

endava 

Challenges in Adtech and Media Planning – and How to Solve for Them

Introduction

Adtech connects advertisers to audiences – but with digital trends ever-changing, the race to create the most effective campaigns can often shift course. Media planners and buyers face a challenging landscape, with platforms to manage, emerging technologies to navigate and plenty of data to unpack.

How can advertisers make the most of these challenges and use adtech tools and novel technology to their advantage?

From data fragmentation to scalability, we've broken down some of the common challenges the industry is facing, and how you can use the right strategies and technology to solve for them.

🔗 Data fragmentation, integration and real-time reporting

Challenge

Media planning and buying require data from various sources, such as:

- DSPs (demand-side platforms)
- SSPs (supply-side platforms)
- Social platforms
- CRMs
- Third-party data providers
- Media measurement tools

Integrating these fragmented data sets into a unified platform while ensuring consistency and cleanliness is complex.

Verifying campaign performance across multiple media types (e.g., programmatic, social, search, traditional) and delivering real-time insights for strategic decision-making can add to the complexity.

Solution

- Implement a **data management platform (DMP)** or **customer data platform (CDP)** to centralise and unify fragmented data from various channels.
- Use **ETL tools** to seamlessly integrate and process data from sources such as ad servers (Google Ads, Bing Ads, Meta) and media measurement providers (Nielsen, Comscore, BARB).
- Incorporate a robust **data warehouse (DWH) solution** to store and analyse large datasets efficiently, ensuring high-performance querying and real-time access to insights.
- Leverage **machine learning (ML)** for automated data analysis, enhancing performance verification, predicting trends and providing actionable insights.
- Integrate **reporting tools** to generate real-time and ad-hoc reports, offering tailored, visually compelling dashboards that drive strategic decision-making and campaign optimisation.

🔗 Real-time bidding (RTB) and latency

Challenge

In media buying, decisions often need to be made in milliseconds through real-time bidding (RTB) platforms.

Latency in the bidding process can lead to inefficiencies or missed opportunities, directly impacting performance and cost-effectiveness.

Solution

- **Optimise the platform's infrastructure** for low-latency operations by leveraging cloud computing solutions like AWS or Google Cloud that provide scalable, high-performance architecture.

Edge computing and caching mechanisms can reduce the distance between the user's data and the platform, improving response times in real-time bidding environments.

- Implement **Open RTB** protocol by leveraging **Prebid Server** to streamline the bidding process allowing server-side handling of bids.

Prebid Server consolidates demand and reduces the load on client-side devices, enhancing speed and ensuring that more bids can be processed in time, thus improving both performance and the overall bid response rate.

- Implement a dual approach with **Open RTB** and **Open Direct** protocol, an alternative protocol focused on automating guaranteed direct deals. This ensures both real-time bidding (RTB) and guaranteed direct deals are managed efficiently. With this approach, you can improve ad performance, reduce latency and provide more robust demand management across both open and direct markets.

