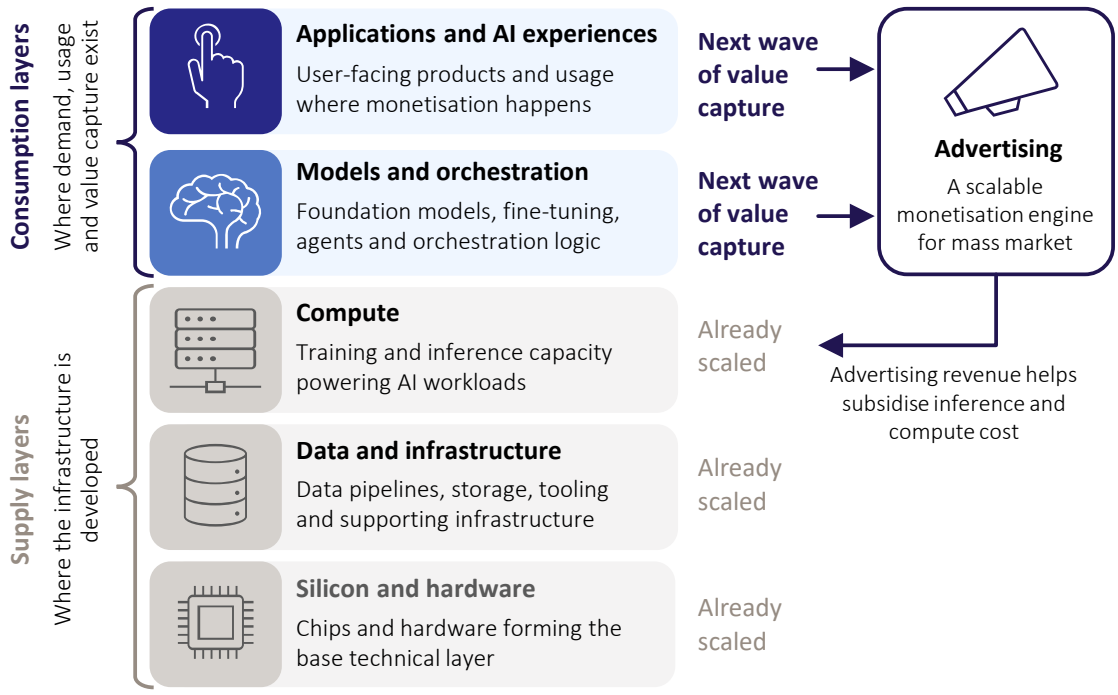
5.4 The next wave extends the SDK moat

The same structural position that enabled adtech SDKs to succeed is driving the next wave, fuelled by two shifts. 1) Attention is moving to surfaces the display stack cannot serve; and 2) A new class of AI-native product is turning to advertising to subsidise compute. Each shift plays to the incumbents' strength, and together they widen the moat.

The first shift is into new surfaces. Lockscreens, in-assistant replies, agentic checkout and voice and spatial interfaces carry no banner advertisements, because these surfaces do not have a page or a slot to hold a banner advertisement. Advertising on them is delivered through SDKs. Owning that SDK layer lets a platform define the format rather than conform to an existing container. Every format transition in apps has worked the same way. The interstitial, rewarded video and the playable each came from SDK-native platforms. The next formats are likely to be agentic, generative and shoppable and these would likely need an SDK layer.

The second shift is in how AI-native products monetise. Each query to an AI assistant or agent involves compute costs. Advertising could become the default monetisation engine, as it became for search and social over the past two decades. This AI-native supply has no tag, no page and no viewport. It sits at the application and operating-system layer and is reachable only by SDK code on the device. Monetising this supply requires code-level presence on the device.

Figure 5.1: Advertising is emerging as the monetisation layer of AI consumer stack **[Source: Analysys Mason, 2026]**



The adtech platforms that already hold a broad installed SDK footprint therefore reach the new supply through infrastructure they have already built. The independent adtech players with the largest footprints – AppLovin, InMobi and Liftoff – would be major beneficiaries of this transition driven by their existing distribution.

Nevertheless, this claim has a boundary. The largest AI-native platforms such as OpenAI and Anthropic will monetise their own surfaces directly, as the walled gardens do, and in doing so create new closed estates rather than new third-party supply. The addressable opportunity for independent SDK platforms is the long tail of AI-native applications that reach consumer scale without building an advertising stack of their own, a population that AI coding tools are enlarging rapidly.

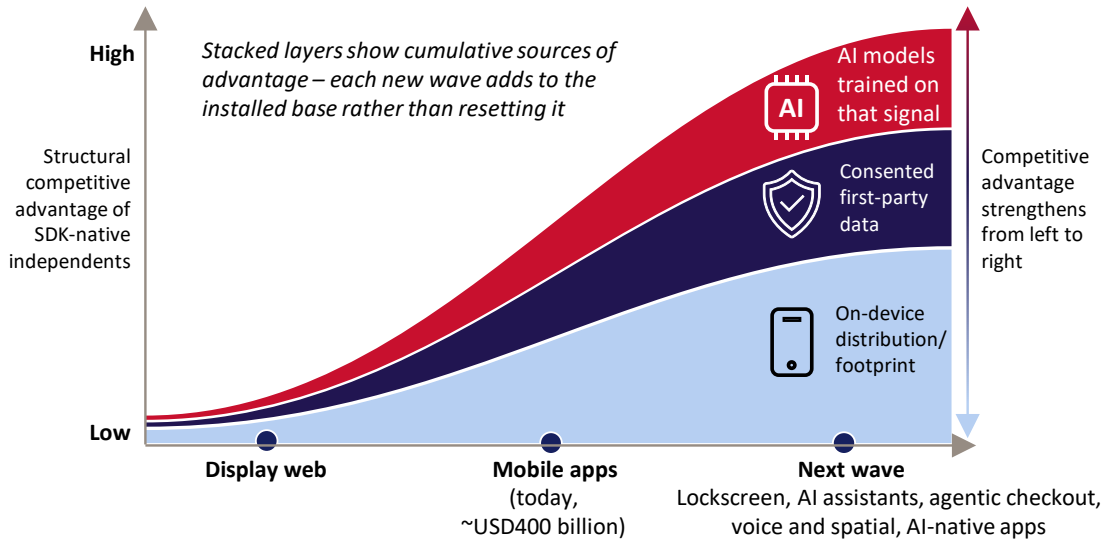
These market shifts widen the SDK moat. Scarce data collected by SDKs is an asset that independent players have gathered with consent. The SDK footprint of independent players grows more valuable as the surface set expands. AI compounds the effect. Models now run targeting, bidding and measurement. They improve with data. The SDK footprint that historically controlled adtech is becoming a strategic AI asset, providing access to first-party data.

This market shift specifically favours the independents over walled gardens. The new surfaces sit largely outside the walled gardens' own properties. A lockscreen, a third-party assistant and an agent acting across many brands' applications are not the walled gardens' owned-and-operated inventory. They sit in the independent app ecosystem, which is where the scaled independents already hold position. Additionally, in some cases, independents hold a strategic stake in and act as the monetisation partner for such platforms, as is the case with InMobi and Glance.

That advantage is not unconditional. The walled-garden SDKs retain the widest raw distribution of any advertising SDK, and AdMob alone reaches 87% of Android downloads. What the independents hold is not greater reach but a different basis of value, namely signal ownership, third-party verification and competitive demand, which is why publishers deploy walled-garden and independent SDKs side by side rather than choosing between them.

Furthermore, the footprint of independent SDK players takes on a new, more strategic role. Until now this footprint has been a distribution asset. In the AI wave, this footprint also becomes a data asset. The consented first-party signal gathered across thousands of unrelated apps is the corpus that trains the models now deciding what to show, what to bid, and what to build. Better models produce better outcomes. Better outcomes attract more spend. More spend wins the next publisher. Each new publisher adds more signal. AI does not weaken this loop but strengthens it.

Figure 5.2: SDK moat widens with the next wave **[Source: Analysys Mason, 2026]**



For a new entrant in the adtech market, achieving meaningful penetration can be difficult. Contesting the next wave means winning across many surfaces at once. It means earning consent under tighter privacy rules. It means accumulating the data to train competitive models. The incumbents integrate further while the surface set keeps expanding. Every earlier format transition rewarded the platform that already held the render-layer capability, and the incumbents hold it again. The window for a new entrant keeps narrowing. The SDK control point holds, and it widens with the market shift. The SDK-first players such as AppLovin, InMobi and Liftoff, which lead in-app advertising today are the players positioned to win the supply that comes next.

The SDK is the control point of in-app advertising, a market worth around USD400 billion. This position is durable because its installed footprint is built over years and cannot simply be bought. The next wave, on new surfaces and AI-native products, runs through the same on-device code, further strengthening these incumbents' competitive advantage. As a result, the scaled independent adtech platforms that lead the market today are also well positioned to capture the next phase of supply growth.

A

Glossary

This glossary defines the key terms as they are used in this report.