🔗 Predictive modelling and AI complexity

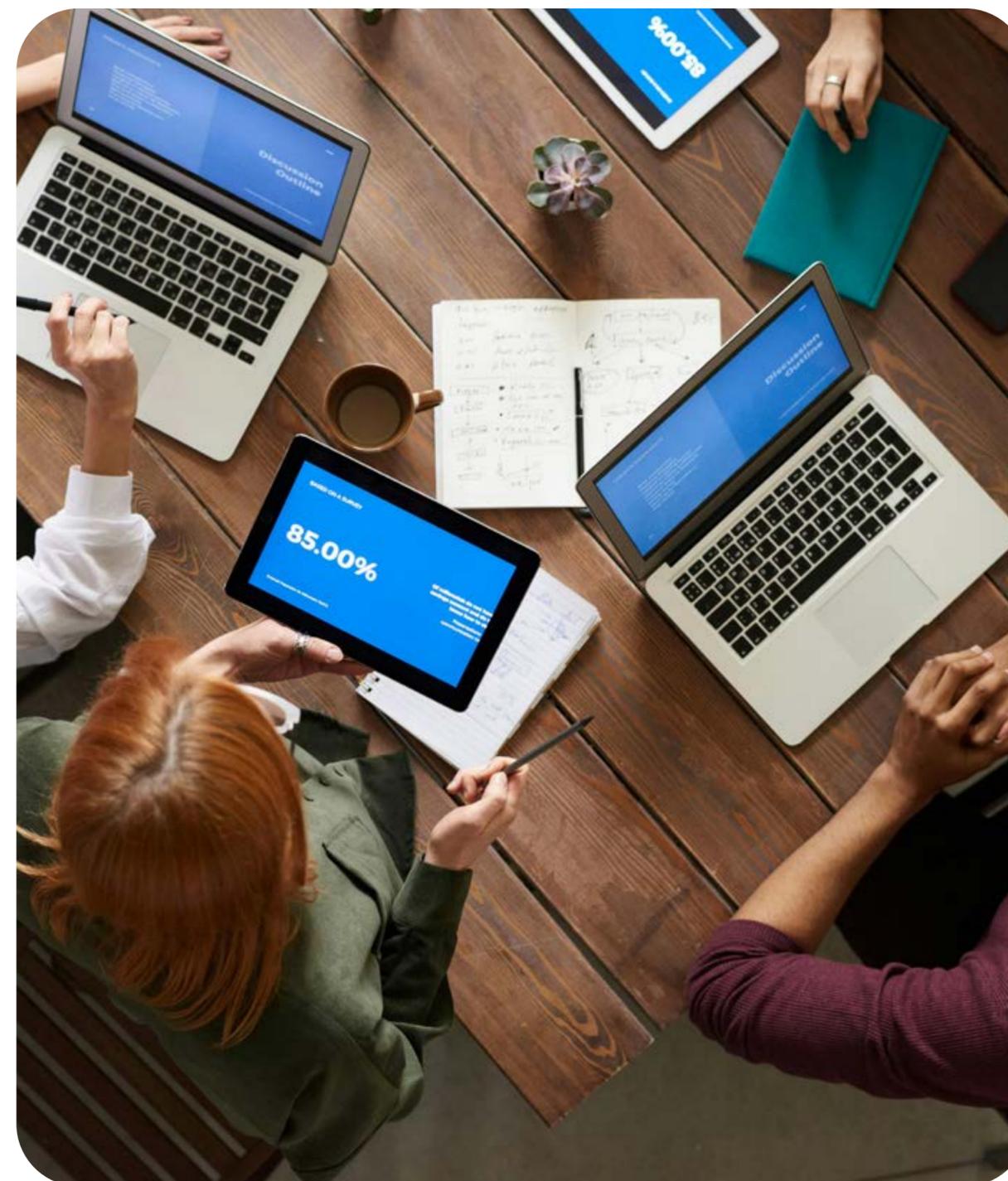
Challenge

Accurate media planning and buying rely heavily on predictive analytics, machine learning and AI.

Building and training complex algorithms that can predict customer behaviour, optimise ad spend and deliver the right message at the right time is difficult and requires a high level of expertise in data science and AI.

Solution

- Use pre-built machine learning models from established platforms (e.g., Google Cloud AI, AWS Machine Learning) as a foundation, then customise them for specific business needs.
- Implement A/B testing frameworks to continuously improve model accuracy.
- Build a cross-functional team that includes data scientists, media planners and software engineers to collaborate on refining algorithms.



🔗 Scalability of the adtech platform

Challenge

As media campaigns grow in scale and complexity, the platform must be able to handle increasing amounts of data and transactions without sacrificing performance.

Ensuring scalability while maintaining high availability and low failure rates is a significant technical challenge.



Solution

- Design the system using **microservices architecture** to allow for independent scaling of various components (e.g., data ingestion, bidding engines, reporting modules).
- Leverage **composable architecture**, which enables the platform to be built from interchangeable, modular components. This approach allows for greater flexibility and agility in scaling, as new functionalities or services can be easily added or replaced without disrupting the entire system.
- Use **containerisation** (Docker, Kubernetes) for deployment, ensuring that each service can scale horizontally as demand increases. Load balancing and autoscaling can help handle traffic spikes efficiently.

How we can help

Each of these challenges in adtech and media planning present new opportunities for advertisers to modernise their approach – and create memorable campaigns that resonate and connect with the right audience.

At Endava, we have a breadth of experience in delivering adtech and media planning solutions, and we're here to help you navigate the strategies, tools and technologies needed to keep your adtech approach ahead of the curve.

Connect with one of our team members below to learn more about how we can help.

Meet the **experts**



Neil McIntyre
Head of Advertising
Media Delivery



Robert Atanasoski
Technical Design
Authority



Michelle Kegg
Global Business
Development Director

Technology is our how. And **people** are our why.

For over two decades, we have been harnessing technology to drive meaningful change. By combining world-class engineering, industry expertise and a people-centric mindset, we consult and partner with our customers to create technological solutions that drive innovation and transform businesses.

Working side by side with leading brands, we build strategies, products and solutions tailored to unique needs, regardless of industry, region or scale. From ideation to production, we support our customers through every step of their digital transformation journey, creating dynamic platforms and intelligent digital experiences across various industries.

[Contact us](#)