Term	Definition
Ad exchange	The marketplace at the centre of the value chain where buyers and sellers trade advertising impressions in real time; often used interchangeably with supply-side platform (SSP).
Ad server	The system that delivers the advertisement to the publisher's inventory.
Adtech	Software and systems through which advertisers and publishers buy, sell, deliver and measure advertisements across the web, mobile apps, and other digital channels.
App publisher	The owner of an app that sells its users' attention to advertisers as advertising inventory. In apps the publisher and the developer are frequently the same entity.
ATT	App Tracking Transparency: Apple's self-governance framework, enforced from April 2021, requiring user permission for cross-app tracking; around 35% of users opt in.
Attribution	Measurement of which campaign or placement caused an install or action, provided by partners such as AppsFlyer and Adjust.
Banner	A small, always-on display strip over app content; the only format that can be served from outside the app through tag or S2S connections.
Brand safety	Control over content and placement context in which advertisements appear; with an SDK it can be enforced at the placement itself.
CCPA	California Consumer Privacy Act: a US state privacy law, effective January 2020, giving California residents rights over the collection, sale and use of their personal data.
CMP	Consent management platform: a module that records and enforces the user's privacy choices inside the app.
Cookie	A small file a website stores in the browser to recognise a user across sites; the tracking mechanism the app environment does not support.
COPPA	Children's Online Privacy Protection Act: a US federal law requiring verifiable parental consent before collecting personal data from children under 13.
Digital advertising	Advertising delivered through any digital channel. It also covers digital out-of-home, connected TV, digital audio and digital cinema.
DSP	Demand-side platform: the buying system advertisers and agencies use to bid for impressions across exchanges.
eCPM	Effective cost per mille (thousand impressions): a normalised revenue-per-thousand impressions figure; the standard yield measure for an advertising slot or format.
Fill rate	The share of advertising requests that are filled with a paid ad; a measure of how fully inventory is monetised.
First-party signal	Behavioural data collected inside the app by its own embedded code, under that app's consent; the basis of SDK targeting after the loss of third-party tracking.
GAID	Google Advertising ID, the Android operating-system identifier that replaced the cookie as an app-world currency. This is Google's version of Apple's IDFA signal.
GDPR	The EU General Data Protection Regulation, in effect from May 2018; requires consent for the collection and use of personal data.
Header bidding	An auction technique that lets every demand source bid on a slot simultaneously.
IAA	In-app advertising: publishers selling their users' attention to advertisers inside apps; roughly USD400 billion worldwide in 2025.
IAB TCF	Interactive Advertising Bureau Transparency and Consent Framework: the industry-standard framework for capturing and signalling user consent for data processing across the advertising supply chain.

Term	Definition
IAP	In-app purchases: consumers paying for digital goods, subscriptions and premium features inside apps; USD167 billion worldwide in 2025.
IAS	Integral Ad Science: a third-party verification firm covering advertising fraud, brand safety and viewability measurement.
IDFA	Apple's Identifier for Advertisers, gated behind ATT consent since 2021. This is Apple's version of Google's GAID signal.
Impression	A single serving of an advertisement to a user; the basic unit that is bought, sold and measured.
Interstitial	A full-screen advertisement shown at a natural break in the app experience.
Mediation	The layer that runs a live auction among demand sources for each advertising slot and awards it to the highest bidder.
Native ad	An advertisement styled to match the surrounding content.
Online advertising	Advertising delivered over the internet to a user's own device, historically through a web browser and now predominantly through apps.
Open internet	The websites and applications not owned by the large platform companies, reached by advertisers through third-party adtech rather than through a platform's own buying tools. Used in this report as the complement of the walled gardens.
Playable ad	A mini-interactive advertisement the user can try before installing the advertised app
Privacy Sandbox	Google's proposed replacement infrastructure for third-party cookies and advertising identifiers; discontinued in October 2025.
Programmatic	The automated buying and selling of advertising through real-time auctions; more than 80% of worldwide digital display spending. Within the industry, the terms programmatic and RTB are often used interchangeably.
Rewarded video	An opt-in video the user chooses to watch in return for an in-app reward such as game credits; the flagship SDK format, with completion rates far above forced formats.
RTB	Real-time bidding: the automated auction protocol, standardised in 2010, that replaced manually negotiated media buys.
S2S	Server to server: an integration linking the publisher's servers to the platform's servers over the internet, with no code in the app.
SDK	Software development kit: a ready-made module of an adtech platform's own code that the publisher embeds in its app; the deepest of the three integration architectures.
SSP	Supply-side platform: the selling system publishers use to offer their inventory to buyers. Within the industry, this term is often used interchangeably with advertising exchange.
Tag	A small piece of code, inherited from the desktop web, that runs inside a browser-style window within the app and is used to request, display or track advertisements.
Total advertising spend	All money spent by advertisers to place advertising across every channel, offline and digital: television, print, radio, out-of-home, cinema and all digital formats.
Verification	Confirmation that advertisements were served under legitimate, safe and viewable conditions. Verification is typically performed by third-party firms such as DoubleVerify and IAS who offer products covering fraud and invalid traffic detection, brand safety, viewability and related measurement capabilities.
Walled garden	A platform that owns the consumer surface and plays every role in the value chain (for example Google, Meta and Amazon in the West, and Alibaba, ByteDance and Tencent in China); together they take 70-75% of global online advertising spend.
Yield	The revenue a publisher earns per advertising slot or impression, typically measured using eCPM; the figure competing SDKs are judged on.

B

About Analysys Mason

Analysys Mason is the **leading specialist consultancy**, creating lasting value in technology-intensive industries, including telecoms, digital infrastructure, consumer internet & digital media, software, IT services, space, defence, manufacturing and logistics.

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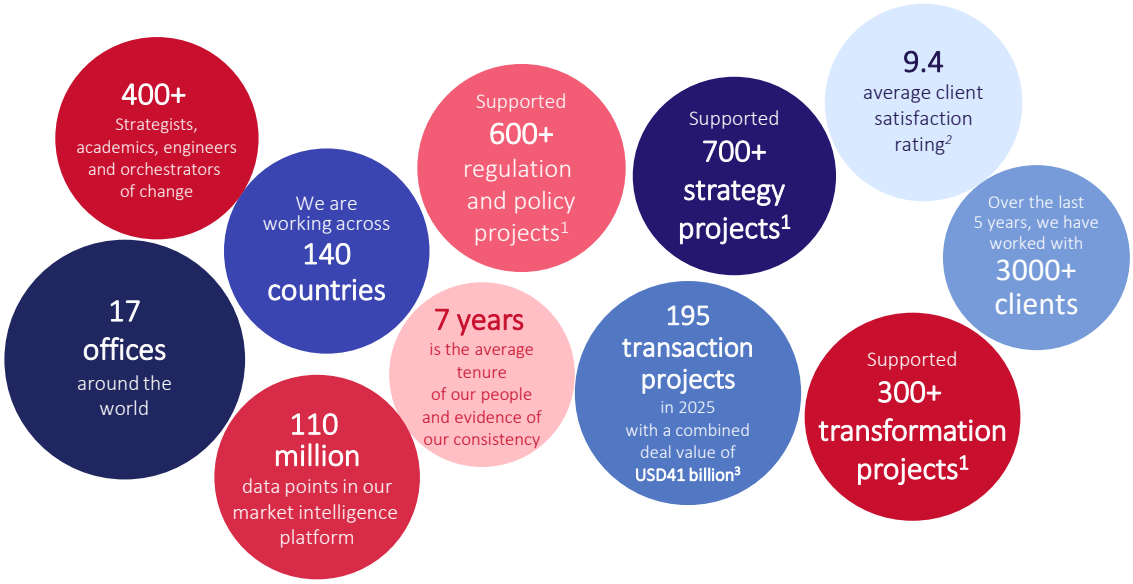
Over more than four decades, Analysys Mason has evolved into a trusted adviser to businesses, investors and governments worldwide. Our experts deliver high-impact results and transformative change across our clients' most critical strategic, regulatory, technology, transaction and transformation initiatives.

Figure B.1: A snapshot of Analysys Mason **[Source: Analysys Mason, 2026]**



[1] In 2020–2025

[2] Analysys Mason client satisfaction survey across projects carried out in the last 2 years (the maximum score is 10)

[3] Total deal value from successful deals we supported that were publicly announced

C

About the authors

Ujjwal Chaudhry *(Partner)* has spent more than 18 years advising investors and operators across adtech, digital advertising, consumer internet, e-commerce and digital platforms, and has led over 50 commercial due diligence and strategy engagements. His work spans digital advertising ecosystems and platform monetisation for leading platforms including Amazon, Careem, Flipkart, Meta and Zomato, as well as initial public offering (IPO) readiness and investor narratives for consumer internet businesses.

Shreshth Virmani *(Manager)* has worked across digital advertising, consumer internet, e-commerce, wireless and wireline telecoms, submarine cables, data centres and digital platforms, with over 45 commercial due diligence and strategy engagements across India, the Middle East and North Africa (MENA), Asia–Pacific (APAC) and Europe. He advises on monetisation, customer journeys and platform dynamics for technology businesses, and has supported capital markets and investor communications for Jio, EDOTCO and Ooredoo, among other clients.

Ashwinder Sethi *(Partner)* has more than 20 years of experience in strategy and transaction advisory for consumer internet and advertising-led businesses. He has led over 70 commercial due diligence projects across MENA, South Asia and South-East Asia, advising on platform economics, unit economics and advertising-led business models. His capital markets experience includes Axian Telecom, Bharti Airtel, Bharti Infratel, Reliance Jio, TBO.com and the NASDAQ listing of a global fintech.

Get in touch

enquiries@analysysmason.com

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